NEC

Block Library

CMOS-9HD Family, EA-9HD Family

CMOS Gate Array, CMOS Embedded Array

Ver.6.0

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[MEMO]

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- Product release schedule
- Availability of related technical literature
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Electron Devices Division
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Fax: 55-11-6462-6829

J00.7

Major Revisions in this Edition

Page	Description
Throughout	Complete modification of organization and values.

PREFACE

This library contains the interface blocks and the internal function blocks of the CMOS-9HD family and EA-9HD family.

When carrying out circuit design, it is requested that the **CMOS-9HD Family Design Manual (A12985E)** and **EA-9HD Family Design Manual (A13282E)** should also be read. Furthermore, as there are occasions when this block library is changed without advance notice, please contact your local NEC ASIC design center.

Please observe all items listed in this manual (general matters, cautions, and limitations).

If you don't observe these things, degradation in the quality and performance of LSI's or abnormal operation may occur.

1. Introduction

The composition of this library is as follows.

(1) PREFACE

The usage of this library, meanings of terminologies and some information are described.

(2) Contents

This Contents is useful when searching a block from its function.

(3) Chapter 1 Interface Block

(4) Chapter 2 Function Block

(5) Chapter 3 Scan Path Block

(6) Chapter 4 Boundary Scan Block (Interface)

(7) Chapter 5 Boundary Scan Block (Function)

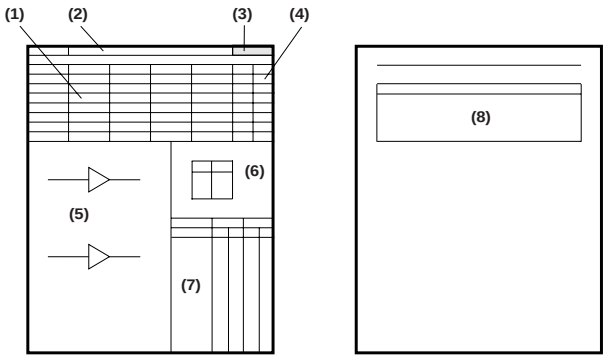
Chapter 1 to 5 list each block by function. Each page describes a logic symbol, a truth table, I/O data and delay time with an integrated format as explained in **2**. **Data Entered in the Block Library** of this PREFACE.

(8) Index

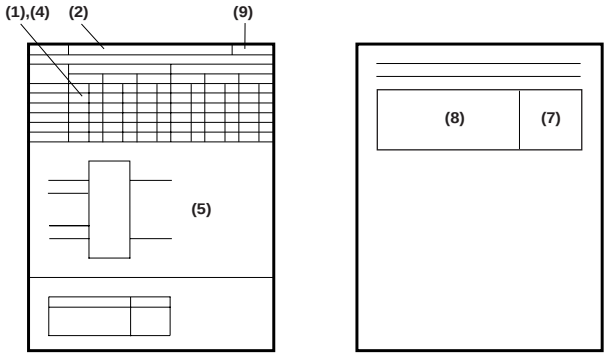
This list is useful when searching a block from its name.

2. Data Entered in the Block Library

Interface Block



Function Block



(1) Block type : Name of function block

(2) Function : Function of that block

(3) Interface Level : Interface level of that block

(4) No. of int. cells : No. of cells used (internal cell number)

(5) Logic Diagram : Symbol of that block

(6) Truth table : Truth table of that block

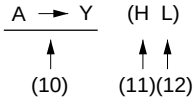
(7) Input, Output : Input (Name of input pin, Fan-in)

Output (Name of output pin, Fan-out)

(8) Switching Speed : Delay time of that block

(9) SSI FAMILY : 74(LS) series name that has the same function

Furthermore, the symbols of switching speed are as follows



(10) Signal path (input to output)

(11) Input signal change (H : Rise L : Fall Z : High impedance)

(12) Output signal change (H : Rise L : Fall Z : High impedance)

Setup time, Hold time, Release time, Removal time, and Minimum pulse width;

MIN : The minimum result at the minimum condition

MAX : The minimum result at the maximum condition

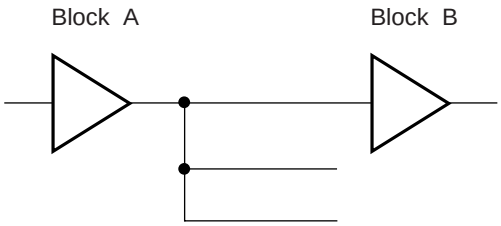
3. Propagation Delay Time (t_{PD})

The method shown here is a simplified calculation formula. This calculation method will give comparatively accurate results when the load matches the following conditions. The error becomes greater as the load capacitance increases, and the results yielded from the calculation are smaller than the values obtained from the simulator. Therefore, note beforehand that these values should be used mainly as a general guide.

Conditions

The total F/I of the front stage of the block for delay calculation shall be within 15% of the F/O limit of the front stage drive block.

Example



Let block B be the object of the propagation calculation. The accuracy of the simplified calculation formula is high when the sum of the F/I connected to the output of Block A is within 15% of the block A F/O limit.

3.1 Calculating Propagation Delay Time

3.1.1 Delay time of input buffer and internal function block

The delay time of input buffer and internal function block can be estimated from the load (number of fan-outs) connected to the block including the memory block and its wiring length (wiring capacitance).

$$t_{PD} = t_{LD0} + (\Sigma F/O + L) \times t_1 \quad (ns)$$

t_{LD0} : Delay time of block itself when F/O = 0, L = 0
$\Sigma F/O$: Number of fan-outs of output pin
L : Wiring capacitance of output pin (see the **CMOS-9HD Family Design Manual (A12985E)** and **EA-9HDFamily Design Manual (A13282E)**
t_1 : Delay coefficient of output pin

3.1.2 Delay time of output buffer

The delay time of an output buffer greatly depends on the load capacitance connected to the output pin. The dependency of delay time on load capacitance varies with the drive capability of the buffer.

The delay time(t_{PD}) of an output buffer can be estimated for the given load capacitance(C_L) using the following formula:

$$t_{PD} = t_{LD0} + T \times C_L \quad \text{(ns)}$$

t_{LD0} : Reference delay time (ns)
T : Delay coefficient
C_L : Load capacitance (pF) ($C_L \geq 15$ pF)

The delay time of an I/O buffer is obtained as follows.

3.3 V interface: Threshold voltage = 1.5 V Swing level = 0 to V_{DD}
5 V interface: Threshold voltage = 1.5 V Swing level = 0 to V_{DD}

The high level of 5 V interface is equal to the power supply to the gate array.

3.1.3 Estimated Wiring Capacitance

Please refer to the **CMOS-9HD Family Design Manual (A12985E)** and **EA-9HD Family Design Manual (A13282E)**

4. Input Interface Levels

The CMOS-9HD Family and EA-9HD Family gate array family has the following seven types of interface levels.

(1) 3.3 V input
(2) 5 V input
(3) 3.3 V Schmitt input
(4) 5 V Schmitt input
(5) 3.3 V input with EN(AND, OR)
(6) 5 V input with EN(AND, OR)
(7) 3.3 V input with failsafe

5. Output Drive Capability

The following levels are available for output drive capability.

(1) 3.3 V output : Six types (3.0 mA, 6.0 mA, 9.0 mA, 12.0 mA, 18.0 mA, 24.0 mA)
(2) 5 V output : Eight types (1.0 mA, 2.0 mA, 3.0 mA, 6.0 mA, 9.0 mA, 12.0 mA, 18.0 mA, 24.0 mA)

6. Multifunction Buffers

6.1 Buffers with Pull-up/Pull-down Resistors

The CMOS-9HD Family and EA-9HD Family have input/output/bidirectional buffers with the following on-chip pull-up/pull-down resistors. Select one suitable for the specific application.

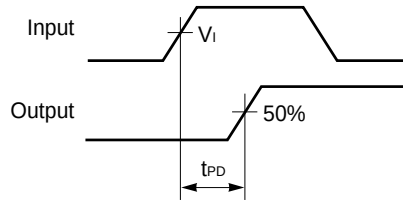
(1) Pull-up resistor : 50 kΩ(TYP)
(2) Pull-down resistor : 50 kΩ(TYP)
(3) Pull-up resistor : 5 kΩ(TYP)

6.2 Low Slew-Rate Buffers

The CMOS-9HD Family and EA-9HD Family have special buffers that satisfy low noise requirement by fixing slew-rate low. These are called low slew-rate buffers. In this library, these buffers are described with a word “LOW-NOISE” at their function description.

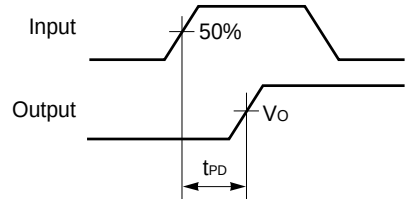
7. Definition of Propagation Delays

(1) Input Buffer



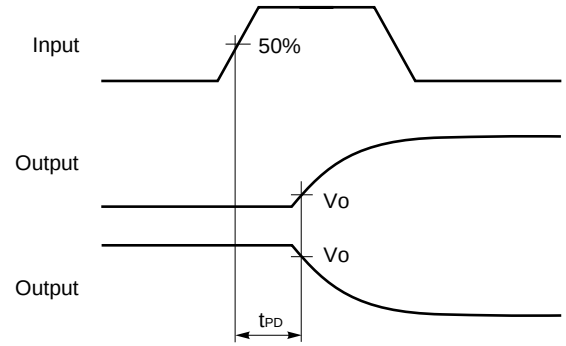
V_I = 1.5 V (3.3 V input)
V_I = 1.5 V (5 V input)

(2) Output Buffer (L→H, H→L, Z→H, Z→L)



V_O = 1.5 V (3.3 V output)
V_O = 1.5 V (5 V output)

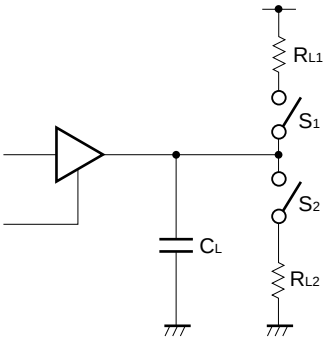
(3) Output Buffer (L→Z, H→Z)



$V_O = 0.1 \times V_{DD}$ (L → Z)
$V_O = 0.9 \times V_{DD}$ (H → Z)

8. Measurement Load Conditions

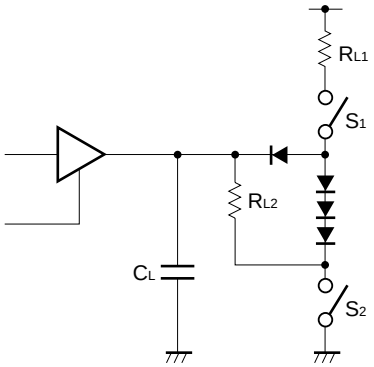
(1) CMOS level output buffer



- Normal Output Buffer
  R_{L1}, $R_{L2} = \infty$, C_L = 15 pF
  (S_1, S_2 : OFF)

- 3-State Output Buffer
  R_{L1} = 2 kΩ, R_{L2} = 2 kΩ, C_L = 15 pF
  $t_{P(HH)}$, $t_{P(LL)}$: S_1 = OFF, S_2 = OFF
  $t_{P(ZL)}$, $t_{P(LZ)}$: S_1 = ON, S_2 = OFF
  $t_{P(ZH)}$, $t_{P(HZ)}$: S_1 = OFF, S_2 = ON

(2) TTL level output buffer



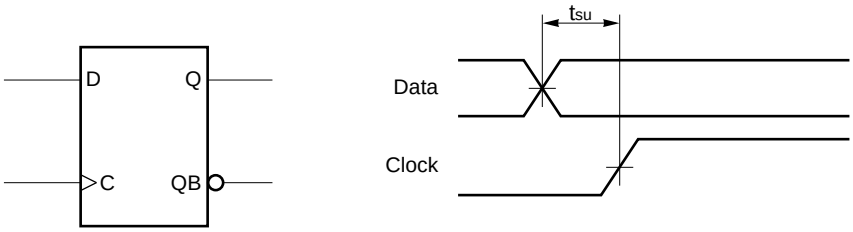
- Normal Output Buffer
  R_{L1} = 500 Ω, $R_{L2} = \infty$, C_L = 15 pF
  (S_1, S_2 : OFF)

- 3-State Output Buffer
  R_{L1} = 500 Ω, R_{L2} = 1 kΩ, C_L = 15 pF
  $t_{P(HH)}$, $t_{P(LL)}$: S_1 = OFF, S_2 = OFF
  $t_{P(ZL)}$, $t_{P(LZ)}$: S_1 = ON, S_2 = OFF
  $t_{P(ZH)}$, $t_{P(HZ)}$: S_1 = OFF, S_2 = ON

9. Timing

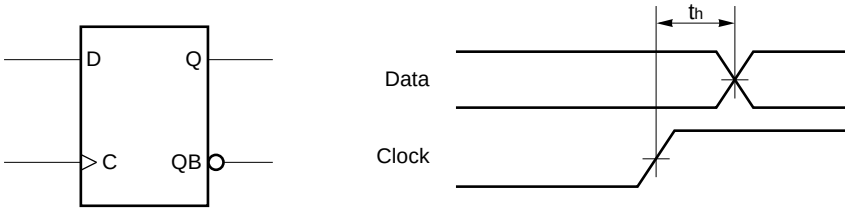
(1) Set up time (t_{su})

The data setup time required before arrival of an active edge of a clock to read data correctly.



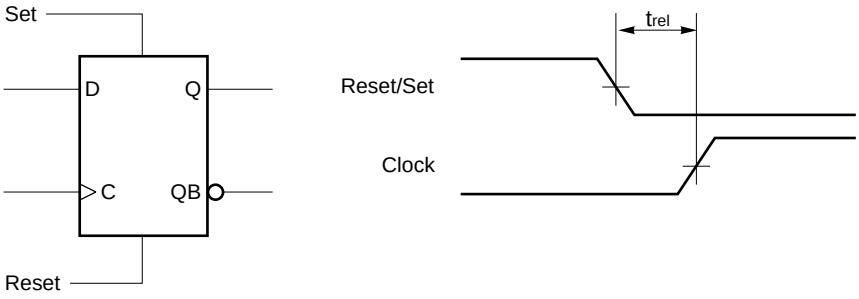
(2) Hold time (t_h)

The data hold time required after receiving an active edge of the clock to read data correctly.



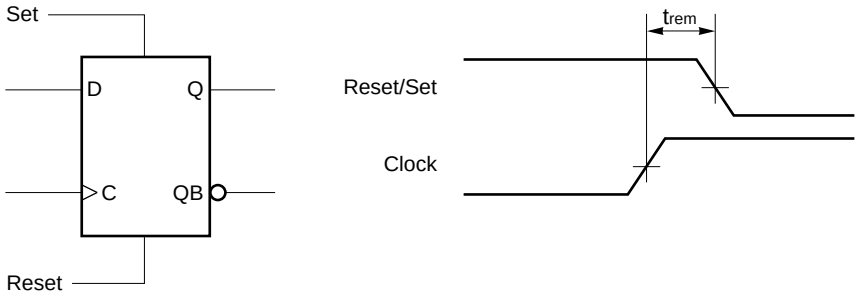
(3) Release time (t_{rel})

The time required from the release of a reset (or set) signal of a latch or flip-flop until the active edge of the next clock pulse becomes valid.



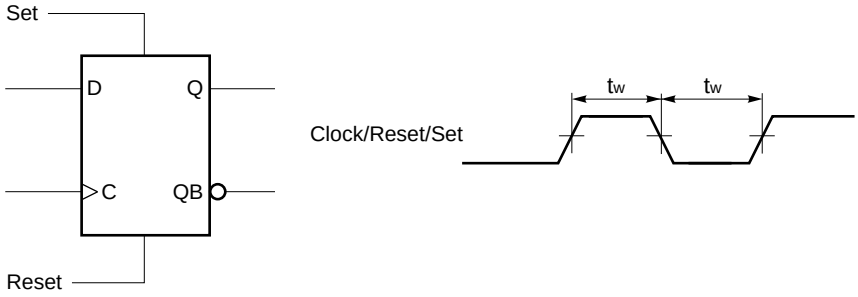
(4) Removal time (t_{rem})

The time required to invalidate an active edge of a clock when a reset (or set) signal of a latch or flip-flop is released.



(5) Minimum Pulse Width (t_w)

The minimum pulse width of Clock/Reset/Set required to read data correctly.



Related documents

The related documents indicated in this publication may include preliminary versions. However, preliminary versions are not marked as such.

● CMOS-9HD Family and EA-9HD Family

- CMOS-9HD Family, EA-9HD Family Block Library : This Manual
- CMOS-9HD Family, EA-9HD Family Memory Block Library : A13071E
- Design For Test User's Manual : A14357E
- SEMICONDUCTOR SELECTION GUIDE Products & Packages (CD-ROM) : X13769X

● CMOS-9HD Family

- CMOS-9HD Family Design Manual : A12985E
- CMOS-9HD Family Mega Macro Design Manual : A13941E

● EA-9HD Family

- EA-9HD Family Design Manual : A13282E
- EA-9HD Family Memory Macro Design Manual : A13367E

To obtain the latest documents when designing, contact an NEC sales office or a distributor.

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Chapter 1 Interface Block

1.1 3.3 V Interface

Function	Block	Description	Cells (I/O)	Page
Input Buffer	FI01	-	7 (1)	1-4
	FID1	50kΩ Pull-down	7 (1)	
	FIU1	50kΩ Pull-up	7 (1)	
	FIW1	5kΩ Pull-up	7 (1)	
	FIS1	Schmitt	11 (1)	
	FDS1	Schmitt 50kΩ Pull-down	11 (1)	
	FUS1	Schmitt 50kΩ Pull-up	11 (1)	
	FWS1	Schmitt 5kΩ Pull-up	11 (1)	
	FIB1	Clock Driver	56 (1)	
	FDB1	Clock Driver 50kΩ Pull-down	56 (1)	
	FUB1	Clock Driver 50kΩ Pull-up	56 (1)	
	FWB1	Clock Driver 5kΩ Pull-up	56 (1)	
Input Buffer with Failsafe	FIA1	-	7 (1)	1-6
	FDA1	50kΩ Pull-down	7 (1)	
	FIE1	Schmitt	11 (1)	
	FDE1	Schmitt 50kΩ Pull-down	11 (1)	
	FIH1	Clock Driver	56 (1)	
	FDH1	Clock Driver 50kΩ Pull-down	56 (1)	
Input Buffer with EN(AND)	FN11	-	8 (1)	1-8
	FN21	50kΩ Pull-down	8 (1)	
Input Buffer with EN(OR)	FN13	-	8 (1)	1-10
	FN23	50kΩ Pull-down	8 (1)	
Output Buffer	FO09	3mA	8 (1)	1-12
	FO04	6mA	8 (1)	
	FO01	9mA	8 (1)	
	FO02	12mA	8 (1)	
	FO03	18mA	18 (1)	
	FO06	24mA	18 (1)	
Low-noise Output Buffer	FE04	6mA	10 (1)	1-14
	FE01	9mA	10 (1)	
	FE02	12mA	10 (1)	
	FE03	18mA	10 (1)	
	FE06	24mA	10 (1)	

Function	Block	Description	Cells (I/O)	Page
3-State Buffer	B00T	3mA	18 (1)	1-16
	B0DT	3mA 50kΩ Pull-down	18 (1)	
	B0UT	3mA 50kΩ Pull-up	18 (1)	
	B0WT	3mA 5kΩ Pull-up	18 (1)	
	B00E	6mA	18 (1)	
	B0DE	6mA 50kΩ Pull-down	18 (1)	
	B0UE	6mA 50kΩ Pull-up	18 (1)	
	B0WE	6mA 5kΩ Pull-up	18 (1)	
	B008	9mA	18 (1)	
	B0D8	9mA 50kΩ Pull-down	18 (1)	
	B0U8	9mA 50kΩ Pull-up	18 (1)	
	B0W8	9mA 5kΩ Pull-up	18 (1)	
	B007	12mA	18 (1)	
	B0D7	12mA 50kΩ Pull-down	18 (1)	
	B0U7	12mA 50kΩ Pull-up	18 (1)	
	B0W7	12mA 5kΩ Pull-up	18 (1)	
	B009	18mA	20 (1)	
	B0D9	18mA 50kΩ Pull-down	20 (1)	
	B0U9	18mA 50kΩ Pull-up	20 (1)	
	B0W9	18mA 5kΩ Pull-up	20 (1)	
	B00H	24mA	20 (1)	
	B0DH	24mA 50kΩ Pull-down	20 (1)	
	B0UH	24mA 50kΩ Pull-up	20 (1)	
	B0WH	24mA 5kΩ Pull-up	20 (1)	
Low-noise 3-State Buffer	BE0E	6mA	11 (1)	1-20
	BEDE	6mA 50kΩ Pull-down	11 (1)	
	BEUE	6mA 50kΩ Pull-up	11 (1)	
	BEWE	6mA 5kΩ Pull-up	11 (1)	
	BE08	9mA	11 (1)	
	BED8	9mA 50kΩ Pull-down	11 (1)	
	BEU8	9mA 50kΩ Pull-up	11 (1)	
	BEW8	9mA 5kΩ Pull-up	11 (1)	
	BE07	12mA	11 (1)	
	BED7	12mA 50kΩ Pull-down	11 (1)	
	BEU7	12mA 50kΩ Pull-up	11 (1)	
	BEW7	12mA 5kΩ Pull-up	11 (1)	
	BE09	18mA	11 (1)	
	BED9	18mA 50kΩ Pull-down	11 (1)	
	BEU9	18mA 50kΩ Pull-up	11 (1)	
	BEW9	18mA 5kΩ Pull-up	11 (1)	
	BE0H	24mA	11 (1)	
	BEDH	24mA 50kΩ Pull-down	11 (1)	
	BEUH	24mA 50kΩ Pull-up	11 (1)	
	BEWH	24mA 5kΩ Pull-up	11 (1)	

Function	Block	Description	Cells (I/O)	Page
N-ch Open drain Buffer	EXTH	3mA	8 (1)	1-24
	EXUH	3mA 50kΩ Pull-up	8 (1)	
	EXWH	3mA 5kΩ Pull-up	8 (1)	
	EXTJ	6mA	8 (1)	
	EXUJ	6mA 50kΩ Pull-up	8 (1)	
	EXWJ	6mA 5kΩ Pull-up	8 (1)	
	EXT1	9mA	8 (1)	
	EXT3	9mA 50kΩ Pull-up	8 (1)	
	EXW3	9mA 5kΩ Pull-up	8 (1)	
	EXT9	12mA	8 (1)	
	EXTB	12mA 50kΩ Pull-up	8 (1)	
	EXWB	12mA 5kΩ Pull-up	8 (1)	
	EXT5	18mA	18 (1)	
	EXT7	18mA 50kΩ Pull-up	18 (1)	
	EXW7	18mA 5kΩ Pull-up	18 (1)	
	EXTD	24mA	18 (1)	
	EXTF	24mA 50kΩ Pull-up	18 (1)	
	EXWF	24mA 5kΩ Pull-up	18 (1)	
Low-noise N-ch Open drain Buffer	EETJ	6mA	5 (1)	1-26
	EEUJ	6mA 50kΩ Pull-up	5 (1)	
	EEWJ	6mA 5kΩ Pull-up	5 (1)	
	EET1	9mA	5 (1)	
	EET3	9mA 50kΩ Pull-up	5 (1)	
	EEW3	9mA 5KΩ Pull-up	5 (1)	
	EET9	12mA	5 (1)	
	EETB	12mA 50kΩ Pull-up	5 (1)	
	EEWB	12mA 5kΩ Pull-up	5 (1)	
	EET5	18mA	5 (1)	
	EET7	18mA 50kΩ Pull-up	5 (1)	
	EEW7	18mA 5kΩ Pull-up	5 (1)	
	EETD	24mA	5 (1)	
	EETF	24mA 50kΩ Pull-up	5 (1)	
	EEWF	24mA 5kΩ Pull-up	5 (1)	

Function	Block	Description	Cells (I/O)	Page
I/O Buffer	B00U	3mA	25 (1)	1-28
	B0DU	3mA 50kΩ Pull-down	25 (1)	
	B0UU	3mA 50kΩ Pull-up	25 (1)	
	B0WU	3mA 5kΩ Pull-up	25 (1)	
	B00C	6mA	25 (1)	
	B0DC	6mA 50kΩ Pull-down	25 (1)	
	B0UC	6mA 50kΩ Pull-up	25 (1)	
	B0WC	6mA 5kΩ Pull-up	25 (1)	
	B003	9mA	25 (1)	
	B0D3	9mA 50kΩ Pull-down	25 (1)	
	B0U3	9mA 50kΩ Pull-up	25 (1)	
	B0W3	9mA 5kΩ Pull-up	25 (1)	
	B001	12mA	25 (1)	
	B0D1	12mA 50kΩ Pull-down	25 (1)	
	B0U1	12mA 50kΩ Pull-up	25 (1)	
	B0W1	12mA 5kΩ Pull-up	25 (1)	
	B005	18mA	27 (1)	
	B0D5	18mA 50kΩ Pull-down	27 (1)	
	B0U5	18mA 50kΩ Pull-up	27 (1)	
	B0W5	18mA 5kΩ Pull-up	27 (1)	
	B00F	24mA	27 (1)	
	B0DF	24mA 50kΩ Pull-down	27 (1)	
	B0UF	24mA 50kΩ Pull-up	27 (1)	
	B0WF	24mA 5kΩ Pull-up	27 (1)	
Low-noise I/O Buffer	BE0C	6mA	18 (1)	1-34
	BEDC	6mA 50kΩ Pull-down	18 (1)	
	BEUC	6mA 50kΩ Pull-up	18 (1)	
	BEWC	6mA 5kΩ Pull-up	18 (1)	
	BE03	9mA	18 (1)	
	BED3	9mA 50kΩ Pull-down	18 (1)	
	BEU3	9mA 50kΩ Pull-up	18 (1)	
	BEW3	9mA 5kΩ Pull-up	18 (1)	
	BE01	12mA	18 (1)	
	BED1	12mA 50kΩ Pull-down	18 (1)	
	BEU1	12mA 50kΩ Pull-up	18 (1)	
	BEW1	12mA 5kΩ Pull-up	18 (1)	
	BE05	18mA	18 (1)	
	BED5	18mA 50kΩ Pull-down	18 (1)	
	BEU5	18mA 50kΩ Pull-up	18 (1)	
	BEW5	18mA 5kΩ Pull-up	18 (1)	
	BE0F	24mA	18 (1)	
	BEDF	24mA 50kΩ Pull-down	18 (1)	
	BEUF	24mA 50kΩ Pull-up	18 (1)	
	BEWF	24mA 5kΩ Pull-up	18 (1)	

Function	Block	Description	Cells (I/O)	Page
Schmitt I/O Buffer	BSIU	3mA	29 (1)	1-38
	BSDU	3mA 50kΩ Pull-down	29 (1)	
	BSUU	3mA 50kΩ Pull-up	29 (1)	
	BSWU	3mA 5kΩ Pull-up	29 (1)	
	BSIC	6mA	29 (1)	
	BSDC	6mA 50kΩ Pull-down	29 (1)	
	BSUC	6mA 50kΩ Pull-up	29 (1)	
	BSWC	6mA 5kΩ Pull-up	29 (1)	
	BSI3	9mA	29 (1)	
	BSD3	9mA 50kΩ Pull-down	29 (1)	
	BSU3	9mA 50kΩ Pull-up	29 (1)	
	BSW3	9mA 5kΩ Pull-up	29 (1)	
	BSI1	12mA	29 (1)	
	BSD1	12mA 50kΩ Pull-down	29 (1)	
	BSU1	12mA 50kΩ Pull-up	29 (1)	
	BSW1	12mA 5kΩ Pull-up	29 (1)	
	BSI5	18mA	31 (1)	
	BSD5	18mA 50kΩ Pull-down	31 (1)	
	BSU5	18mA 50kΩ Pull-up	31 (1)	
	BSW5	18mA 5kΩ Pull-up	31 (1)	
	BSIF	24mA	31 (1)	
	BSDF	24mA 50kΩ Pull-down	31 (1)	
	BSUF	24mA 50kΩ Pull-up	31 (1)	
	BSWF	24mA 5kΩ Pull-up	31 (1)	
Low-noise Schmitt I/O Buffer	BFIC	6mA	22 (1)	1-44
	BFDC	6mA 50kΩ Pull-down	22 (1)	
	BFUC	6mA 50kΩ Pull-up	22 (1)	
	BFWC	6mA 5kΩ Pull-up	22 (1)	
	BFI3	9mA	22 (1)	
	BFD3	9mA 50kΩ Pull-down	22 (1)	
	BFU3	9mA 50kΩ Pull-up	22 (1)	
	BFW3	9mA 5kΩ Pull-up	22 (1)	
	BFI1	12mA	22 (1)	
	BFD1	12mA 50kΩ Pull-down	22 (1)	
	BFU1	12mA 50kΩ Pull-up	22 (1)	
	BFW1	12mA 5kΩ Pull-up	22 (1)	
	BFI5	18mA	22 (1)	
	BFD5	18mA 50kΩ Pull-down	22 (1)	
	BFU5	18mA 50kΩ Pull-up	22 (1)	
	BFW5	18mA 5kΩ Pull-up	22 (1)	
	BFIF	24mA	22 (1)	
	BFDF	24mA 50kΩ Pull-down	22 (1)	
	BFUF	24mA 50kΩ Pull-up	22 (1)	
	BFWF	24mA 5kΩ Pull-up	22 (1)	

Function	Block	Description	Cells (I/O)	Page
I/O Buffer with EN(AND)	BN2U	3mA	26 (1)	1-48
	BN4U	3mA 50kΩ Pull-down	26 (1)	
	BN2C	6mA	26 (1)	
	BN4C	6mA 50kΩ Pull-down	26 (1)	
	BN23	9mA	26 (1)	
	BN43	9mA 50kΩ Pull-down	26 (1)	
	BN21	12mA	26 (1)	
	BN41	12mA 50kΩ Pull-down	26 (1)	
	BN25	18mA	28 (1)	
	BN45	18mA 50kΩ Pull-down	28 (1)	
	BN2F	24mA	28 (1)	
	BN4F	24mA 50kΩ Pull-down	28 (1)	
I/O Buffer with EN(OR)	BN3U	3mA	26 (1)	1-52
	BN5U	3mA 50kΩ Pull-down	26 (1)	
	BN3C	6mA	26 (1)	
	BN5C	6mA 50kΩ Pull-down	26 (1)	
	BN33	9mA	26 (1)	
	BN53	9mA 50kΩ Pull-down	26 (1)	
	BN31	12mA	26 (1)	
	BN51	12mA 50kΩ Pull-down	26 (1)	
	BN35	18mA	28 (1)	
	BN55	18mA 50kΩ Pull-down	28 (1)	
	BN3F	24mA	28 (1)	
	BN5F	24mA 50kΩ Pull-down	28 (1)	

1.2 5 V Interface

Function		Block	Description	Cells (I/O)	Page
Input Buffer		FIV1	-	7 (1)	1-60
		FDV1	50kΩ Pull-down	7 (1)	
		FIF1	Schmitt	11 (1)	
		FDF1	Schmitt 50kΩ Pull-down	11 (1)	
		FIG1	Clock Driver	56 (1)	
		FDG1	Clock Driver 50kΩ Pull-down	56 (1)	
Input Buffer with EN(AND)		FN1135	-	8 (1)	1-62
		FN2135	50kΩ Pull-down	8 (1)	
Input Buffer with EN(OR)		FN1335	-	8 (1)	1-64
		FN2335	50kΩ Pull-down	8 (1)	
CMOS Level	Output Buffer	FY09	3mA	26 (1)	1-66
		FY04	6mA	26 (1)	
		FY01	9mA	28 (1)	
		FY02	12mA	28 (1)	
		FY03	18mA	28 (1)	
		FY06	24mA	28 (1)	

Function		Block	Description	Cells (I/O)	Page
CMOS Level	Low-noise Output Buffer	FZ02	12mA	28 (1)	1-68
		FZ03	18mA	28 (1)	
		FZ06	24mA	28 (1)	
	3-State Buffer	BD0T	3mA	45 (1)	1-70
		BD0E	6mA	45 (1)	
		BD08	9mA	47 (1)	
		BD07	12mA	47 (1)	
		BD09	18mA	47 (1)	
		BD0H	24mA	47 (1)	
	Low-noise 3-State Buffer	BJ07	12mA	40 (1)	1-72
		BJ09	18mA	40 (1)	
		BJ0H	24mA	40 (1)	
	I/O Buffer	BM0U	3mA	52 (1)	1-74
		BM0C	6mA	52 (1)	
		BM03	9mA	54 (1)	
		BM01	12mA	54 (1)	
		BM05	18mA	54 (1)	
		BM0F	24mA	54 (1)	
	Low-noise I/O Buffer	BP01	12mA	47 (1)	1-76
		BP05	18mA	47 (1)	
		BP0F	24mA	47 (1)	
	Schmitt I/O Buffer	BQIU	3mA	56 (1)	1-78
		BQIC	6mA	56 (1)	
		BQI3	9mA	58 (1)	
		BQI1	12mA	58 (1)	
		BQI5	18mA	58 (1)	
		BQIF	24mA	58 (1)	
	Low-noise Schmitt I/O Buffer	BUI1	12mA	51 (1)	1-80
		BUI5	18mA	51 (1)	
		BUIF	24mA	51 (1)	
	I/O Buffer with EN(AND)	BNXU35	3mA	53 (1)	1-82
		BNXC35	6mA	53 (1)	
		BNX335	9mA	55 (1)	
		BNX135	12mA	55 (1)	
		BNX535	18mA	55 (1)	
		BNXF35	24mA	55 (1)	
	I/O Buffer with EN(OR)	BNMU35	3mA	53 (1)	1-86
		BNMC35	6mA	53 (1)	
		BNM335	9mA	55 (1)	
		BNM135	12mA	55 (1)	
		BNM535	18mA	55 (1)	
		BNMF35	24mA	55 (1)	

Function		Block	Description	Cells (I/O)	Page
TTL Level	Output Buffer	FV0A	1mA	8 (1)	1-90
		FV0B	2mA	8 (1)	
		FV09	3mA	8 (1)	
		FV04	6mA	8 (1)	
		FV01	9mA	18 (1)	
		FV02	12mA	18 (1)	
		FV03	18mA	18 (1)	
		FV06	24mA	18 (1)	
	Low-noise Output Buffer	FW02	12mA	10 (1)	1-92
		FW03	18mA	10 (1)	
		FW06	24mA	10 (1)	
	3-State Buffer	BV0Q	1mA	40 (1)	1-94
		BVDQ	1mA 50kΩ Pull-down	40 (1)	
		BV0M	2mA	40 (1)	
		BVDM	2mA 50kΩ Pull-down	40 (1)	
		BV0T	3mA	40 (1)	
		BVDT	3mA 50kΩ Pull-down	40 (1)	
		BV0E	6mA	40 (1)	
		BVDE	6mA 50kΩ Pull-down	40 (1)	
		BV08	9mA	42 (1)	
		BVD8	9mA 50kΩ Pull-down	42 (1)	
		BV07	12mA	42 (1)	
		BVD7	12mA 50kΩ Pull-down	42 (1)	
		BV09	18mA	42 (1)	
		BVD9	18mA 50kΩ Pull-down	42 (1)	
		BV0H	24mA	42 (1)	
		BVDH	24mA 50kΩ Pull-down	42 (1)	
	Low-noise 3-State Buffer	BY07	12mA	28 (1)	1-98
		BYD7	12mA 50kΩ Pull-down	28 (1)	
		BY09	18mA	28 (1)	
		BYD9	18mA 50kΩ Pull-down	28 (1)	
		BY0H	24mA	28 (1)	
		BYDH	24mA 50kΩ Pull-down	28 (1)	
	N-ch Open drain Buffer	EVTT	1mA	8 (1)	1-100
		EVTK	2mA	8 (1)	
		EVTH	3mA	8 (1)	
		EVTJ	6mA	8 (1)	
		EVT1	9mA	18 (1)	
		EVT9	12mA	18 (1)	
		EVT5	18mA	18 (1)	
		EVTD	24mA	18 (1)	

Function		Block	Description	Cells (I/O)	Page
TTL Level	Low-noise N-ch Open drain Buffer	EYT9	12mA	5 (1)	1-102
		EYT5	18mA	5 (1)	
		EYTD	24mA	5 (1)	
	I/O Buffer	BW0X	1mA	47 (1)	1-104
		BWDX	1mA 50kΩ Pull-down	47 (1)	
		BW0K	2mA	47 (1)	
		BWDK	2mA 50kΩ Pull-down	47 (1)	
		BW0U	3mA	47 (1)	
		BWDU	3mA 50kΩ Pull-down	47 (1)	
		BW0C	6mA	47 (1)	
		BWDC	6mA 50kΩ Pull-down	47 (1)	
		BW03	9mA	49 (1)	
		BWD3	9mA 50kΩ Pull-down	49 (1)	
		BW01	12mA	49 (1)	
		BWD1	12mA 50kΩ Pull-down	49 (1)	
		BW05	18mA	49 (1)	
		BWD5	18mA 50kΩ Pull-down	49 (1)	
		BW0F	24mA	49 (1)	
		BWDF	24mA 50kΩ Pull-down	49 (1)	
	Low-noise I/O Buffer	BX01	12mA	35 (1)	1-108
		BXD1	12mA 50kΩ Pull-down	35 (1)	
		BX05	18mA	35 (1)	
		BXD5	18mA 50kΩ Pull-down	35 (1)	
		BX0F	24mA	35 (1)	
		BXDF	24mA 50kΩ Pull-down	35 (1)	
	Schmitt I/O Buffer	BKIX	1mA	51 (1)	1-110
		BKDX	1mA 50kΩ Pull-down	51 (1)	
		BKIK	2mA	51 (1)	
		BKDK	2mA 50kΩ Pull-down	51 (1)	
		BKIU	3mA	51 (1)	
		BKDU	3mA 50kΩ Pull-down	51 (1)	
		BKIC	6mA	51 (1)	
		BKDC	6mA 50kΩ Pull-down	51 (1)	
		BKI3	9mA	53 (1)	
		BKD3	9mA 50kΩ Pull-down	53 (1)	
		BKI1	12mA	53 (1)	
		BKD1	12mA 50kΩ Pull-down	53 (1)	
		BKI5	18mA	53 (1)	
		BKD5	18mA 50kΩ Pull-down	53 (1)	
		BKIF	24mA	53 (1)	
		BKDF	24mA 50kΩ Pull-down	53 (1)	

Function		Block	Description	Cells (I/O)	Page
TTL Level	Low-noise Schmitt I/O Buffer	BZI1	12mA	39 (1)	1-114
		BZD1	12mA 50kΩ Pull-down	39 (1)	
		BZI5	18mA	39 (1)	
		BZD5	18mA 50kΩ Pull-down	39 (1)	
		BZIF	24mA	39 (1)	
		BZDF	24mA 50kΩ Pull-down	39 (1)	
	I/O Buffer with EN(AND)	BNXV35	3mA	48 (1)	1-116
		BNYV35	3mA 50kΩ Pull-down	48 (1)	
		BNXD35	6mA	48 (1)	
		BNYD35	6mA 50kΩ Pull-down	48 (1)	
		BNX435	9mA	50 (1)	
		BNY435	9mA 50kΩ Pull-down	50 (1)	
		BNX235	12mA	50 (1)	
		BNY235	12mA 50kΩ Pull-down	50 (1)	
		BNX635	18mA	50 (1)	
		BNY635	18mA 50kΩ Pull-down	50 (1)	
		BNXG35	24mA	50 (1)	
		BNYG35	24mA 50kΩ Pull-down	50 (1)	
	I/O Buffer with EN(OR)	BNMV35	3mA	48 (1)	1-120
		BNVV35	3mA 50kΩ Pull-down	48 (1)	
		BNMD35	6mA	48 (1)	
		BNVD35	6mA 50kΩ Pull-down	48 (1)	
		BNM435	9mA	50 (1)	
		BNV435	9mA 50kΩ Pull-down	50 (1)	
		BNM235	12mA	50 (1)	
		BNV235	12mA 50kΩ Pull-down	50 (1)	
		BNM635	18mA	50 (1)	
		BNV635	18mA 50kΩ Pull-down	50 (1)	
		BNMG35	24mA	50 (1)	
		BNVG35	24mA 50kΩ Pull-down	50 (1)	

1.3 Oscillator

Function	Block	Description	Cells (I/O)	Page
Oscillator Input Buffer	OSI1	-	0 (1)	1-128
Oscillator Input Buffer for Enable	OSI2	-	0 (1)	1-130
Oscillator Output Buffer(Internal Feedback Resistor)	OSO1	-	0 (1)	1-132
Oscillator Output Buffer(for OSF Type)	OSO3	-	0 (1)	1-134
Oscillator Output Buffer(for Enable Type)	OSO7	-	0 (1)	1-136
Oscillator Output Buffer(External Feedback Resistor)	OSO9	-	0 (1)	1-138
Feedback Resistor for Oscillator	OSF1	-	0 (1)	1-140
Feedback Resistor for Oscillator For Enable	OSF3	-	0 (1)	1-142

1.4 PCI

Function	Block	Description	Cells (I/O)	Page
3V PCI Input Buffer	BP3I	-	7 (1)	1-148
3V PCI Output Buffer	BP3O	-	18 (1)	1-150
3V PCI 3-State Buffer	BP3T	-	20 (1)	1-152
3V PCI I/O Buffer	BP3B	-	27 (1)	1-154
5V PCI Input Buffer	BP5I	-	7 (1)	1-156
5V PCI Output Buffer	BP5O	-	18 (1)	1-158
5V PCI 3-State Buffer	BP5T	-	42 (1)	1-160
5V PCI I/O Buffer	BP5B	-	49 (1)	1-162

1.5 High Speed Signal Transmission

Function	Block	Description	Cells (I/O)	Page
3V GTL/GTL+/P-ECL Input Buffer for Enable Terminal	FIXA	-	56 (1)	1-168
	FUXA	50kΩ Pull-up	56 (1)	
5V GTL/GTL+/P-ECL Input Buffer for Enable Terminal	FIZA	-	56 (1)	1-170
GTL+ Input Buffer with EN	FIR2	-	19 (1)	1-172
GTL+ Input Buffer for Reference VOLTAGE	FIP2	-	0 (1)	1-174
GTL+ Output Buffer with ENB	ELTL	-	6 (1)	1-176
GTL+ I/O Buffer	BL0W	-	25 (1)	1-178

1.6 PLL

Function	Block	Description	Cells (I/O)	Page
3V Input Buffer Reference Clock	FI0P	-	7 (1)	1-184
5V Input Buffer Reference Clock	FI0Q	-	7 (1)	1-186
DPLL(Phase locked loop:25-80MHz)	F9E4	-	3770 (-)	1-188

Chapter 2 Function Block

2.1 Level Generator

Function	Block	Description	Cells (I/O)	Page
H,L Level Generator	F091	-	1 (-)	2-4

2.2 Inverter, Buffer, CTS Driver, Delay Gate

Function	Block	Description	Cells (I/O)	Page
Inverter	L101	Single Out (Low Power)	1 (-)	2-10
	F101	Single Out	1 (-)	
	F102	Single Out (X2 Drive)	2 (-)	
	F143K	Single Out (X3 Drive)	3 (-)	
	F144K	Single Out (X4 Drive)	4 (-)	
	F145K	Single Out (X5 Drive)	5 (-)	
	F146K	Single Out (X6 Drive)	6 (-)	
	F148K	Single Out (X8 Drive)	12 (-)	
	F148P	Single Out (X8 Drive)	8 (-)	
	F148BR	Single Out (X8 Drive)	12 (-)	
	F14AK	Single Out (X12 Drive)	21 (-)	
Buffer	L111	Single Out (Low Power)	1 (-)	2-12
	F111	Single Out	2 (-)	
	F112	Single Out (X2 Drive)	3 (-)	
	F153K	Single Out (X3 Drive)	4 (-)	
	F154K	Single Out (X4 Drive)	5 (-)	
	F158K	Single Out (X8 Drive)	11 (-)	
	F158BR	Single Out (X8 Drive)	11 (-)	
	F15AK	Single Out (X12 Drive)	20 (-)	
CTS Driver (Inverter Type)	FC42	Single type	132 (-)	2-14
	FC82	Single type (X2 Drive)	396 (-)	
	FC44	Double type	340 (-)	
	FC84	Double type (X2 Drive)	1020 (-)	
CTS Driver (Buffer Type)	FC52	Single type	100 (-)	2-16
	FC92	Single type (X2 Drive)	143 (-)	
	FC53	Standard type	1905 (-)	
	FC93	Standard type (X2 Drive)	1727 (-)	
	FC54	Double type	36200 (-)	
	FC94	Double type (X2 Drive)	20735 (-)	
Delay Gate	F131	-	6 (-)	2-18
	F132	-	10 (-)	
	F137	-	18 (-)	
	F138	-	34 (-)	

2.3 OR(NOR), AND(NAND)

Function	Block	Description	Cells (I/O)	Page
2-Input NOR	L202	(Low Power)	1 (-)	2-24
	F202	-	2 (-)	
	F222	(X2 Drive)	4 (-)	
	F282	(X4 Drive)	6 (-)	
	F2C2K	(X8 Drive)	12 (-)	
	L202N1	1-Input Inverter (Low Power)	2 (-)	
	F202N1	1-Input Inverter	3 (-)	
	F222N1	1-Input Inverter (X2 Drive)	5 (-)	
	F282N1	1-Input Inverter (X4 Drive)	7 (-)	
3-Input NOR	F203	-	3 (-)	2-26
	F223	(X2 Drive)	6 (-)	
	F2C3	(X4 Drive)	9 (-)	
	F2C3NS	(X4 Drive)	12 (-)	
	F203N1	1-Input Inverter	4 (-)	
	F223N1	1-Input Inverter (X2 Drive)	7 (-)	
	F2C3N1	1-Input Inverter (X4 Drive)	10 (-)	
	F2C3N1S	1-Input Inverter (X4 Drive)	14 (-)	
	F203N2	2-Input Inverter	4 (-)	
	F223N2	2-Input Inverter (X2 Drive)	7 (-)	
	F2C3N2	2-Input Inverter (X4 Drive)	9 (-)	
	F2C3N2S	2-Input Inverter (X4 Drive)	12 (-)	
4-Input NOR	L204	(Low Power)	4 (-)	2-30
	F204	-	4 (-)	
	F224	(X2 Drive)	8 (-)	
	L204N1	1-Input Inverter (Low Power)	4 (-)	
	F204N1	1-Input Inverter	5 (-)	
	F224N1	1-Input Inverter (X2 Drive)	9 (-)	
	L204N2	2-Input Inverter (Low Power)	5 (-)	
	F204N2	2-Input Inverter	5 (-)	
	F224N2	2-Input Inverter (X2 Drive)	9 (-)	
5-Input NOR	L205	(Low Power)	4 (-)	2-34
	F205	-	5 (-)	
	F225	(X2 Drive)	6 (-)	
	L205N1	1-Input Inverter (Low Power)	5 (-)	
	F205N1	1-Input Inverter	6 (-)	
	F225N1	1-Input Inverter (X2 Drive)	6 (-)	
	L205N2	2-Input Inverter (Low Power)	5 (-)	
	F205N2	2-Input Inverter	6 (-)	
	F225N2	2-Input Inverter (X2 Drive)	7 (-)	
	L205N3	3-Input Inverter (Low Power)	6 (-)	
	F205N3	3-Input Inverter	7 (-)	
	F225N3	3-Input Inverter (X2 Drive)	7 (-)	

Function	Block	Description	Cells (I/O)	Page
6-Input NOR	F206	-	5 (-)	2-38
	F226	(X2 Drive)	6 (-)	
	L206N1	1-Input Inverter (Low Power)	5 (-)	
	F206N1	1-Input Inverter	6 (-)	
	F226N1	1-Input Inverter (X2 Drive)	7 (-)	
	F206N2	2-Input Inverter	6 (-)	
	F226N2	2-Input Inverter (X2 Drive)	7 (-)	
	L206N3	3-Input Inverter (Low Power)	6 (-)	
	F206N3	3-Input Inverter	7 (-)	
	F226N3	3-Input Inverter (X2 Drive)	8 (-)	
8-Input NOR	L208	(Low Power)	7 (-)	2-42
	F208	-	7 (-)	
	F228	(X2 Drive)	8 (-)	
	L208N1	1-Input Inverter (Low Power)	8 (-)	
	F208N1	1-Input Inverter	8 (-)	
	F228N1	1-Input Inverter (X2 Drive)	9 (-)	
	L208N2	2-Input Inverter (Low Power)	8 (-)	
	F208N2	2-Input Inverter	8 (-)	
	F228N2	2-Input Inverter (X2 Drive)	9 (-)	
	L208N3	3-Input Inverter (Low Power)	9 (-)	
	F208N3	3-Input Inverter	9 (-)	
	F228N3	3-Input Inverter (X2 Drive)	10 (-)	
	L208N4	4-Input Inverter (Low Power)	9 (-)	
	F208N4	4-Input Inverter	9 (-)	
	F228N4	4-Input Inverter (X2 Drive)	10 (-)	
2-Input OR	L212	(Low Power)	2 (-)	2-48
	F212	-	2 (-)	
	F232	(X2 Drive)	3 (-)	
	F252	(X4 Drive)	6 (-)	
	F232NS	(X2 Drive)	4 (-)	
	F2D2	(X4 Drive)	7 (-)	
3-Input OR	L213	(Low Power)	2 (-)	2-50
	F213	-	3 (-)	
	F233	(X2 Drive)	4 (-)	
	F233NS	(X2 Drive)	5 (-)	
	F2D3	(X4 Drive)	9 (-)	
4-Input OR	L214	(Low Power)	3 (-)	2-52
	F214	-	3 (-)	
	F234	(X2 Drive)	4 (-)	
	L214N1	1-Input Inverter (Low Power)	3 (-)	
	F214N1	1-Input Inverter	4 (-)	
	F234N1	1-Input Inverter (X2 Drive)	5 (-)	

Function	Block	Description	Cells (I/O)	Page
5-Input OR	L215	(Low Power)	4 (-)	2-54
	F215	-	5 (-)	
	F235	(X2 Drive)	7 (-)	
	L215N1	1-Input Inverter (Low Power)	4 (-)	
	F215N1	1-Input Inverter	5 (-)	
	F235N1	1-Input Inverter (X2 Drive)	8 (-)	
6-Input OR	L216	(Low Power)	4 (-)	2-58
	F216	-	5 (-)	
	F236	(X2 Drive)	7 (-)	
	L216N1	1-Input Inverter (Low Power)	5 (-)	
	F216N1	1-Input Inverter	6 (-)	
	F236N1	1-Input Inverter (X2 Drive)	8 (-)	
	L216N2	2-Input Inverter (Low Power)	5 (-)	
	F216N2	2-Input Inverter	6 (-)	
	F236N2	2-Input Inverter (X2 Drive)	8 (-)	
8-Input OR	L218	(Low Power)	6 (-)	2-62
	F218	-	8 (-)	
	F238	(X2 Drive)	9 (-)	
	L218N1	1-Input Inverter (Low Power)	7 (-)	
	F218N1	1-Input Inverter	9 (-)	
	F238N1	1-Input Inverter (X2 Drive)	10 (-)	
	L218N2	2-Input Inverter (Low Power)	7 (-)	
	F218N2	2-Input Inverter	9 (-)	
	F238N2	2-Input Inverter (X2 Drive)	10 (-)	
	L218N3	3-Input Inverter (Low Power)	8 (-)	
	F218N3	3-Input Inverter	10 (-)	
	F238N3	3-Input Inverter (X2 Drive)	11 (-)	
2-Input NAND	L302	(Low Power)	1 (-)	2-68
	F302	-	2 (-)	
	F322	(X2 Drive)	4 (-)	
	F382	(X4 Drive)	6 (-)	
	F3C2K	(X8 Drive)	12 (-)	
	F382NS	(X4 Drive)	8 (-)	
	L302N1	1-Input Inverter (Low Power)	2 (-)	
	F302N1	1-Input Inverter	3 (-)	
	F322N1	1-Input Inverter (X2 Drive)	5 (-)	
	F382N1	1-Input Inverter (X4 Drive)	7 (-)	
	F382N1S	1-Input Inverter (X4 Drive)	10 (-)	

Function	Block	Description	Cells (I/O)	Page
3-Input NAND	L303	(Low Power)	2 (-)	2-70
	F303	-	3 (-)	
	F323	(X2 Drive)	6 (-)	
	F3C3	(X4 Drive)	9 (-)	
	F3C3NS	(X4 Drive)	12 (-)	
	L303N1	1-Input Inverter (Low Power)	2 (-)	
	F303N1	1-Input Inverter	4 (-)	
	F323N1	1-Input Inverter (X2 Drive)	7 (-)	
	F3C3N1	1-Input Inverter (X4 Drive)	10 (-)	
	F3C3N1S	1-Input Inverter (X4 Drive)	14 (-)	
	L303N2	2-Input Inverter (Low Power)	3 (-)	
	F303N2	2-Input Inverter	4 (-)	
	F323N2	2-Input Inverter (X2 Drive)	7 (-)	
	F3C3N2	2-Input Inverter (X4 Drive)	10 (-)	
	F3C3N2S	2-Input Inverter (X4 Drive)	16 (-)	
4-Input NAND	L304	(Low Power)	2 (-)	2-74
	F304	-	4 (-)	
	F324	(X2 Drive)	8 (-)	
	F3C4	(X4 Drive)	10 (-)	
	F3C4NS	(X4 Drive)	16 (-)	
	L304N1	1-Input Inverter (Low Power)	3 (-)	
	F304N1	1-Input Inverter	5 (-)	
	F324N1	1-Input Inverter (X2 Drive)	9 (-)	
	F3C4N1	1-Input Inverter (X4 Drive)	11 (-)	
	F3C4N1S	1-Input Inverter (X4 Drive)	18 (-)	
	L304N2	2-Input Inverter (Low Power)	3 (-)	
	F304N2	2-Input Inverter	5 (-)	
	F324N2	2-Input Inverter (X2 Drive)	9 (-)	
	F3C4N2	2-Input Inverter (X4 Drive)	11 (-)	
	F3C4N2S	2-Input Inverter (X4 Drive)	20 (-)	
5-Input NAND	L305	(Low Power)	4 (-)	2-78
	F305	-	5 (-)	
	F325	(X2 Drive)	6 (-)	
	L305N1	1-Input Inverter (Low Power)	5 (-)	
	F305N1	1-Input Inverter	6 (-)	
	F325N1	1-Input Inverter (X2 Drive)	6 (-)	
	L305N2	2-Input Inverter (Low Power)	5 (-)	
	F305N2	2-Input Inverter	6 (-)	
	F325N2	2-Input Inverter (X2 Drive)	7 (-)	
	L305N3	3-Input Inverter (Low Power)	6 (-)	
	F305N3	3-Input Inverter	7 (-)	
	F325N3	3-Input Inverter (X2 Drive)	7 (-)	

Function	Block	Description	Cells (I/O)	Page
6-Input NAND	L306	(Low Power)	5 (-)	2-82
	F306	-	5 (-)	
	F326	(X2 Drive)	6 (-)	
	L306N1	1-Input Inverter (Low Power)	5 (-)	
	F306N1	1-Input Inverter	6 (-)	
	F326N1	1-Input Inverter (X2 Drive)	7 (-)	
	L306N2	2-Input Inverter (Low Power)	6 (-)	
	F306N2	2-Input Inverter	6 (-)	
	F326N2	2-Input Inverter (X2 Drive)	7 (-)	
	L306N3	3-Input Inverter (Low Power)	6 (-)	
	F306N3	3-Input Inverter	7 (-)	
	F326N3	3-Input Inverter (X2 Drive)	8 (-)	
8-Input NAND	F308	-	6 (-)	2-86
	F328	(X2 Drive)	7 (-)	
	L308N1	1-Input Inverter (Low Power)	6 (-)	
	F308N1	1-Input Inverter	7 (-)	
	F328N1	1-Input Inverter (X2 Drive)	8 (-)	
	F308N2	2-Input Inverter	7 (-)	
	F328N2	2-Input Inverter (X2 Drive)	8 (-)	
	L308N3	3-Input Inverter (Low Power)	7 (-)	
	F308N3	3-Input Inverter	8 (-)	
	F328N3	3-Input Inverter (X2 Drive)	9 (-)	
	F308N4	4-Input Inverter	8 (-)	
	F328N4	4-Input Inverter (X2 Drive)	9 (-)	
2-Input AND	L312	(Low Power)	2 (-)	2-92
	F312	-	2 (-)	
	F332	(X2 Drive)	3 (-)	
	F352	(X4 Drive)	6 (-)	
	F3D2	(X8 Drive)	16 (-)	
	F332NS	(X2 Drive)	4 (-)	
	F352NS	(X4 Drive)	7 (-)	
3-Input AND	L313	(Low Power)	2 (-)	2-94
	F313	-	3 (-)	
	F333	(X2 Drive)	4 (-)	
	F3D3	(X4 Drive)	9 (-)	
	F333NS	(X2 Drive)	5 (-)	
4-Input AND	L314	(Low Power)	3 (-)	2-96
	F314	-	3 (-)	
	F334	(X2 Drive)	4 (-)	
	F3D4	(X4 Drive)	10 (-)	
	F334NS	(X2 Drive)	6 (-)	
	L314N1	1-Input Inverter (Low Power)	3 (-)	
	F314N1	1-Input Inverter	4 (-)	
	F334N1	1-Input Inverter (X2 Drive)	5 (-)	

Function	Block	Description	Cells (I/O)	Page
5-Input AND	L315	(Low Power)	4 (-)	2-100
	F315	-	5 (-)	
	F335	(X2 Drive)	7 (-)	
	L315N1	1-Input Inverter (Low Power)	4 (-)	
	F315N1	1-Input Inverter	5 (-)	
	F335N1	1-Input Inverter (X2 Drive)	7 (-)	
6-Input AND	L316	(Low Power)	4 (-)	2-104
	F316	-	5 (-)	
	F336	(X2 Drive)	7 (-)	
	L316N1	1-Input Inverter (Low Power)	5 (-)	
	F316N1	1-Input Inverter	6 (-)	
	F336N1	1-Input Inverter (X2 Drive)	8 (-)	
	L316N2	2-Input Inverter (Low Power)	5 (-)	
	F316N2	2-Input Inverter	6 (-)	
	F336N2	2-Input Inverter (X2 Drive)	8 (-)	
8-Input AND	L318	(Low Power)	5 (-)	2-108
	F318	-	6 (-)	
	F338	(X2 Drive)	8 (-)	
	L318N1	1-Input Inverter (Low Power)	6 (-)	
	F318N1	1-Input Inverter	7 (-)	
	F338N1	1-Input Inverter (X2 Drive)	9 (-)	
	L318N2	2-Input Inverter (Low Power)	6 (-)	
	F318N2	2-Input Inverter	7 (-)	
	F338N2	2-Input Inverter (X2 Drive)	9 (-)	
	L318N3	3-Input Inverter (Low Power)	7 (-)	
	F318N3	3-Input Inverter	8 (-)	
	F338N3	3-Input Inverter (X2 Drive)	10 (-)	

2.4 AND-NOR

Function	Block	Description	Cells (I/O)	Page
1-2-Input AND-NOR	L421	(Low Power)	2 (-)	2-118
	F421	-	3 (-)	
	F421NP	(X2 Drive)	5 (-)	
	F421T	(X4 Drive)	12 (-)	
	L421NA	(Low Power)	2 (-)	
	F421NA	-	4 (-)	
	F421NAP	(X2 Drive)	5 (-)	
	F421NAT	(X4 Drive)	14 (-)	
	L421NB	(Low Power)	3 (-)	
	F421NB	-	4 (-)	
	F421NBP	(X2 Drive)	6 (-)	
	F421NBT	(X4 Drive)	16 (-)	
	L421NC	(Low Power)	3 (-)	
	F421NC	-	5 (-)	
	F421NCP	(X2 Drive)	6 (-)	
	F421NCT	(X4 Drive)	9 (-)	
	L421ND	(Low Power)	2 (-)	
	F421ND	-	4 (-)	
	F421NDP	(X2 Drive)	5 (-)	
	F421NDT	(X4 Drive)	14 (-)	
	L421NE	(Low Power)	3 (-)	
	F421NE	-	4 (-)	
	F421NEP	(X2 Drive)	6 (-)	
	F421NET	(X4 Drive)	16 (-)	

Function	Block	Description	Cells (I/O)	Page
1-1-2-Input AND-NOR	F422	-	4 (-)	2-122
	F422NP	(X2 Drive)	5 (-)	
	F422T	(X4 Drive)	16 (-)	
	F422NA	-	5 (-)	
	F422NAP	(X2 Drive)	6 (-)	
	F422NAT	(X4 Drive)	18 (-)	
	F422NB	-	5 (-)	
	F422NBP	(X2 Drive)	6 (-)	
	F422NBT	(X4 Drive)	16 (-)	
	F422NC	-	6 (-)	
	F422NCP	(X2 Drive)	7 (-)	
	F422NCT	(X4 Drive)	18 (-)	
	F422ND	-	6 (-)	
	F422NDP	(X2 Drive)	7 (-)	
	F422NDT	(X4 Drive)	10 (-)	
	F422NE	-	5 (-)	
	F422NEP	(X2 Drive)	6 (-)	
	F422NET	(X4 Drive)	20 (-)	
	F422NF	-	6 (-)	
	F422NFP	(X2 Drive)	7 (-)	
	F422NFT	(X4 Drive)	22 (-)	
	F422NG	-	5 (-)	
	F422NGP	(X2 Drive)	6 (-)	
	F422NGT	(X4 Drive)	18 (-)	
	F422NH	-	5 (-)	
	F422NHP	(X2 Drive)	6 (-)	
	F422NHT	(X4 Drive)	20 (-)	

Function	Block	Description	Cells (I/O)	Page
1-3-Input AND-NOR	L423	(Low Power)	2 (-)	2-128
	F423	-	4 (-)	
	F423NP	(X2 Drive)	5 (-)	
	F423T	(X4 Drive)	16 (-)	
	L423NA	(Low Power)	3 (-)	
	F423NA	-	5 (-)	
	F423NAP	(X2 Drive)	6 (-)	
	F423NAT	(X4 Drive)	18 (-)	
	L423NB	(Low Power)	3 (-)	
	F423NB	-	5 (-)	
	F423NBP	(X2 Drive)	6 (-)	
	F423NBT	(X4 Drive)	20 (-)	
	L423NC	(Low Power)	4 (-)	
	F423NC	-	6 (-)	
	F423NCP	(X2 Drive)	7 (-)	
	F423NCT	(X4 Drive)	22 (-)	
	L423ND	(Low Power)	4 (-)	
	F423ND	-	6 (-)	
	F423NDP	(X2 Drive)	7 (-)	
	F423NDT	(X4 Drive)	10 (-)	
	L423NE	(Low Power)	3 (-)	
	F423NE	-	5 (-)	
	F423NEP	(X2 Drive)	6 (-)	
	F423NET	(X4 Drive)	18 (-)	
	L423NF	(Low Power)	3 (-)	
	F423NF	-	5 (-)	
	F423NFP	(X2 Drive)	6 (-)	
	F423NFT	(X4 Drive)	20 (-)	
	L423NG	(Low Power)	4 (-)	
	F423NG	-	6 (-)	
	F423NGP	(X2 Drive)	7 (-)	
	F423NGT	(X4 Drive)	22 (-)	

Function	Block	Description	Cells (I/O)	Page
2-2-Input AND-NOR	L424	(Low Power)	2 (-)	2-134
	F424	-	4 (-)	
	F424NP	(X2 Drive)	5 (-)	
	F424T	(X4 Drive)	16 (-)	
	L424NA	(Low Power)	3 (-)	
	F424NA	-	5 (-)	
	F424NAP	(X2 Drive)	6 (-)	
	F424NAT	(X4 Drive)	18 (-)	
	L424NB	(Low Power)	3 (-)	
	F424NB	-	5 (-)	
	F424NBP	(X2 Drive)	6 (-)	
	F424NBT	(X4 Drive)	20 (-)	
	L424NC	(Low Power)	4 (-)	
	F424NC	-	6 (-)	
	F424NCP	(X2 Drive)	7 (-)	
	F424NCT	(X4 Drive)	10 (-)	
	L424ND	(Low Power)	3 (-)	
	F424ND	-	5 (-)	
	F424NDP	(X2 Drive)	6 (-)	
	F424NDT	(X4 Drive)	20 (-)	
	L424NE	(Low Power)	4 (-)	
	F424NE	-	6 (-)	
	F424NEP	(X2 Drive)	7 (-)	
	F424NET	(X4 Drive)	22 (-)	
2-2-2-Input AND-NOR	L425	(Low Power)	5 (-)	2-140
	F425	-	6 (-)	
	F425NP	(X2 Drive)	6 (-)	
	F425T	(X4 Drive)	24 (-)	
3-3-Input AND-NOR	L426	(Low Power)	5 (-)	2-142
	F426	-	6 (-)	
	F426NP	(X2 Drive)	6 (-)	
	F426T	(X4 Drive)	24 (-)	
2-3-Input AND-NOR	L427	(Low Power)	4 (-)	2-144
	F427	-	5 (-)	
	F427NP	(X2 Drive)	6 (-)	
	F427T	(X4 Drive)	20 (-)	
1-2-2-Input AND-NOR	F428	-	5 (-)	2-146
	F428NP	(X2 Drive)	6 (-)	
	F428T	(X4 Drive)	20 (-)	
2-2-2-2-Input AND-NOR	L429	(Low Power)	6 (-)	2-148
	F429	-	6 (-)	
	F429NP	(X2 Drive)	7 (-)	

Function	Block	Description	Cells (I/O)	Page
1-4-Input AND-NOR	L440	(Low Power)	3 (-)	2-150
	F440	-	5 (-)	
	F440NP	(X2 Drive)	6 (-)	
1-5-Input AND-NOR	L441	(Low Power)	5 (-)	2-152
	F441	-	7 (-)	
	F441NP	(X2 Drive)	8 (-)	
4-4-Input AND-NOR	L442	(Low Power)	6 (-)	2-154
	F442	-	11 (-)	
	F442NP	(X2 Drive)	12 (-)	
4-4-4-Input AND-NOR	L444	(Low Power)	8 (-)	2-156
	F444	-	8 (-)	
	F444NP	(X2 Drive)	9 (-)	
2-4-Input AND-NOR	L445	(Low Power)	5 (-)	2-160
	F445	-	6 (-)	
	F445NP	(X2 Drive)	6 (-)	
1-1-1-2-Input AND-NOR	L446	(Low Power)	4 (-)	2-162
	F446	-	5 (-)	
	F446NP	(X2 Drive)	6 (-)	
1-1-1-3-Input AND-NOR	L447	(Low Power)	5 (-)	2-164
	F447	-	5 (-)	
	F447NP	(X2 Drive)	6 (-)	
1-1-2-2-Input AND-NOR	L448	(Low Power)	5 (-)	2-166
	F448	-	5 (-)	
	F448NP	(X2 Drive)	6 (-)	
3-3-3-3-Input AND-NOR	F449	-	8 (-)	2-168
	F449NP	(X2 Drive)	9 (-)	
3-3-3-Input AND-NOR	L460	(Low Power)	6 (-)	2-170
	F460	-	7 (-)	
	F460NP	(X2 Drive)	8 (-)	
1-2-3-Input AND-NOR	L462	(Low Power)	5 (-)	2-172
	F462	-	6 (-)	
	F462NP	(X2 Drive)	6 (-)	
1-1-3-Input AND-NOR	L463	(Low Power)	4 (-)	2-174
	F463	-	5 (-)	
	F463NP	(X2 Drive)	6 (-)	
1-1-4-Input AND-NOR	L464	(Low Power)	5 (-)	2-176
	F464	-	5 (-)	
	F464NP	(X2 Drive)	6 (-)	
1-1-1-1-2-Input AND-NOR	F465	-	5 (-)	2-178
	F465NP	(X2 Drive)	6 (-)	
4-4-4-4-Input AND-NOR	F466	-	10 (-)	2-180
	F466NP	(X2 Drive)	11 (-)	

2.5 OR-NAND

Function	Block	Description	Cells (I/O)	Page
1-4-Input OR-NAND	L430	(Low Power)	4 (-)	2-188
	F430	-	5 (-)	
	F430NP	(X2 Drive)	7 (-)	
1-2-Input OR-NAND	L431	(Low Power)	2 (-)	2-190
	F431	-	3 (-)	
	F431NP	(X2 Drive)	5 (-)	
	F431T	(X4 Drive)	12 (-)	
	L431NA	(Low Power)	2 (-)	
	F431NA	-	4 (-)	
	F431NAP	(X2 Drive)	5 (-)	
	F431NAT	(X4 Drive)	14 (-)	
	L431NB	(Low Power)	3 (-)	
	F431NB	-	4 (-)	
	F431NBP	(X2 Drive)	6 (-)	
	F431NBT	(X4 Drive)	16 (-)	
	L431NC	(Low Power)	3 (-)	
	F431NC	-	5 (-)	
	F431NCP	(X2 Drive)	6 (-)	
	F431NCT	(X4 Drive)	14 (-)	
	L431ND	(Low Power)	2 (-)	
	F431ND	-	4 (-)	
	F431NDP	(X2 Drive)	5 (-)	
	F431NDT	(X4 Drive)	14 (-)	
	L431NE	(Low Power)	3 (-)	
	F431NE	-	4 (-)	
	F431NEP	(X2 Drive)	6 (-)	
	F431NET	(X4 Drive)	12 (-)	

Function	Block	Description	Cells (I/O)	Page
1-1-2-Input OR-NAND	L432	(Low Power)	2 (-)	2-194
	F432	-	4 (-)	
	F432NP	(X2 Drive)	5 (-)	
	F432T	(X4 Drive)	16 (-)	
	L432NA	(Low Power)	3 (-)	
	F432NA	-	5 (-)	
	F432NAP	(X2 Drive)	6 (-)	
	F432NAT	(X4 Drive)	18 (-)	
	L432NB	(Low Power)	3 (-)	
	F432NB	-	5 (-)	
	F432NBP	(X2 Drive)	6 (-)	
	F432NBT	(X4 Drive)	20 (-)	
	L432NC	(Low Power)	4 (-)	
	F432NC	-	6 (-)	
	F432NCP	(X2 Drive)	7 (-)	
	F432NCT	(X4 Drive)	22 (-)	
	L432ND	(Low Power)	4 (-)	
	F432ND	-	6 (-)	
	F432NDP	(X2 Drive)	7 (-)	
	F432NDT	(X4 Drive)	20 (-)	
	L432NE	(Low Power)	3 (-)	
	F432NE	-	5 (-)	
	F432NEP	(X2 Drive)	6 (-)	
	F432NET	(X4 Drive)	20 (-)	
	L432NF	(Low Power)	4 (-)	
	F432NF	-	6 (-)	
	F432NFP	(X2 Drive)	7 (-)	
	F432NFT	(X4 Drive)	18 (-)	
	L432NG	(Low Power)	3 (-)	
	F432NG	-	5 (-)	
	F432NGP	(X2 Drive)	6 (-)	
	F432NGT	(X4 Drive)	18 (-)	
	L432NH	(Low Power)	3 (-)	
	F432NH	-	5 (-)	
	F432NHP	(X2 Drive)	6 (-)	
	F432NHT	(X4 Drive)	16 (-)	

Function	Block	Description	Cells (I/O)	Page
1-3-Input OR-NAND	F433	-	4 (-)	2-202
	F433NP	(X2 Drive)	5 (-)	
	F433T	(X4 Drive)	16 (-)	
	F433NA	-	5 (-)	
	F433NAP	(X2 Drive)	6 (-)	
	F433NAT	(X4 Drive)	18 (-)	
	F433NB	-	5 (-)	
	F433NBP	(X2 Drive)	6 (-)	
	F433NBT	(X4 Drive)	20 (-)	
	F433NC	-	6 (-)	
	F433NCP	(X2 Drive)	7 (-)	
	F433NCT	(X4 Drive)	18 (-)	
	F433ND	-	6 (-)	
	F433NDP	(X2 Drive)	7 (-)	
	F433NDT	(X4 Drive)	16 (-)	
	F433NE	-	5 (-)	
	F433NEP	(X2 Drive)	6 (-)	
	F433NET	(X4 Drive)	18 (-)	
	F433NF	-	5 (-)	
	F433NFP	(X2 Drive)	6 (-)	
	F433NFT	(X4 Drive)	16 (-)	
	F433NG	-	6 (-)	
	F433NGP	(X2 Drive)	7 (-)	
	F433NGT	(X4 Drive)	14 (-)	

Function	Block	Description	Cells (I/O)	Page
2-2-Input OR-NAND	L434	(Low Power)	2 (-)	2-208
	F434	-	4 (-)	
	F434NP	(X2 Drive)	5 (-)	
	F434T	(X4 Drive)	16 (-)	
	L434NA	(Low Power)	3 (-)	
	F434NA	-	5 (-)	
	F434NAP	(X2 Drive)	6 (-)	
	F434NAT	(X4 Drive)	18 (-)	
	L434NB	(Low Power)	3 (-)	
	F434NB	-	5 (-)	
	F434NBP	(X2 Drive)	6 (-)	
	F434NBT	(X4 Drive)	16 (-)	
	L434NC	(Low Power)	4 (-)	
	F434NC	-	6 (-)	
	F434NCP	(X2 Drive)	7 (-)	
	F434NCT	(X4 Drive)	16 (-)	
	L434ND	(Low Power)	3 (-)	
	F434ND	-	5 (-)	
	F434NDP	(X2 Drive)	6 (-)	
	F434NDT	(X4 Drive)	20 (-)	
	L434NE	(Low Power)	4 (-)	
	F434NE	-	6 (-)	
	F434NEP	(X2 Drive)	7 (-)	
	F434NET	(X4 Drive)	18 (-)	
2-3-Input OR-NAND	L435	(Low Power)	4 (-)	2-214
	F435	-	8 (-)	
	F435NP	(X2 Drive)	9 (-)	
	F435T	(X4 Drive)	20 (-)	
3-3-Input OR-NAND	L436	(Low Power)	5 (-)	2-216
	F436	-	9 (-)	
	F436NP	(X2 Drive)	10 (-)	
	F436T	(X4 Drive)	24 (-)	
1-2-2-Input OR-NAND	F437	-	5 (-)	2-218
	F437NP	(X2 Drive)	6 (-)	
	F437T	(X4 Drive)	20 (-)	
2-2-2-Input OR-NAND	L438	(Low Power)	5 (-)	2-220
	F438	-	6 (-)	
	F438NP	(X2 Drive)	6 (-)	
1-5-Input OR-NAND	L439	(Low Power)	5 (-)	2-222
	F439	-	6 (-)	
	F439NP	(X2 Drive)	8 (-)	
2-4-Input OR-NAND	L450	(Low Power)	5 (-)	2-224
	F450	-	6 (-)	
	F450NP	(X2 Drive)	8 (-)	

Function	Block	Description	Cells (I/O)	Page
4-4-Input OR-NAND	L451	(Low Power)	7 (-)	2-226
	F451	-	8 (-)	
	F451NP	(X2 Drive)	10 (-)	
1-1-3-Input OR-NAND	L452	(Low Power)	4 (-)	2-228
	F452	-	5 (-)	
	F452NP	(X2 Drive)	6 (-)	
1-1-4-Input OR-NAND	L453	(Low Power)	5 (-)	2-230
	F453	-	6 (-)	
	F453NP	(X2 Drive)	9 (-)	
2-2-2-2-Input OR-NAND	F454	-	13 (-)	2-232
	F454NP	(X2 Drive)	14 (-)	
4-4-4-Input OR-NAND	F457	-	10 (-)	2-234
	F457NP	(X2 Drive)	11 (-)	
1-1-1-2-Input OR-NAND	L458	(Low Power)	4 (-)	2-236
	F458	-	5 (-)	
	F458NP	(X2 Drive)	5 (-)	
1-1-1-3-Input OR-NAND	L459	(Low Power)	5 (-)	2-238
	F459	-	5 (-)	
	F459NP	(X2 Drive)	6 (-)	
1-1-1-1-2-Input OR-NAND	F490	-	5 (-)	2-240
	F490NP	(X2 Drive)	6 (-)	
1-2-3-Input OR-NAND	L491	(Low Power)	5 (-)	2-242
	F491	-	5 (-)	
	F491NP	(X2 Drive)	6 (-)	
3-3-3-Input OR-NAND	L493	(Low Power)	6 (-)	2-244
	F493	-	7 (-)	
	F493NP	(X2 Drive)	8 (-)	
1-1-2-2-Input OR-NAND	L495	(Low Power)	5 (-)	2-246
	F495	-	6 (-)	
	F495NP	(X2 Drive)	6 (-)	
3-3-3-3-Input OR-NAND	F496	-	8 (-)	2-248
	F496NP	(X2 Drive)	9 (-)	
4-4-4-4-Input OR-NAND	F498	-	14 (-)	2-250
	F498NP	(X2 Drive)	16 (-)	

2.6 Exclusive OR, Exclusive NOR

Function	Block	Description	Cells (I/O)	Page
2-Input Exclusive OR	L511	(Low Power)	3 (-)	2-258
	F511	-	4 (-)	
	F511NP	(X2 Drive)	5 (-)	
	F511NT	(X4 Drive)	11 (-)	
3-Input Exclusive OR	L516	(Low Power)	6 (-)	2-260
	F516	-	9 (-)	
	F516NP	(X2 Drive)	9 (-)	
	F516NT	(X4 Drive)	14 (-)	
2-Input Exclusive NOR	L512	(Low Power)	3 (-)	2-262
	F512	-	4 (-)	
	F512NP	(X2 Drive)	5 (-)	
	F512NT	(X4 Drive)	11 (-)	
3-Input Exclusive NOR	L517	(Low Power)	6 (-)	2-264
	F517	-	8 (-)	
	F517NT	(X4 Drive)	14 (-)	

2.7 Adder, 3-State Buffer, Decoder, Multiplexer, Generator

Function	Block	Description	Cells (I/O)	Page
1-Bit Full Adder	F521	-	9 (-)	2-270
	F521NP	(X2 Drive)	19 (-)	
	F521NT	(X4 Drive)	26 (-)	
4-Bit Full Adder	F523	-	34 (-)	2-272
1-Bit Carry Save Adder	F528	-	11 (-)	2-276
3-State Buffer	L531	with EN (Low Power)	4 (-)	2-278
	F531	with EN	5 (-)	
	F533	with EN (X2 Drive)	7 (-)	
	F53F	with EN (X4 Drive)	11 (-)	
	F53H	with EN (X8 Drive)	24 (-)	
	L532	with ENB (Low Power)	4 (-)	
	F532	with ENB	5 (-)	
	F534	with ENB (X2 Drive)	7 (-)	
	F53G	with ENB (X4 Drive)	11 (-)	
	F53K	with ENB (X8 Drive)	24 (-)	
	F541	Inverter with EN	3 (-)	
	F543	Inverter with EN (X2 Drive)	4 (-)	
	F54F	Inverter with EN (X4 Drive)	6 (-)	
	F54H	Inverter with EN (X8 Drive)	25 (-)	
	F542	Inverter with ENB	3 (-)	
	F544	Inverter with ENB (X2 Drive)	4 (-)	
	F54G	Inverter with ENB (X4 Drive)	6 (-)	
	F54K	Inverter with ENB (X8 Drive)	25 (-)	

Function	Block	Description	Cells (I/O)	Page
2 to 4 Decoder	L560	Positive Out (Low Power)	6 (-)	2-282
	F560	Positive Out	10 (-)	
	F560NP	Positive Out (X2 Drive)	18 (-)	
	L561	Negative Out (Low Power)	6 (-)	
	F561	Negative Out	10 (-)	
	F561NP	Negative Out (X2 Drive)	18 (-)	
	L981	Negative Out with ENB (Low Power)	8 (-)	
	F981	Negative Out with ENB	13 (-)	
3 to 8 Decoder	L982	Negative Out with ENB (Low Power)	17 (-)	2-286
	F982	Negative Out with ENB	26 (-)	
2 to 1 Multiplexer (Positive Out)	F565	-	4 (-)	2-290
	F56C	(X2 Drive)	7 (-)	
	F565NT	(X4 Drive)	11 (-)	
	L571	with ENB (Low Power)	4 (-)	
	F571	with ENB	6 (-)	
	F571NP	with ENB (X2 Drive)	8 (-)	
2 to 1 Multiplexer (Negative Out)	F57B	-	5 (-)	2-292
	F57BNP	(X2 Drive)	6 (-)	
4 to 1 Multiplexer (Positive Out)	F564	-	8 (-)	2-294
	F56B	(X2 Drive)	11 (-)	
	F564NT	(X4 Drive)	16 (-)	
	F570	with ENB	10 (-)	
	F570NP	with ENB (X2 Drive)	12 (-)	
	F56BNSP	High-speed (X2 Drive)	15 (-)	
	F564NST	High-speed (X4 Drive)	21 (-)	
4 to 1 Multiplexer (Negative Out)	F57A	-	10 (-)	2-298
	F57ANP	(X2 Drive)	10 (-)	
8 to 1 Multiplexer (Positive Out)	F563	-	17 (-)	2-300
	F563NP	(X2 Drive)	20 (-)	
	F563NT	(X4 Drive)	25 (-)	
	F569	with ENB	19 (-)	
	F569NP	with ENB (X2 Drive)	21 (-)	
	F563NSP	High-speed (X2 Drive)	31 (-)	
	F563NST	High-speed (X4 Drive)	41 (-)	
8 to 1 Multiplexer (Negative Out)	F579	-	17 (-)	2-306
Quad 2 to 1 Multiplexer (Positive Out)	F552	-	13 (-)	2-308
Quad 2 to 1 Multiplexer (Negative Out)	F555	-	9 (-)	2-310
	L572	with ENB (Low Power)	10 (-)	
	F572	with ENB	14 (-)	
Quad 4 to 1 Multiplexer (Positive Out)	F551	-	27 (-)	2-314
Quad 4 to 1 Multiplexer (Negative Out)	F554	-	29 (-)	2-318
Quad 8 to 1 Multiplexer (Positive Out)	F550	-	64 (-)	2-322
Quad 8 to 1 Multiplexer (Negative Out)	F553	-	64 (-)	2-326

Function	Block	Description	Cells (I/O)	Page
8-Bit Odd Parity Generator	F581	-	19 (-)	2-330
	F581NSP	(X2 Drive)	21 (-)	
8-Bit Even Parity Generator	F582	-	19 (-)	2-334
	F582NSP	(X2 Drive)	21 (-)	

2.8 RS-F/F, RS-latch

Function	Block	Description	Cells (I/O)	Page
RS-Latch	F595	-	5 (-)	2-342
RS-F/F with R,S	F596	-	11 (-)	2-344

2.9 D-Latch

Function	Block	Description	Cells (I/O)	Page
D-Latch	F601NL	(Low Power)	5 (-)	2-350
	F601	-	6 (-)	
	F601NP	(X2 Drive)	8 (-)	
	L601	Q Out (Low Power)	4 (-)	
	F601NQL	Q Out (Low Power)	4 (-)	
	F601NQ	Q Out	5 (-)	
	F601NQP	Q Out (X2 Drive)	6 (-)	
	F601NBL	QB Out (Low Power)	4 (-)	
	F601NB	QB Out	5 (-)	
	F601NBP	QB Out (X2 Drive)	6 (-)	
D-Latch (High Speed)	F6R1	-	6 (-)	2-354
D-Latch with R	F602NL	(Low Power)	6 (-)	2-356
	F602	-	6 (-)	
	F602NP	(X2 Drive)	9 (-)	
	L602	Q Out (Low Power)	5 (-)	
	F602NQL	Q Out (Low Power)	5 (-)	
	F602NQ	Q Out	6 (-)	
	F602NQP	Q Out (X2 Drive)	7 (-)	
	F602NB	QB Out	6 (-)	
	F602NBP	QB Out (X2 Drive)	7 (-)	
D-Latch with R (High Speed)	F6R2	-	7 (-)	2-360
D-Latch with RB	F603NL	(Low Power)	5 (-)	2-362
	F603	-	7 (-)	
	F603NP	(X2 Drive)	8 (-)	
	L603	Q Out (Low Power)	4 (-)	
	F603NQ	Q Out	5 (-)	
	F603NQP	Q Out (X2 Drive)	6 (-)	
	F603NBL	QB Out (Low Power)	5 (-)	
	F603NB	QB Out	6 (-)	
	F603NBP	QB Out (X2 Drive)	7 (-)	

Function	Block	Description	Cells (I/O)	Page
D-Latch with RB (High Speed)	F6R5	-	6 (-)	2-366
D-Latch with SB	F60KNL	(Low Power)	6 (-)	2-368
	F60K	-	7 (-)	
	F60KNP	(X2 Drive)	9 (-)	
	F60KNQL	Q Out (Low Power)	5 (-)	
	F60KNQ	Q Out	6 (-)	
	F60KNQP	Q Out (X2 Drive)	7 (-)	
	F60KNB	QB Out	5 (-)	
	F60KNBP	QB Out (X2 Drive)	6 (-)	
D-Latch with RB,SB	F60JNL	(Low Power)	6 (-)	2-372
	F60J	-	7 (-)	
	F60JNP	(X2 Drive)	9 (-)	
	F60JNQ	Q Out	6 (-)	
	F60JNQP	Q Out (X2 Drive)	7 (-)	
	F60JNBL	QB Out (Low Power)	5 (-)	
	F60JNB	QB Out	6 (-)	
	F60JNBP	QB Out (X2 Drive)	7 (-)	
D-Latch (GB)	F604NL	(Low Power)	5 (-)	2-376
	F604	-	6 (-)	
	F604NP	(X2 Drive)	8 (-)	
	L604	Q Out (Low Power)	4 (-)	
	F604NQL	Q Out (Low Power)	4 (-)	
	F604NQ	Q Out	5 (-)	
	F604NQP	Q Out (X2 Drive)	6 (-)	
	F604NBL	QB Out (Low Power)	4 (-)	
	F604NB	QB Out	5 (-)	
	F604NBP	QB Out (X2 Drive)	6 (-)	
D-Latch (GB) (High Speed)	F6R8	-	6 (-)	2-380
D-Latch (GB) with RB	F605NL	(Low Power)	5 (-)	2-382
	F605	-	7 (-)	
	F605NP	(X2 Drive)	8 (-)	
	L605	Q Out (Low Power)	4 (-)	
	F605NQ	Q Out	5 (-)	
	F605NQP	Q Out (X2 Drive)	6 (-)	
	F605NBL	QB Out (Low Power)	5 (-)	
	F605NB	QB Out	6 (-)	
	F605NBP	QB Out (X2 Drive)	7 (-)	
D-Latch (GB) with RB (High Speed)	F6R9	-	6 (-)	2-386

2.10 D-F/F

Function	Block	Description	Cells (I/O)	Page
D-F/F	F611	-	8 (-)	2-392
	F611NT	(X4 Drive)	14 (-)	
	L611	Q Out (Low Power)	6 (-)	
	F611NQT	Q Out (X4 Drive)	10 (-)	
	F611NBT	QB Out (X4 Drive)	10 (-)	
	F641NL	(Low Power)	7 (-)	2-394
	F641	-	8 (-)	
	F641NP	(X2 Drive)	10 (-)	
	F641NQL	Q Out (Low Power)	7 (-)	
	F641NQ	Q Out	7 (-)	
	F641NQP	Q Out (X2 Drive)	8 (-)	
	F641NBL	QB Out (Low Power)	7 (-)	
	F641NB	QB Out	7 (-)	
	F641NBP	QB Out (X2 Drive)	8 (-)	
D-F/F with R	F612NQT	Q Out (X4 Drive)	11 (-)	2-396
	F612NBT	QB Out (X4 Drive)	12 (-)	
	F642NL	(Low Power)	8 (-)	2-398
	F642	-	9 (-)	
	F642NP	(X2 Drive)	11 (-)	
	F642NQL	Q Out (Low Power)	8 (-)	
	F642NQ	Q Out	8 (-)	
	F642NQP	Q Out (X2 Drive)	9 (-)	
	F642NBL	QB Out (Low Power)	8 (-)	
	F642NB	QB Out	8 (-)	
	F642NBP	QB Out (X2 Drive)	9 (-)	
D-F/F with S	F613NQT	Q Out (X4 Drive)	12 (-)	2-402
	F613NBT	QB Out (X4 Drive)	11 (-)	
	F643NL	(Low Power)	8 (-)	2-404
	F643	-	9 (-)	
	F643NP	(X2 Drive)	11 (-)	
	F643NQL	Q Out (Low Power)	7 (-)	
	F643NQ	Q Out	8 (-)	
	F643NQP	Q Out (X2 Drive)	9 (-)	
	F643NBL	QB Out (Low Power)	7 (-)	
	F643NB	QB Out	8 (-)	
	F643NBP	QB Out (X2 Drive)	9 (-)	

Function	Block	Description	Cells (I/O)	Page
D-F/F with R,S	F614	-	10 (-)	2-408
	L614	Q Out (Low Power)	8 (-)	
	F614NQT	Q Out (X4 Drive)	13 (-)	
	F614NBT	QB Out (X4 Drive)	13 (-)	
	F644NL	(Low Power)	9 (-)	2-410
	F644	-	10 (-)	
	F644NP	(X2 Drive)	12 (-)	
	F644NQL	Q Out (Low Power)	9 (-)	
	F644NQ	Q Out	9 (-)	
	F644NQP	Q Out (X2 Drive)	10 (-)	
	F644NBL	QB Out (Low Power)	9 (-)	
	F644NB	QB Out	9 (-)	
	F644NBP	QB Out (X2 Drive)	10 (-)	
D-F/F with RB	F615NL	(Low Power)	8 (-)	2-414
	F615	-	9 (-)	
	F615NP	(X2 Drive)	11 (-)	
	F615NT	(X4 Drive)	16 (-)	
	F615NQL	Q Out (Low Power)	8 (-)	
	F615NQ	Q Out	8 (-)	
	F615NQP	Q Out (X2 Drive)	9 (-)	
	F615NQT	Q Out (X4 Drive)	12 (-)	
	F615NBL	QB Out (Low Power)	8 (-)	
	F615NB	QB Out	8 (-)	
	F615NBP	QB Out (X2 Drive)	9 (-)	
	F615NBT	QB Out (X4 Drive)	11 (-)	
D-F/F with SB	F616NL	(Low Power)	8 (-)	2-418
	F616	-	9 (-)	
	F616NP	(X2 Drive)	11 (-)	
	F616NQL	Q Out (Low Power)	8 (-)	
	F616NQ	Q Out	8 (-)	
	F616NQP	Q Out (X2 Drive)	9 (-)	
	F616NQT	Q Out (X4 Drive)	11 (-)	
	F616NBL	QB Out (Low Power)	8 (-)	
	F616NB	QB Out	8 (-)	
	F616NBP	QB Out (X2 Drive)	9 (-)	
	F616NBT	QB Out (X4 Drive)	12 (-)	

Function	Block	Description	Cells (I/O)	Page
D-F/F with RB,SB	F617	-	10 (-)	2-422
	L617	Q Out (Low Power)	8 (-)	
	F617NQT	Q Out (X4 Drive)	13 (-)	
	F617NBT	QB Out (X4 Drive)	13 (-)	
	F647NL	(Low Power)	9 (-)	2-424
	F647	-	10 (-)	
	F647NP	(X2 Drive)	12 (-)	
	F647NQL	Q Out (Low Power)	9 (-)	
	F647NQ	Q Out	9 (-)	
	F647NQP	Q Out (X2 Drive)	10 (-)	
	F647NBL	QB Out (Low Power)	9 (-)	
	F647NB	QB Out	9 (-)	
	F647NBP	QB Out (X2 Drive)	10 (-)	
D-F/F (CB)	F631	-	8 (-)	2-428
	F631NT	(X4 Drive)	14 (-)	
	L631	Q Out (Low Power)	6 (-)	
	F631NQT	Q Out (X4 Drive)	10 (-)	
	F631NBT	QB Out (X4 Drive)	10 (-)	
	F661NL	(Low Power)	7 (-)	2-430
	F661	-	8 (-)	
	F661NP	(X2 Drive)	10 (-)	
	F661NQL	Q Out (Low Power)	7 (-)	
	F661NQ	Q Out	7 (-)	
	F661NQP	Q Out (X2 Drive)	8 (-)	
	F661NBL	QB Out (Low Power)	7 (-)	
	F661NB	QB Out	7 (-)	
	F661NBP	QB Out (X2 Drive)	8 (-)	
D-F/F (CB) with RB	F635NQT	Q Out (X4 Drive)	12 (-)	2-432
	F635NBT	QB Out (X4 Drive)	11 (-)	
	F665NL	(Low Power)	8 (-)	2-434
	F665	-	9 (-)	
	F665NP	(X2 Drive)	11 (-)	
	F665NQL	Q Out (Low Power)	7 (-)	
	F665NQ	Q Out	8 (-)	
	F665NQP	Q Out (X2 Drive)	9 (-)	
	F665NBL	QB Out (Low Power)	7 (-)	
	F665NB	QB Out	8 (-)	
	F665NBP	QB Out (X2 Drive)	9 (-)	

Function	Block	Description	Cells (I/O)	Page
D-F/F (CB) with SB	F636NQT	Q Out (X4 Drive)	11 (-)	2-438
	F636NBT	QB Out (X4 Drive)	12 (-)	
	F666NL	(Low Power)	8 (-)	2-440
	F666	-	9 (-)	
	F666NP	(X2 Drive)	11 (-)	
	F666NQL	Q Out (Low Power)	7 (-)	
	F666NQ	Q Out	8 (-)	
	F666NQP	Q Out (X2 Drive)	9 (-)	
	F666NBL	QB Out (Low Power)	7 (-)	
	F666NB	QB Out	8 (-)	
	F666NBP	QB Out (X2 Drive)	9 (-)	
D-F/F (CB) with RB,SB	F637	-	10 (-)	2-444
	L637	Q Out (Low Power)	8 (-)	
	F637NQT	Q Out (X4 Drive)	13 (-)	
	F637NBT	QB Out (X4 Drive)	13 (-)	
	F667NL	(Low Power)	9 (-)	2-446
	F667	-	10 (-)	
	F667NP	(X2 Drive)	12 (-)	
	F667NQL	Q Out (Low Power)	9 (-)	
	F667NQ	Q Out	9 (-)	
	F667NQP	Q Out (X2 Drive)	10 (-)	
	F667NBL	QB Out (Low Power)	9 (-)	
	F667NB	QB Out	9 (-)	
	F667NBP	QB Out (X2 Drive)	10 (-)	
D-F/F with 2 to 1 Selector	F611ST	(X4 Drive)	17 (-)	2-450
	F611SQT	Q Out (X4 Drive)	13 (-)	
	F611SBT	QB Out (X4 Drive)	13 (-)	
	F641SL	(Low Power)	9 (-)	2-452
	F641S	-	10 (-)	
	F641SP	(X2 Drive)	12 (-)	
	F641SQ	Q Out	9 (-)	
	F641SQP	Q Out (X2 Drive)	10 (-)	
	F641SB	QB Out	9 (-)	
	F641SBP	QB Out (X2 Drive)	10 (-)	
D-F/F with R,2 to 1 Selector	F612SQT	Q Out (X4 Drive)	14 (-)	2-456
	F612SBT	QB Out (X4 Drive)	14 (-)	
	F642SL	(Low Power)	10 (-)	2-458
	F642S	-	11 (-)	
	F642SP	(X2 Drive)	13 (-)	
	F642SQ	Q Out	10 (-)	
	F642SQP	Q Out (X2 Drive)	11 (-)	
	F642SB	QB Out	10 (-)	
	F642SBP	QB Out (X2 Drive)	11 (-)	

Function	Block	Description	Cells (I/O)	Page
D-F/F with S,2 to 1 Selector	F613SQT	Q Out (X4 Drive)	14 (-)	2-462
	F613SBT	QB Out (X4 Drive)	14 (-)	
	F643SL	(Low Power)	10 (-)	2-464
	F643S	-	11 (-)	
	F643SP	(X2 Drive)	13 (-)	
	F643SQ	Q Out	10 (-)	
	F643SQP	Q Out (X2 Drive)	11 (-)	
	F643SB	QB Out	10 (-)	
	F643SBP	QB Out (X2 Drive)	11 (-)	
D-F/F with R,S,2 to 1 Selector	F614SQT	Q Out (X4 Drive)	15 (-)	2-468
	F614SBT	QB Out (X4 Drive)	15 (-)	
	F644SL	(Low Power)	11 (-)	2-470
	F644S	-	12 (-)	
	F644SP	(X2 Drive)	14 (-)	
	F644SQ	Q Out	11 (-)	
	F644SQP	Q Out (X2 Drive)	12 (-)	
	F644SB	QB Out	11 (-)	
	F644SBP	QB Out (X2 Drive)	12 (-)	
D-F/F with RB,2 to 1 Selector	F615SL	(Low Power)	10 (-)	2-474
	F615S	-	11 (-)	
	F615SP	(X2 Drive)	13 (-)	
	F615ST	(X4 Drive)	18 (-)	
	F615SQ	Q Out	10 (-)	
	F615SQP	Q Out (X2 Drive)	11 (-)	
	F615SQT	Q Out (X4 Drive)	14 (-)	
	F615SB	QB Out	10 (-)	
	F615SBP	QB Out (X2 Drive)	11 (-)	
	F615SBT	QB Out (X4 Drive)	14 (-)	
D-F/F with SB,2 to 1 Selector	F616SL	(Low Power)	10 (-)	2-478
	F616S	-	11 (-)	
	F616SP	(X2 Drive)	13 (-)	
	F616SQ	Q Out	10 (-)	
	F616SQP	Q Out (X2 Drive)	11 (-)	
	F616SQT	Q Out (X4 Drive)	14 (-)	
	F616SB	QB Out	10 (-)	
	F616SBP	QB Out (X2 Drive)	11 (-)	
	F616SBT	QB Out (X4 Drive)	14 (-)	

Function	Block	Description	Cells (I/O)	Page
D-F/F with RB,SB,2 to 1 Selector	F617SQT	Q Out (X4 Drive)	15 (-)	2-482
	F617SBT	QB Out (X4 Drive)	15 (-)	
	F647SL	(Low Power)	11 (-)	2-484
	F647S	-	12 (-)	
	F647SP	(X2 Drive)	14 (-)	
	F647SQ	Q Out	11 (-)	
	F647SQP	Q Out (X2 Drive)	12 (-)	
	F647SB	QB Out	11 (-)	
	F647SBP	QB Out (X2 Drive)	12 (-)	
D-F/F (CB) with 2 to 1 Selector	F631ST	(X4 Drive)	17 (-)	2-488
	F631SQT	Q Out (X4 Drive)	13 (-)	
	F631SBT	QB Out (X4 Drive)	13 (-)	
	F661SL	(Low Power)	9 (-)	2-490
	F661S	-	10 (-)	
	F661SP	(X2 Drive)	12 (-)	
	F661SQ	Q Out	9 (-)	
	F661SQP	Q Out (X2 Drive)	10 (-)	
	F661SB	QB Out	9 (-)	
	F661SBP	QB Out (X2 Drive)	10 (-)	
D-F/F (CB) with RB,2 to 1 Selector	F635ST	(X4 Drive)	18 (-)	2-494
	F635SQT	Q Out (X4 Drive)	14 (-)	
	F635SBT	QB Out (X4 Drive)	14 (-)	
	F665SL	(Low Power)	10 (-)	2-496
	F665S	-	11 (-)	
	F665SP	(X2 Drive)	13 (-)	
	F665SQ	Q Out	10 (-)	
	F665SQP	Q Out (X2 Drive)	11 (-)	
	F665SB	QB Out	10 (-)	
	F665SBP	QB Out (X2 Drive)	11 (-)	
D-F/F (CB) with SB,2 to 1 Selector	F636ST	(X4 Drive)	18 (-)	2-500
	F636SBT	QB Out (X4 Drive)	14 (-)	
	F666SL	(Low Power)	10 (-)	2-502
	F666S	-	11 (-)	
	F666SP	(X2 Drive)	13 (-)	
	F666SQ	Q Out	10 (-)	
	F666SQP	Q Out (X2 Drive)	11 (-)	
	F666SB	QB Out	10 (-)	
	F666SBP	QB Out (X2 Drive)	11 (-)	

Function	Block	Description	Cells (I/O)	Page
D-F/F (CB) with RB,SB,2 to 1 Selector	F637SQT	Q Out (X4 Drive)	15 (-)	2-506
	F637SBT	QB Out (X4 Drive)	15 (-)	
	F667SL	(Low Power)	11 (-)	2-508
	F667S	-	12 (-)	
	F667SP	(X2 Drive)	14 (-)	
	F667SQ	Q Out	11 (-)	
	F667SQP	Q Out (X2 Drive)	12 (-)	
	F667SB	QB Out	11 (-)	
	F667SBP	QB Out (X2 Drive)	12 (-)	
D-F/F with Hold	F641HL	(Low Power)	9 (-)	2-512
	F641H	-	10 (-)	
	F641HP	(X2 Drive)	12 (-)	
	F641HQ	Q Out	9 (-)	
	F641HQP	Q Out (X2 Drive)	10 (-)	
	F641HB	QB Out	9 (-)	
	F641HBP	QB Out (X2 Drive)	10 (-)	
D-F/F with RB,Hold	F615HL	(Low Power)	10 (-)	2-514
	F615H	-	11 (-)	
	F615HP	(X2 Drive)	13 (-)	
	F615HQ	Q Out	10 (-)	
	F615HQP	Q Out (X2 Drive)	11 (-)	
	F615HB	QB Out	10 (-)	
	F615HBP	QB Out (X2 Drive)	11 (-)	
D-F/F with SB,Hold	F616HL	(Low Power)	10 (-)	2-518
	F616H	-	11 (-)	
	F616HP	(X2 Drive)	13 (-)	
	F616HQ	Q Out	10 (-)	
	F616HQP	Q Out (X2 Drive)	11 (-)	
	F616HB	QB Out	10 (-)	
	F616HBP	QB Out (X2 Drive)	11 (-)	
D-F/F with RB,SB,Hold	F647HL	(Low Power)	11 (-)	2-522
	F647H	-	12 (-)	
	F647HP	(X2 Drive)	14 (-)	
	F647HQ	Q Out	11 (-)	
	F647HQP	Q Out (X2 Drive)	12 (-)	
	F647HB	QB Out	11 (-)	
	F647HBP	QB Out (X2 Drive)	12 (-)	
D-F/F (CB) with 2 to 1 Selector(2 CTRL),RB	F673	-	11 (-)	2-526
D-F/F (CB) with Hold,2 to 1 Selector(2 CTRL),RB	F674	-	12 (-)	2-528

2.11 T-F/F, JK-F/F

Function	Block	Description	Cells (I/O)	Page
T-F/F with R,S	F744NL	(Low Power)	8 (-)	2-534
	F744	-	9 (-)	
	F714	-	9 (-)	
	F744NP	(X2 Drive)	11 (-)	
	L714	Q Out (Low Power)	8 (-)	
	F744NQ	Q Out	8 (-)	
	F744NQP	Q Out (X2 Drive)	9 (-)	
T-F/F with RB	F745NL	(Low Power)	7 (-)	2-538
	F745	-	8 (-)	
	F745NP	(X2 Drive)	10 (-)	
	F745NQ	Q Out	7 (-)	
	F745NQP	Q Out (X2 Drive)	8 (-)	
T-F/F with RB,SB	F747NL	(Low Power)	8 (-)	2-540
	F747	-	9 (-)	
	F717	-	9 (-)	
	F747NP	(X2 Drive)	11 (-)	
	L717	Q Out (Low Power)	8 (-)	
	F747NQ	Q Out	8 (-)	
	F747NQP	Q Out (X2 Drive)	9 (-)	
T-F/F with Data-Hold R,S	F791	-	12 (-)	2-544
T-F/F (TB) with RB	F765NL	(Low Power)	7 (-)	2-546
	F765	-	8 (-)	
	F765NP	(X2 Drive)	10 (-)	
	F765NQ	Q Out	7 (-)	
	F765NQP	Q Out (X2 Drive)	8 (-)	
T-F/F (TB) with RB,SB	F767NL	(Low Power)	8 (-)	2-548
	F767	-	9 (-)	
	F737	-	9 (-)	
	F767NP	(X2 Drive)	11 (-)	
	L737	Q Out (Low Power)	8 (-)	
	F767NQ	Q Out	8 (-)	
	F767NQP	Q Out (X2 Drive)	9 (-)	
JK-F/F	F771NL	(Low Power)	9 (-)	2-552
	F771	-	10 (-)	
	F771NP	(X2 Drive)	12 (-)	
	F771NQL	Q Out (Low Power)	9 (-)	
	F771NQ	Q Out	9 (-)	
	F771NQP	Q Out (X2 Drive)	10 (-)	
	F771NBL	QB Out (Low Power)	9 (-)	
	F771NB	QB Out	9 (-)	
	F771NBP	QB Out (X2 Drive)	10 (-)	

Function	Block	Description	Cells (I/O)	Page
JK-F/F (High Speed)	F7D1	-	10 (-)	2-556
JK-F/F with R,S	F774NL	(Low Power)	11 (-)	2-558
	F774	-	12 (-)	
	F774NP	(X2 Drive)	14 (-)	
	F774NQL	Q Out (Low Power)	11 (-)	
	F774NQ	Q Out	11 (-)	
	F774NQP	Q Out (X2 Drive)	12 (-)	
	F774NBL	QB Out (Low Power)	11 (-)	
	F774NB	QB Out	11 (-)	
	F774NBP	QB Out (X2 Drive)	12 (-)	
JK-F/F with RB	F775NL	(Low Power)	10 (-)	2-562
	F775	-	11 (-)	
	F775NP	(X2 Drive)	13 (-)	
	F775NQL	Q Out (Low Power)	10 (-)	
	F775NQ	Q Out	10 (-)	
	F775NQP	Q Out (X2 Drive)	11 (-)	
	F775NBL	QB Out (Low Power)	10 (-)	
	F775NB	QB Out	10 (-)	
	F775NBP	QB Out (X2 Drive)	11 (-)	
JK-F/F with SB	F776NL	(Low Power)	11 (-)	2-566
	F776	-	12 (-)	
	F776NP	(X2 Drive)	14 (-)	
	F776NQL	Q Out (Low Power)	11 (-)	
	F776NQ	Q Out	11 (-)	
	F776NQP	Q Out (X2 Drive)	12 (-)	
	F776NBL	QB Out (Low Power)	11 (-)	
	F776NB	QB Out	11 (-)	
	F776NBP	QB Out (X2 Drive)	12 (-)	
JK-F/F with RB,SB	F777NL	(Low Power)	11 (-)	2-570
	F777	-	12 (-)	
	F777NP	(X2 Drive)	14 (-)	
	F777NQL	Q Out (Low Power)	11 (-)	
	F777NQ	Q Out	11 (-)	
	F777NQP	Q Out (X2 Drive)	12 (-)	
	F777NBL	QB Out (Low Power)	11 (-)	
	F777NB	QB Out	11 (-)	
	F777NBP	QB Out (X2 Drive)	12 (-)	

Function	Block	Description	Cells (I/O)	Page
JK-F/F (CB)	F781NL	(Low Power)	9 (-)	2-574
	F781	-	10 (-)	
	F781NP	(X2 Drive)	12 (-)	
	F781NQL	Q Out (Low Power)	9 (-)	
	F781NQ	Q Out	9 (-)	
	F781NQP	Q Out (X2 Drive)	10 (-)	
	F781NBL	QB Out (Low Power)	9 (-)	
	F781NB	QB Out	9 (-)	
	F781NBP	QB Out (X2 Drive)	10 (-)	
JK-F/F (CB) (High Speed)	F7E1	-	10 (-)	2-578
JK-F/F (CB) with RB,SB	F787NL	(Low Power)	11 (-)	2-580
	F787	-	12 (-)	
	F787NP	(X2 Drive)	14 (-)	
	F787NQL	Q Out (Low Power)	11 (-)	
	F787NQ	Q Out	11 (-)	
	F787NQP	Q Out (X2 Drive)	12 (-)	
	F787NBL	QB Out (Low Power)	11 (-)	
	F787NB	QB Out	11 (-)	
	F787NBP	QB Out (X2 Drive)	12 (-)	

2.12 Other Block

Function	Block	Description	Cells (I/O)	Page
4-Bit D-Latch	F901	-	20 (-)	2-588
	L901	Q Out (Low Power)	12 (-)	
4-Bit D-Latch (High Speed)	F971	-	20 (-)	2-592
8-Bit D-Latch	F902	-	38 (-)	2-594
	L902	Q Out (Low Power)	22 (-)	
8-Bit D-Latch (High Speed)	F972	-	38 (-)	2-598
4-Bit D-F/F	L924	Q Out (Low Power)	20 (-)	2-602
4-Bit Shift Register	L914	Q Out (Low Power)	20 (-)	2-604
4-Bit Magnitude Comparator	F985	-	32 (-)	2-606

Chapter 3 Scan Path Block

3.1 Standard Type

Function	Block	Description	Cells (I/O)	Page
D-F/F with R,S,2 to 1 Selector	S000	-	12 (-)	3-4
D-F/F with 2 to 1 Selector	S001	(Low Power)	9 (-)	3-6
	S002	-	10 (-)	3-8
D-F/F with RB,2 to 1 Selector	S004	-	11 (-)	3-10
D-F/F with SB,2 to 1 Selector	S005	-	11 (-)	3-12
D-F/F with R,S,Hold,2 to 1 Selector	S050	-	14 (-)	3-14
D-F/F with Hold,2 to 1 Selector	S052	-	12 (-)	3-16
JK-F/F with R,S,D-F/F Function	S100	-	14 (-)	3-18
JK-F/F with D-F/F Function	S102	-	12 (-)	3-20
JK-F/F with R,S,Hold,D-F/F Function	S150	-	17 (-)	3-22
JK-F/F with Hold,D-F/F Function	S152	-	15 (-)	3-24
D-Latch with R,D-F/F Function	S201	-	12 (-)	3-26
D-Latch with D-F/F Function	S202	-	11 (-)	3-28
D-Latch with D-F/F Function (High Speed)	S204	-	11 (-)	3-30
D-Latch with R,Special Function,R	S301	-	8 (-)	3-32
D-Latch with Special Function	S302	-	7 (-)	3-34
D-Latch with Special Function (High Speed)	S303	-	7 (-)	3-36
2 to 1 Data Selector	S999	-	4 (-)	3-38

3.2 LSSD Scan

Function	Block	Description	Cells (I/O)	Page
Clocked LSSD D-Latch	SD601	-	10 (-)	3-44
	SD601NP	(X2 Drive)	13 (-)	
Clocked LSSD D-Latch with R	SD602	-	11 (-)	3-48
	SD602NP	(X2 Drive)	14 (-)	
Clocked LSSD D-Latch with RB	SD603	-	11 (-)	3-52
	SD603NP	(X2 Drive)	14 (-)	
Clocked LSSD D-Latch (GB)	SD604	-	10 (-)	3-56
	SD604NP	(X2 Drive)	13 (-)	
Clocked LSSD D-Latch (GB) with RB	SD605	-	11 (-)	3-60
	SD605NP	(X2 Drive)	14 (-)	
Clocked LSSD D-F/F	SD611	-	12 (-)	3-64
	SD641	(X2 Drive)	15 (-)	
	SD611T	(X4 Drive)	19 (-)	
Clocked LSSD D-F/F with R,S	SD614	-	14 (-)	3-68
	SD644	(X2 Drive)	17 (-)	
Clocked LSSD D-F/F with RB	SD615	-	13 (-)	3-72
	SD645	(X2 Drive)	16 (-)	

Function	Block	Description	Cells (I/O)	Page
Clocked LSSD D-F/F with SB	SD616	-	13 (-)	3-76
	SD646	(X2 Drive)	16 (-)	
Clocked LSSD D-F/F with RB,SB	SD617	-	14 (-)	3-80
	SD647	(X2 Drive)	17 (-)	
Clocked LSSD D-F/F (CB)	SD631	-	12 (-)	3-84
	SD661	(X2 Drive)	15 (-)	
Clocked LSSD D-F/F (CB) with RB,SB	SD637	-	14 (-)	3-86
	SD667	(X2 Drive)	17 (-)	

3.3 NEC Scan

Function	Block	Description	Cells (I/O)	Page
D-Latch	SE601	-	12 (-)	3-94
	SE601NP	(X2 Drive)	15 (-)	
	SE601NQ	Q Out	11 (-)	
	SE601NQP	Q Out (X2 Drive)	13 (-)	
	SE601NB	QB Out	11 (-)	
	SE601NBP	QB Out (X2 Drive)	13 (-)	
D-Latch with R	SE602	-	13 (-)	3-96
	SE602NP	(X2 Drive)	16 (-)	
	SE602NQ	Q Out	12 (-)	
	SE602NQP	Q Out (X2 Drive)	14 (-)	
	SE602NB	QB Out	12 (-)	
	SE602NBP	QB Out (X2 Drive)	14 (-)	
D-Latch with RB	SE603	-	13 (-)	3-100
	SE603NP	(X2 Drive)	16 (-)	
	SE603NQ	Q Out	12 (-)	
	SE603NQP	Q Out (X2 Drive)	14 (-)	
	SE603NB	QB Out	12 (-)	
	SE603NBP	QB Out (X2 Drive)	14 (-)	
D-Latch(GB)	SE604	-	12 (-)	3-104
	SE604NP	(X2 Drive)	15 (-)	
	SE604NQ	Q Out	11 (-)	
	SE604NQP	Q Out (X2 Drive)	13 (-)	
	SE604NB	QB Out	11 (-)	
	SE604NBP	QB Out (X2 Drive)	13 (-)	
D-Latch(GB) with RB	SE605	-	13 (-)	3-106
	SE605NP	(X2 Drive)	16 (-)	
	SE605NQ	Q Out	12 (-)	
	SE605NQP	Q Out (X2 Drive)	14 (-)	
	SE605NB	QB Out	12 (-)	
	SE605NBP	QB Out (X2 Drive)	14 (-)	

Function	Block	Description	Cells (I/O)	Page
D-F/F	SE611	-	11 (-)	3-110
	SE611NT	(X4 Drive)	18 (-)	
	SE611NQT	Q Out (X4 Drive)	14 (-)	
	SE611NBT	QB Out (X4 Drive)	14 (-)	
	SE641	-	11 (-)	3-112
	SE641NP	(X2 Drive)	14 (-)	
	SE641NQ	Q Out	10 (-)	
	SE641NQP	Q Out (X2 Drive)	12 (-)	
	SE641NB	QB Out	10 (-)	
	SE641NBP	QB Out (X2 Drive)	12 (-)	
D-F/F with R,S	SE614	-	13 (-)	3-114
	SE614NQT	Q Out (X4 Drive)	16 (-)	
	SE614NBT	QB Out (X4 Drive)	16 (-)	
	SE644	-	13 (-)	3-116
	SE644NP	(X2 Drive)	16 (-)	
	SE644NQ	Q Out	12 (-)	
	SE644NQP	Q Out (X2 Drive)	14 (-)	
	SE644NB	QB Out	12 (-)	
	SE644NBP	QB Out (X2 Drive)	14 (-)	
D-F/F with RB	SE615	-	12 (-)	3-120
	SE615NQ	Q Out	11 (-)	
	SE615NQT	Q Out (X4 Drive)	15 (-)	
	SE615NB	QB Out	11 (-)	
	SE615NBT	QB Out (X4 Drive)	15 (-)	
	SE645NP	(X2 Drive)	15 (-)	3-122
	SE645NQP	Q Out (X2 Drive)	13 (-)	
	SE645NBP	QB Out (X2 Drive)	13 (-)	
D-F/F with SB	SE616	-	12 (-)	3-124
	SE616NQ	Q Out	11 (-)	
	SE616NQT	Q Out (X4 Drive)	15 (-)	
	SE616NB	QB Out	11 (-)	
	SE616NBT	QB Out (X4 Drive)	15 (-)	
	SE646NP	(X2 Drive)	15 (-)	3-126
	SE646NQP	Q Out (X2 Drive)	13 (-)	
	SE646NBP	QB Out (X2 Drive)	13 (-)	
D-F/F with RB,SB	SE617	-	13 (-)	3-128
	SE617NQT	Q Out (X4 Drive)	16 (-)	
	SE617NBT	QB Out (X4 Drive)	16 (-)	
	SE647	-	13 (-)	3-130
	SE647NP	(X2 Drive)	16 (-)	
	SE647NQ	Q Out	12 (-)	
	SE647NQP	Q Out (X2 Drive)	14 (-)	
	SE647NB	QB Out	12 (-)	
	SE647NBP	QB Out (X2 Drive)	14 (-)	

Function	Block	Description	Cells (I/O)	Page
D-F/F (CB)	SE631	-	11 (-)	3-134
	SE631NT	(X4 Drive)	18 (-)	
	SE631NQT	Q Out (X4 Drive)	14 (-)	
	SE631NBT	QB Out (X4 Drive)	14 (-)	
	SE661	-	11 (-)	3-136
	SE661NP	(X2 Drive)	14 (-)	
	SE661NQ	Q Out	10 (-)	
	SE661NQP	Q Out (X2 Drive)	12 (-)	
	SE661NB	QB Out	10 (-)	
	SE661NBP	QB Out (X2 Drive)	12 (-)	
D-F/F (CB) with RB,SB	SE637	-	13 (-)	3-138
	SE637NQT	Q Out (X4 Drive)	16 (-)	
	SE637NBT	QB Out (X4 Drive)	16 (-)	
	SE667	-	13 (-)	3-140
	SE667NP	(X2 Drive)	16 (-)	
	SE667NQ	Q Out	12 (-)	
	SE667NQP	Q Out (X2 Drive)	14 (-)	
	SE667NB	QB Out	12 (-)	
	SE667NBP	QB Out (X2 Drive)	14 (-)	

3.4 Scan Controller

Function	Block	Description	Cells (I/O)	Page
Clock Distributor	SCD1	-	8 (-)	3-148
Clock Distributor with Test (Positive Clock)	SCDC	-	2 (-)	3-150
Clock Distributor with Test (Negative Clock)	SCDD	-	2 (-)	3-152
I/F Control (AMC) with EN	SFEH	-	3 (-)	3-154
I/F Control (AMC) with ENB	SFEL	-	2 (-)	3-156
I/F Control (SMC) with EN	SOEH	-	4 (-)	3-158
	SOEH2	(X2 Drive)	7 (-)	
I/F Control (SMC) with ENB	SOEL	-	3 (-)	3-160
	SOEL2	(X2 Drive)	6 (-)	
Mega Macro Skip	SMS1	-	4 (-)	3-162
Set/Reset Control	SRH1	-	2 (-)	3-164
Set-B/Reset-B Control	SRL1	-	2 (-)	3-166
Loop Cut	SRPD	-	12 (-)	3-168
Clock Generator	SCKG	-	16 (-)	3-170
Common Input	SCI1	-	2 (-)	3-172
Common Output	SCO1	-	5 (-)	3-174
GND	SGND	-	2 (-)	3-176

Chapter 4 Boundary Scan Block (Interface)

4.1 3.3V Interface

Function	Block	Description	Cells (I/O)	Page
Input Buffer	FI01BI	-	7 (1)	4-4
	FID1BI	50kΩ Pull-down	7 (1)	
	FIU1BI	50kΩ Pull-up	7 (1)	
	FIW1BI	5kΩ Pull-up	7 (1)	
	FIS1BI	Schmitt	11 (1)	
	FDS1BI	Schmitt 50kΩ Pull-down	11 (1)	
	FUS1BI	Schmitt 50kΩ Pull-up	11 (1)	
	FWS1BI	Schmitt 5kΩ Pull-up	11 (1)	
	FIB1BI	Clock Driver	56 (1)	
	FDB1BI	Clock Driver 50kΩ Pull-down	56 (1)	
	FUB1BI	Clock Driver 50kΩ Pull-up	56 (1)	
	FWB1BI	Clock Driver 5kΩ Pull-up	56 (1)	
Input Buffer with Failsafe	FIA1BI	-	7 (1)	4-6
	FDA1BI	50kΩ Pull-down	7 (1)	
	FIE1BI	Schmitt	11 (1)	
	FDE1BI	Schmitt 50kΩ Pull-down	11 (1)	
	FIH1BI	Clock Driver	56 (1)	
	FDH1BI	Clock Driver 50kΩ Pull-down	56 (1)	
Output Buffer	FO09B2	3mA	13 (1)	4-8
	FO04B2	6mA	13 (1)	
	FO01B2	9mA	13 (1)	
	FO02B2	12mA	13 (1)	
	FO03B2	18mA	25 (1)	
	FO06B2	24mA	25 (1)	
Low-noise Output Buffer	FE04B2	6mA	15 (1)	4-10
	FE01B2	9mA	15 (1)	
	FE02B2	12mA	15 (1)	
	FE03B2	18mA	15 (1)	
	FE06B2	24mA	15 (1)	

Function	Block	Description	Cells (I/O)	Page
3-State Buffer	B00TB3	3mA	29 (1)	4-12
	B0DTB3	3mA 50kΩ Pull-down	29 (1)	
	B0UTB3	3mA 50kΩ Pull-up	29 (1)	
	B0WTB3	3mA 5kΩ Pull-up	29 (1)	
	B00EB3	6mA	29 (1)	
	B0DEB3	6mA 50kΩ Pull-down	29 (1)	
	B0UEB3	6mA 50kΩ Pull-up	29 (1)	
	B0WEB3	6mA 5kΩ Pull-up	29 (1)	
	B008B3	9mA	29 (1)	
	B0D8B3	9mA 50kΩ Pull-down	29 (1)	
	B0U8B3	9mA 50kΩ Pull-up	29 (1)	
	B0W8B3	9mA 5kΩ Pull-up	29 (1)	
	B007B3	12mA	29 (1)	
	B0D7B3	12mA 50kΩ Pull-down	29 (1)	
	B0U7B3	12mA 50kΩ Pull-up	29 (1)	
	B0W7B3	12mA 5kΩ Pull-up	29 (1)	
	B009B3	18mA	32 (1)	
	B0D9B3	18mA 50kΩ Pull-down	32 (1)	
	B0U9B3	18mA 50kΩ Pull-up	32 (1)	
	B0W9B3	18mA 5kΩ Pull-up	32 (1)	
	B00HB3	24mA	32 (1)	
	B0DHB3	24mA 50kΩ Pull-down	32 (1)	
	B0UHB3	24mA 50kΩ Pull-up	32 (1)	
	B0WHB3	24mA 5kΩ Pull-up	32 (1)	
Low-noise 3-State Buffer	BE0EB3	6mA	22 (1)	4-24
	BEDEB3	6mA 50kΩ Pull-down	22 (1)	
	BEUEB3	6mA 50kΩ Pull-up	22 (1)	
	BEWEB3	6mA 5kΩ Pull-up	22 (1)	
	BE08B3	9mA	22 (1)	
	BED8B3	9mA 50kΩ Pull-down	22 (1)	
	BEU8B3	9mA 50kΩ Pull-up	22 (1)	
	BEW8B3	9mA 5kΩ Pull-up	22 (1)	
	BE07B3	12mA	22 (1)	
	BED7B3	12mA 50kΩ Pull-down	22 (1)	
	BEU7B3	12mA 50kΩ Pull-up	22 (1)	
	BEW7B3	12mA 5kΩ Pull-up	22 (1)	
	BE09B3	18mA	22 (1)	
	BED9B3	18mA 50kΩ Pull-down	22 (1)	
	BEU9B3	18mA 50kΩ Pull-up	22 (1)	
	BEW9B3	18mA 5kΩ Pull-up	22 (1)	
	BE0HB3	24mA	22 (1)	
	BEDHB3	24mA 50kΩ Pull-down	22 (1)	
	BEUHB3	24mA 50kΩ Pull-up	22 (1)	
	BEWHB3	24mA 5kΩ Pull-up	22 (1)	

Function	Block	Description	Cells (I/O)	Page
I/O Buffer	B00UBB	3mA	38 (1)	4-34
	B0DUBB	3mA 50kΩ Pull-down	38 (1)	
	B0UUBB	3mA 50kΩ Pull-up	38 (1)	
	B0WUBB	3mA 5kΩ Pull-up	38 (1)	
	B00CBB	6mA	38 (1)	
	B0DCBB	6mA 50kΩ Pull-down	38 (1)	
	B0UCBB	6mA 50kΩ Pull-up	38 (1)	
	B0WCBB	6mA 5kΩ Pull-up	38 (1)	
	B003BB	9mA	38 (1)	
	B0D3BB	9mA 50kΩ Pull-down	38 (1)	
	B0U3BB	9mA 50kΩ Pull-up	38 (1)	
	B0W3BB	9mA 5kΩ Pull-up	38 (1)	
	B001BB	12mA	38 (1)	
	B0D1BB	12mA 50kΩ Pull-down	38 (1)	
	B0U1BB	12mA 50kΩ Pull-up	38 (1)	
	B0W1BB	12mA 5kΩ Pull-up	38 (1)	
	B005BB	18mA	41 (1)	
	B0D5BB	18mA 50kΩ Pull-down	41 (1)	
	B0U5BB	18mA 50kΩ Pull-up	41 (1)	
	B0W5BB	18mA 5kΩ Pull-up	41 (1)	
	B00FBB	24mA	41 (1)	
	B0DFBB	24mA 50kΩ Pull-down	41 (1)	
	B0UFBB	24mA 50kΩ Pull-up	41 (1)	
	B0WFBB	24mA 5kΩ Pull-up	41 (1)	
Low-noise I/O Buffer	BE0CBB	6mA	31 (1)	4-54
	BEDCBB	6mA 50kΩ Pull-down	31 (1)	
	BEUCBB	6mA 50kΩ Pull-up	31 (1)	
	BEWCBB	6mA 5kΩ Pull-up	31 (1)	
	BE03BB	9mA	31 (1)	
	BED3BB	9mA 50kΩ Pull-down	31 (1)	
	BEU3BB	9mA 50kΩ Pull-up	31 (1)	
	BEW3BB	9mA 5kΩ Pull-up	31 (1)	
	BE01BB	12mA	31 (1)	
	BED1BB	12mA 50kΩ Pull-down	31 (1)	
	BEU1BB	12mA 50kΩ Pull-up	31 (1)	
	BEW1BB	12mA 5kΩ Pull-up	31 (1)	
	BE05BB	18mA	31 (1)	
	BED5BB	18mA 50kΩ Pull-down	31 (1)	
	BEU5BB	18mA 50kΩ Pull-up	31 (1)	
	BEW5BB	18mA 5kΩ Pull-up	31 (1)	
	BE0FBB	24mA	31 (1)	
	BEDFBB	24mA 50kΩ Pull-down	31 (1)	
	BEUFBB	24mA 50kΩ Pull-up	31 (1)	
	BEWFBB	24mA 5kΩ Pull-up	31 (1)	

Function	Block	Description	Cells (I/O)	Page
Schmitt I/O Buffer	BSIUBB	3mA	42 (1)	4-70
	BSDUBB	3mA 50kΩ Pull-down	42 (1)	
	BSUUBB	3mA 50kΩ Pull-up	42 (1)	
	BSWUBB	3mA 5kΩ Pull-up	42 (1)	
	BSICBB	6mA	42 (1)	
	BSDCBB	6mA 50kΩ Pull-down	42 (1)	
	BSUCBB	6mA 50kΩ Pull-up	42 (1)	
	BSWCBB	6mA 5kΩ Pull-up	42 (1)	
	BSI3BB	9mA	42 (1)	
	BSD3BB	9mA 50kΩ Pull-down	42 (1)	
	BSU3BB	9mA 50kΩ Pull-up	42 (1)	
	BSW3BB	9mA 5kΩ Pull-up	42 (1)	
	BSI1BB	12mA	42 (1)	
	BSD1BB	12mA 50kΩ Pull-down	42 (1)	
	BSU1BB	12mA 50kΩ Pull-up	42 (1)	
	BSW1BB	12mA 5kΩ Pull-up	42 (1)	
	BSI5BB	18mA	45 (1)	
	BSD5BB	18mA 50kΩ Pull-down	45 (1)	
	BSU5BB	18mA 50kΩ Pull-up	45 (1)	
	BSW5BB	18mA 5kΩ Pull-up	45 (1)	
	BSIFBB	24mA	45 (1)	
	BSDFBB	24mA 50kΩ Pull-down	45 (1)	
	BSUFBB	24mA 50kΩ Pull-up	45 (1)	
	BSWFBB	24mA 5kΩ Pull-up	45 (1)	
Low-noise Schmitt I/O Buffer	BFICBB	6mA	35 (1)	4-90
	BFDCBB	6mA 50kΩ Pull-down	35 (1)	
	BFUCBB	6mA 50kΩ Pull-up	35 (1)	
	BFWCBB	6mA 5kΩ Pull-up	35 (1)	
	BFI3BB	9mA	35 (1)	
	BFD3BB	9mA 50kΩ Pull-down	35 (1)	
	BFU3BB	9mA 50kΩ Pull-up	35 (1)	
	BFW3BB	9mA 5kΩ Pull-up	35 (1)	
	BFI1BB	12mA	35 (1)	
	BFD1BB	12mA 50kΩ Pull-down	35 (1)	
	BFU1BB	12mA 50kΩ Pull-up	35 (1)	
	BFW1BB	12mA 5kΩ Pull-up	35 (1)	
	BFI5BB	18mA	35 (1)	
	BFD5BB	18mA 50kΩ Pull-down	35 (1)	
	BFU5BB	18mA 50kΩ Pull-up	35 (1)	
	BFW5BB	18mA 5kΩ Pull-up	35 (1)	
	BFIFBB	24mA	35 (1)	
	BFDFBB	24mA 50kΩ Pull-down	35 (1)	
	BFUFBB	24mA 50kΩ Pull-up	35 (1)	
	BFWFBB	24mA 5kΩ Pull-up	35 (1)	

Function	Block	Description	Cells (I/O)	Page
N-ch Open drain Buffer	EXTHB2	3mA	13 (1)	4-106
	EXUHB2	3mA 50kΩ Pull-up	13 (1)	
	EXWHB2	3mA 5kΩ Pull-up	13 (1)	
	EXTJB2	6mA	13 (1)	
	EXUJB2	6mA 50kΩ Pull-up	13 (1)	
	EXWJB2	6mA 5kΩ Pull-up	13 (1)	
	EXT1B2	9mA	13 (1)	
	EXT3B2	9mA 50kΩ Pull-up	13 (1)	
	EXW3B2	9mA 5kΩ Pull-up	13 (1)	
	EXT9B2	12mA	13 (1)	
	EXTBB2	12mA 50kΩ Pull-up	13 (1)	
	EXWBB2	12mA 5kΩ Pull-up	13 (1)	
	EXT5B2	18mA	25 (1)	
	EXT7B2	18mA 50kΩ Pull-up	25 (1)	
	EXW7B2	18mA 5kΩ Pull-up	25 (1)	
	EXTDB2	24mA	25 (1)	
	EXTFB2	24mA 50kΩ Pull-up	25 (1)	
	EXWFB2	24mA 5kΩ Pull-up	25 (1)	
Low-noise N-ch Open drain Buffer	EETJB2	6mA	10 (1)	4-110
	EEUJB2	6mA 50kΩ Pull-up	10 (1)	
	EEWJB2	6mA 5kΩ Pull-up	10 (1)	
	EET1B2	9mA	10 (1)	
	EET3B2	9mA 50kΩ Pull-up	10 (1)	
	EEW3B2	9mA 5KΩ Pull-up	10 (1)	
	EET9B2	12mA	10 (1)	
	EETBB2	12mA 50kΩ Pull-up	10 (1)	
	EEWBB2	12mA 5kΩ Pull-up	10 (1)	
	EET5B2	18mA	10 (1)	
	EET7B2	18mA 50kΩ Pull-up	10 (1)	
	EEW7B2	18mA 5kΩ Pull-up	10 (1)	
	EETDB2	24mA	10 (1)	
	EETFB2	24mA 50kΩ Pull-up	10 (1)	
	EEWFB2	24mA 5kΩ Pull-up	10 (1)	

4.2 5V Interface

Function	Block	Description	Cells (I/O)	Page
Input Buffer	FIV1BI	-	7 (1)	4-118
	FDV1BI	50kΩ Pull-down	7 (1)	
	FIF1BI	-	11 (1)	
	FDF1BI	50kΩ Pull-down	11 (1)	
	FIG1BI	-	56 (1)	
	FDG1BI	50kΩ Pull-down	56 (1)	

Function		Block	Description	Cells (I/O)	Page
CMOS Level	Output Buffer	FY09B2	3mA	31 (1)	4-120
		FY04B2	6mA	31 (1)	
		FY01B2	9mA	34 (1)	
		FY02B2	12mA	34 (1)	
		FY03B2	18mA	34 (1)	
		FY06B2	24mA	34 (1)	
	Low-noise Output Buffer	FZ02B2	12mA	33 (1)	4-122
		FZ03B2	18mA	33 (1)	
		FZ06B2	24mA	33 (1)	
	3-State Buffer	BD0TB3	3mA	57 (1)	4-124
		BD0EB3	6mA	57 (1)	
		BD08B3	9mA	60 (1)	
		BD07B3	12mA	60 (1)	
		BD09B3	18mA	60 (1)	
		BD0HB3	24mA	60 (1)	
	Low-noise 3-State Buffer	BJ07B3	12mA	51 (1)	4-128
		BJ09B3	18mA	51 (1)	
		BJ0HB3	24mA	51 (1)	
	I/O Buffer	BM0UBB	3mA	66 (1)	4-132
		BM0CBB	6mA	66 (1)	
		BM03BB	9mA	69 (1)	
		BM01BB	12mA	69 (1)	
		BM05BB	18mA	69 (1)	
		BM0FBB	24mA	69 (1)	
	Low-noise I/O Buffer	BP01BB	12mA	60 (1)	4-138
		BP05BB	18mA	60 (1)	
		BP0FBB	24mA	60 (1)	
	Schmitt I/O Buffer	BQIUBB	3mA	70 (1)	4-142
		BQICBB	6mA	70 (1)	
		BQI3BB	9mA	73 (1)	
		BQI1BB	12mA	73 (1)	
		BQI5BB	18mA	73 (1)	
		BQIFBB	24mA	73 (1)	
	Low-noise Schmitt I/O Buffer	BUI1BB	12mA	64 (1)	4-148
		BUI5BB	18mA	64 (1)	
		BUIFBB	24mA	64 (1)	
TTL Level	Output Buffer	FV0AB2	1mA	13 (1)	4-152
		FV0BB2	2mA	13 (1)	
		FV09B2	3mA	13 (1)	
		FV04B2	6mA	13 (1)	
		FV01B2	9mA	25 (1)	
		FV02B2	12mA	25 (1)	
		FV03B2	18mA	25 (1)	
		FV06B2	24mA	25 (1)	

Function		Block	Description	Cells (I/O)	Page
TTL Level	Low-noise Output Buffer	FW02B2	12mA	15 (1)	4-156
		FW03B2	18mA	15 (1)	
		FW06B2	24mA	15 (1)	
	3-State Buffer	BV0QB3	1mA	52 (1)	4-158
		BVDQB3	1mA 50kΩ Pull-down	52 (1)	
		BV0MB3	2mA	52 (1)	
		BVDMB3	2mA 50kΩ Pull-down	52 (1)	
		BV0TB3	3mA	52 (1)	
		BVDTB3	3mA 50kΩ Pull-down	52 (1)	
		BV0EB3	6mA	52 (1)	
		BVDEB3	6mA 50kΩ Pull-down	52 (1)	
		BV08B3	9mA	54 (1)	
		BVD8B3	9mA 50kΩ Pull-down	54 (1)	
		BV07B3	12mA	54 (1)	
		BVD7B3	12mA 50kΩ Pull-down	54 (1)	
		BV09B3	18mA	54 (1)	
		BVD9B3	18mA 50kΩ Pull-down	54 (1)	
		BV0HB3	24mA	54 (1)	
		BVDHB3	24mA 50kΩ Pull-down	54 (1)	
	Low-noise 3-State Buffer	BY07B3	12mA	39 (1)	4-166
		BYD7B3	12mA 50kΩ Pull-down	39 (1)	
		BY09B3	18mA	39 (1)	
		BYD9B3	18mA 50kΩ Pull-down	39 (1)	
		BY0HB3	24mA	39 (1)	
		BYDHB3	24mA 50kΩ Pull-down	39 (1)	
	I/O Buffer	BW0XBB	1mA	61 (1)	4-170
		BWDXBB	1mA 50kΩ Pull-down	61 (1)	
		BW0KBB	2mA	61 (1)	
		BWDKBB	2mA 50kΩ Pull-down	61 (1)	
		BW0UBB	3mA	61 (1)	
		BWDUBB	3mA 50kΩ Pull-down	61 (1)	
		BW0CBB	6mA	61 (1)	
		BWDCBB	6mA 50kΩ Pull-down	61 (1)	
		BW03BB	9mA	63 (1)	
		BWD3BB	9mA 50kΩ Pull-down	63 (1)	
		BW01BB	12mA	63 (1)	
		BWD1BB	12mA 50kΩ Pull-down	63 (1)	
		BW05BB	18mA	63 (1)	
		BWD5BB	18mA 50kΩ Pull-down	63 (1)	
		BW0FBB	24mA	63 (1)	
		BWDFBB	24mA 50kΩ Pull-down	63 (1)	

Function		Block	Description	Cells (I/O)	Page
TTL Level	Low-noise I/O Buffer	BX01BB	12mA	48 (1)	4-184
		BXD1BB	12mA 50kΩ Pull-down	48 (1)	
		BX05BB	18mA	48 (1)	
		BXD5BB	18mA 50kΩ Pull-down	48 (1)	
		BX0FBB	24mA	48 (1)	
		BXDFBB	24mA 50kΩ Pull-down	48 (1)	
	Schmitt I/O Buffer	BKIXBB	1mA	65 (1)	4-190
		BKDXBB	1mA 50kΩ Pull-down	65 (1)	
		BKIKBB	2mA	65 (1)	
		BKDKBB	2mA 50kΩ Pull-down	65 (1)	
		BKIUBB	3mA	65 (1)	
		BKDUBB	3mA 50kΩ Pull-down	65 (1)	
		BKICBB	6mA	65 (1)	
		BKDCBB	6mA 50kΩ Pull-down	65 (1)	
		BKI3BB	9mA	67 (1)	
		BKD3BB	9mA 50kΩ Pull-down	67 (1)	
		BKI1BB	12mA	67 (1)	
		BKD1BB	12mA 50kΩ Pull-down	67 (1)	
		BKI5BB	18mA	67 (1)	
		BKD5BB	18mA 50kΩ Pull-down	67 (1)	
		BKIFBB	24mA	67 (1)	
		BKDFBB	24mA 50kΩ Pull-down	67 (1)	
	Low-noise Schmitt I/O Buffer	BZI1BB	12mA	52 (1)	4-204
		BZD1BB	12mA 50kΩ Pull-down	52 (1)	
		BZI5BB	18mA	52 (1)	
		BZD5BB	18mA 50kΩ Pull-down	52 (1)	
		BZIFBB	24mA	52 (1)	
		BZDFBB	24mA 50kΩ Pull-down	52 (1)	
	N-ch Open drain Buffer	EVTTB2	1mA	13 (1)	4-210
		EVTKB2	2mA	13 (1)	
		EVTHB2	3mA	13 (1)	
		EVTJB2	6mA	13 (1)	
		EVT1B2	9mA	25 (1)	
		EVT9B2	12mA	25 (1)	
		EVT5B2	18mA	25 (1)	
		EVTDB2	24mA	25 (1)	
	Low-noise N-ch Open drain Buffer	EYT9B2	12mA	10 (1)	4-212
		EYT5B2	18mA	10 (1)	
		EYTDB2	24mA	10 (1)	

4.3 PCI

Function	Block	Description	Cells (I/O)	Page
3V PCI Input Buffer	BP3IBI	-	7 (1)	4-218
3V PCI Output Buffer	BP3OB2	-	25 (1)	4-220
3V PCI 3-State Buffer	BP3TB3	-	32 (1)	4-222
3V PCI I/O Buffer	BP3BBB	-	41 (1)	4-224
5V PCI Input Buffer	BP5IBI	-	7 (1)	4-226
5V PCI Output Buffer	BP5OB2	-	25 (1)	4-228
5V PCI 3-State Buffer	BP5TB3	-	54 (1)	4-230
5V PCI I/O Buffer	BP5BBB	-	63 (1)	4-232

Chapter 5 Boundary Scan Block (Function)

5.1 TAP Macro

Function	Block	Description	Cells (I/O)	Page
TAP MACRO	SBC4	-	- (-)	5-4
TAP Macro with NEC Scan	SBCL	-	- (-)	5-6

5.2 Level Generator

Function	Block	Description	Cells (I/O)	Page
Level Generator(CLANP)	SBZ1	-	0 (-)	5-12

5.3 D-Latch

Function	Block	Description	Cells (I/O)	Page
D-Latch with SB Q Out (Low Power) for Boundary Scan Block	L606	-	5 (-)	5-18

Chapter 1

Interface Block

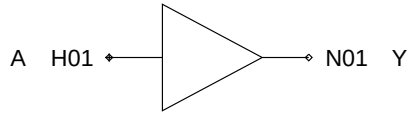
1.1 3.3V Interface

[MEMO]

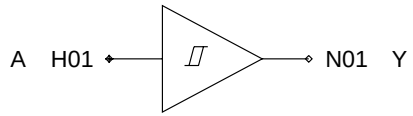
Function	Input Buffer					3.3V
Block type						
Function	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
Normal	FI01	FID1	FIU1	FIW1	1	7
Schmitt	FIS1	FDS1	FUS1	FWS1	1	11
Clock	FIB1	FDB1	FUB1	FWB1	1	56

Logic Diagram

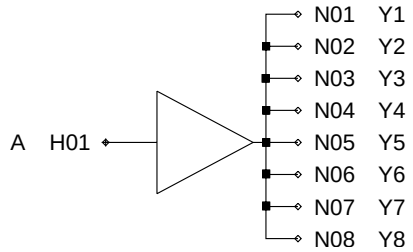
"Normal"



"Schmitt"



"Clock"



Truth Table

A	Yn
1	1
0	0

(n=1 to 8)

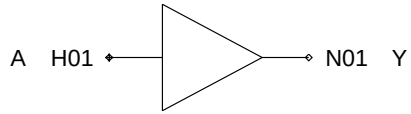
Block type	Input		Output	
	Symbol	Fan-In	Symbol	Fan-Out
FI01 to FIW1	A	-	Y	358
FIS1 to FWS1	A	-	Y	229
FIB1 to FWB1	A	-	Y1	229
	:	:	Y2	229
			:	:
			Y7	229
			Y8	229

Block type	Switching speed									
	Path	t_{LD0} (ns)			t_1			T		
	IN → OUT	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
FI01	A → Y (HH)	0.113	0.162	0.227	0.001	0.002	0.003			
	(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
FID1	A → Y (HH)	0.113	0.162	0.227	0.001	0.002	0.003			
	(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
FIU1	A → Y (HH)	0.113	0.162	0.227	0.001	0.002	0.003			
	(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
FIW1	A → Y (HH)	0.113	0.162	0.227	0.001	0.002	0.003			
	(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
FIS1	A → Y (HH)	0.450	0.689	1.102	0.002	0.003	0.004			
	(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
FDS1	A → Y (HH)	0.450	0.689	1.102	0.002	0.003	0.004			
	(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
FUS1	A → Y (HH)	0.450	0.689	1.102	0.002	0.003	0.004			
	(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
FWS1	A → Y (HH)	0.450	0.689	1.102	0.002	0.003	0.004			
	(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
FIB1	A → Yn (HH)	0.108	0.156	0.216	0.000	0.000	0.000			
	(LL)	0.170	0.250	0.376	0.000	0.001	0.001			
	(n = 1 to 8)									
FDB1	A → Yn (HH)	0.108	0.156	0.216	0.000	0.000	0.000			
	(LL)	0.170	0.250	0.376	0.000	0.001	0.001			
	(n = 1 to 8)									
FUB1	A → Yn (HH)	0.108	0.156	0.216	0.000	0.000	0.000			
	(LL)	0.170	0.250	0.376	0.000	0.001	0.001			
	(n = 1 to 8)									
FWB1	A → Yn (HH)	0.108	0.156	0.216	0.000	0.000	0.000			
	(LL)	0.170	0.250	0.376	0.000	0.001	0.001			
	(n = 1 to 8)									

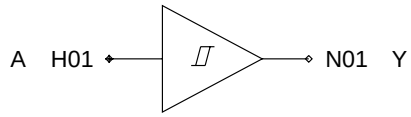
Function	Input Buffer with Failsafe				3.3V	
Block type						
Function	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
Normal	FIA1	FDA1			1	7
Schmitt	FIE1	FDE1			1	11
Clock	FIH1	FDH1			1	56

Logic Diagram

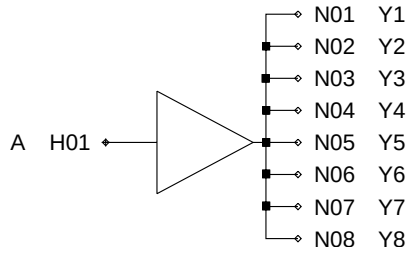
"Normal"



"Schmitt"



"Clock"



Truth Table

A	Yn
1	1
0	0

(n=1 to 8)

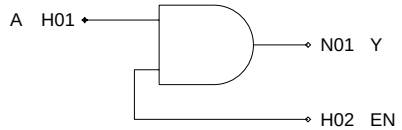
Block type	Input		Output	
	Symbol	Fan-In	Symbol	Fan-Out
FIA1 to FDA1	A	-	Y	356
FIE1 to FDE1	A	-	Y	224
FIH1 to FDH1	A	-	Y1	228
	:	:	Y2	228
			:	:
			Y7	228
			Y8	228

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
FIA1	A → Y	(HH)	0.114	0.163	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.358	0.001	0.002	0.003			
FDA1	A → Y	(HH)	0.114	0.163	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.358	0.001	0.002	0.003			
FIE1	A → Y	(HH)	0.450	0.689	1.104	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
FDE1	A → Y	(HH)	0.450	0.689	1.104	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
FIH1	A → Yn	(HH)	0.108	0.156	0.216	0.000	0.000	0.000			
		(LL)	0.170	0.250	0.376	0.000	0.001	0.001			
	(n = 1 to 8)										
FDH1	A → Yn	(HH)	0.108	0.156	0.216	0.000	0.000	0.000			
		(LL)	0.170	0.250	0.376	0.000	0.001	0.001			
	(n = 1 to 8)										

Function	Input Buffer with EN(AND)					3.3V
Block type						
Function	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
Normal	FN11	FN21			1	8
Schmitt						
Clock						

Logic Diagram

"Normal"



Truth Table

A	EN	Y
0	0	0
0	1	0
1	0	0
1	1	1

"Schmitt"

Block type	Input		Output	
	Symbol	Fan-In	Symbol	Fan-Out
FN11 to FN21	A	-	Y	361
	EN	3.6		

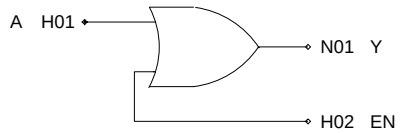
"Clock"

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
FN11	A → Y	(HH)	0.164	0.240	0.361	0.001	0.002	0.004			
		(LL)	0.208	0.313	0.477	0.002	0.003	0.005			
	EN → Y	(HH)	0.155	0.233	0.360	0.001	0.002	0.004			
		(LL)	0.215	0.324	0.493	0.002	0.003	0.005			
FN21	A → Y	(HH)	0.164	0.240	0.361	0.001	0.002	0.004			
		(LL)	0.208	0.313	0.477	0.002	0.003	0.005			
	EN → Y	(HH)	0.155	0.233	0.360	0.001	0.002	0.004			
		(LL)	0.215	0.324	0.493	0.002	0.003	0.005			

Function	Input Buffer with EN(OR)					3.3V
Block type						
Function	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
Normal	FN13	FN23			1	8
Schmitt						
Clock						

Logic Diagram

"Normal"



Truth Table

A	EN	Y
0	0	0
0	1	1
1	0	1
1	1	1

"Schmitt"

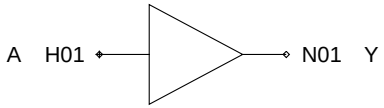
"Clock"

Block type	Input		Output	
	Symbol	Fan-In	Symbol	Fan-Out
FN13 to FN23	A	-	Y	350
	EN	3.6		

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
FN13	A → Y	(HH)	0.132	0.195	0.275	0.001	0.002	0.003			
		(LL)	0.313	0.490	0.774	0.002	0.003	0.005			
	EN → Y	(HH)	0.131	0.194	0.274	0.001	0.002	0.003			
		(LL)	0.314	0.490	0.774	0.002	0.003	0.005			
FN23	A → Y	(HH)	0.132	0.195	0.275	0.001	0.002	0.003			
		(LL)	0.313	0.490	0.774	0.002	0.003	0.005			
	EN → Y	(HH)	0.131	0.194	0.274	0.001	0.002	0.003			
		(LL)	0.314	0.490	0.774	0.002	0.003	0.005			

Function	Output Buffer					3.3V
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA	FO09				1	8
6mA	FO04				1	8
9mA	FO01				1	8
12mA	FO02				1	8
18mA	FO03				1	18
24mA	FO06				1	18

Logic Diagram



Truth Table

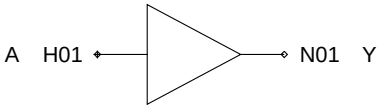
A	Y
1	1
0	0

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
FO09	A	19.5	Y	-
FO04	A	19.2	Y	-
FO01	A	19.2	Y	-
FO02	A	19.2	Y	-
FO03	A	42.6	Y	-
FO06	A	42.8	Y	-

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
FO09	A → Y	(HH)	0.669	1.044	1.655				0.072	0.113	0.180
		(LL)	0.771	1.110	1.601				0.087	0.124	0.179
FO04	A → Y	(HH)	0.524	0.800	1.267				0.037	0.059	0.093
		(LL)	0.596	0.893	1.338				0.044	0.063	0.090
FO01	A → Y	(HH)	0.459	0.691	1.087				0.026	0.041	0.064
		(LL)	0.511	0.773	1.168				0.031	0.043	0.061
FO02	A → Y	(HH)	0.425	0.640	1.006				0.019	0.030	0.048
		(LL)	0.477	0.724	1.105				0.023	0.032	0.046
FO03	A → Y	(HH)	0.401	0.598	0.942				0.013	0.020	0.032
		(LL)	0.313	0.483	0.731				0.016	0.022	0.031
FO06	A → Y	(HH)	0.398	0.593	0.940				0.010	0.016	0.024
		(LL)	0.301	0.464	0.711				0.012	0.017	0.024

Function	Low-noise Output Buffer				3.3V	
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA						
6mA	FE04				1	10
9mA	FE01				1	10
12mA	FE02				1	10
18mA	FE03				1	10
24mA	FE06				1	10

Logic Diagram



Truth Table

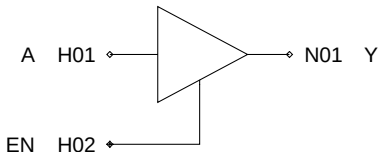
A	Y
1	1
0	0

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
FE04	A	23.4	Y	-
FE01	A	23.4	Y	-
FE02	A	23.5	Y	-
FE03	A	23.5	Y	-
FE06	A	23.5	Y	-

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
FE04	A → Y	(HH)	1.071	1.736	3.001				0.038	0.060	0.095
		(LL)	1.706	2.730	4.291				0.047	0.067	0.096
FE01	A → Y	(HH)	1.025	1.676	2.915				0.027	0.043	0.068
		(LL)	1.562	2.509	4.045				0.034	0.049	0.070
FE02	A → Y	(HH)	1.005	1.660	2.900				0.021	0.033	0.053
		(LL)	1.481	2.436	3.948				0.028	0.040	0.057
FE03	A → Y	(HH)	1.033	1.730	3.042				0.016	0.025	0.042
		(LL)	1.464	2.452	3.998				0.023	0.033	0.047
FE06	A → Y	(HH)	1.035	1.748	3.091				0.014	0.022	0.036
		(LL)	1.423	2.389	3.875				0.019	0.028	0.042

Function	3-State Buffer					3.3V
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA	B00T	B0DT	B0UT	B0WT	1	18
6mA	B00E	B0DE	B0UE	B0WE	1	18
9mA	B008	B0D8	B0U8	B0W8	1	18
12mA	B007	B0D7	B0U7	B0W7	1	18
18mA	B009	B0D9	B0U9	B0W9	1	20
24mA	B00H	B0DH	B0UH	B0WH	1	20

Logic Diagram



Truth Table

A	EN	Y
0	1	0
1	1	1
X	0	Z

X:Irrelevant

Z:High Impedance

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
B00T to B0WT	A	22.5	Y	-
	EN	11.4		
B00E to B0WE	A	22.4	Y	-
	EN	11.5		
B008 to B0W8	A	22.4	Y	-
	EN	11.5		
B007 to B0W7	A	22.4	Y	-
	EN	11.5		
B009 to B0W9	A	27.2	Y	-
	EN	11.6		
B00H to B0WH	A	27.1	Y	-
	EN	11.6		

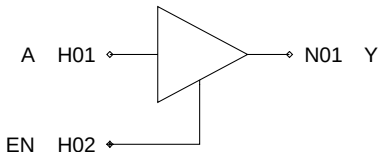
Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
B00T	A → Y	(HH)	0.703	1.103	1.744				0.072	0.113	0.181	
		(LL)	0.834	1.210	1.793				0.087	0.125	0.179	
	EN → Y	(HZ)	0.156	0.201	0.285							
		(LZ)	0.305	0.460	0.709							
		(ZH)	0.683	1.066	1.676				0.072	0.113	0.181	
		(ZL)	0.946	1.352	1.966				0.087	0.124	0.179	
B0DT	A → Y	(HH)	0.703	1.103	1.744				0.072	0.113	0.181	
		(LL)	0.834	1.210	1.793				0.087	0.125	0.179	
	EN → Y	(HZ)	0.156	0.201	0.285							
		(LZ)	0.305	0.460	0.709							
		(ZH)	0.683	1.066	1.676				0.072	0.113	0.181	
		(ZL)	0.946	1.352	1.966				0.087	0.124	0.179	
B0UT	A → Y	(HH)	0.703	1.103	1.744				0.072	0.113	0.181	
		(LL)	0.834	1.210	1.793				0.087	0.125	0.179	
	EN → Y	(HZ)	0.156	0.201	0.285							
		(LZ)	0.305	0.460	0.709							
		(ZH)	0.683	1.066	1.676				0.072	0.113	0.181	
		(ZL)	0.946	1.352	1.966				0.087	0.124	0.179	
B0WT	A → Y	(HH)	0.703	1.103	1.744				0.072	0.113	0.181	
		(LL)	0.834	1.210	1.793				0.087	0.125	0.179	
	EN → Y	(HZ)	0.156	0.201	0.285							
		(LZ)	0.305	0.460	0.709							
		(ZH)	0.683	1.066	1.676				0.072	0.113	0.181	
		(ZL)	0.946	1.352	1.966				0.087	0.124	0.179	
B00E	A → Y	(HH)	0.579	0.912	1.484				0.037	0.059	0.093	
		(LL)	0.704	1.100	1.720				0.045	0.063	0.090	
	EN → Y	(HZ)	0.422	0.556	0.826							
		(LZ)	0.455	0.679	1.055							
		(ZH)	0.533	0.820	1.312				0.037	0.059	0.093	
		(ZL)	0.738	1.105	1.692				0.045	0.063	0.090	
B0DE	A → Y	(HH)	0.579	0.912	1.484				0.037	0.059	0.093	
		(LL)	0.704	1.100	1.720				0.045	0.063	0.090	
	EN → Y	(HZ)	0.422	0.556	0.826							
		(LZ)	0.455	0.679	1.055							
		(ZH)	0.533	0.820	1.312				0.037	0.059	0.093	
		(ZL)	0.738	1.105	1.692				0.045	0.063	0.090	
B0UE	A → Y	(HH)	0.579	0.912	1.484				0.037	0.059	0.093	
		(LL)	0.704	1.100	1.720				0.045	0.063	0.090	
	EN → Y	(HZ)	0.422	0.556	0.826							
		(LZ)	0.455	0.679	1.055							
		(ZH)	0.533	0.820	1.312				0.037	0.059	0.093	
		(ZL)	0.738	1.105	1.692				0.045	0.063	0.090	
B0WE	A → Y	(HH)	0.579	0.912	1.484				0.037	0.059	0.093	
		(LL)	0.704	1.100	1.720				0.045	0.063	0.090	
	EN → Y	(HZ)	0.422	0.556	0.826							
		(LZ)	0.455	0.679	1.055							
		(ZH)	0.533	0.820	1.312				0.037	0.059	0.093	
		(ZL)	0.738	1.105	1.692				0.045	0.063	0.090	
B008	A → Y	(HH)	0.516	0.813	1.318				0.026	0.041	0.064	
		(LL)	0.608	0.972	1.542				0.031	0.043	0.061	
	EN → Y	(HZ)	0.470	0.634	0.937							
		(LZ)	0.470	0.700	1.088							
		(ZH)	0.466	0.709	1.136				0.026	0.041	0.064	
		(ZL)	0.639	0.961	1.484				0.030	0.043	0.061	

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
B0D8	A → Y	(HH)	0.516	0.813	1.318				0.026	0.041	0.064	
		(LL)	0.608	0.972	1.542				0.031	0.043	0.061	
	EN → Y	(HZ)	0.470	0.634	0.937							
		(LZ)	0.470	0.700	1.088							
		(ZH)	0.466	0.709	1.136				0.026	0.041	0.064	
		(ZL)	0.639	0.961	1.484				0.030	0.043	0.061	
B0U8	A → Y	(HH)	0.516	0.813	1.318				0.026	0.041	0.064	
		(LL)	0.608	0.972	1.542				0.031	0.043	0.061	
	EN → Y	(HZ)	0.470	0.634	0.937							
		(LZ)	0.470	0.700	1.088							
		(ZH)	0.466	0.709	1.136				0.026	0.041	0.064	
		(ZL)	0.639	0.961	1.484				0.030	0.043	0.061	
B0W8	A → Y	(HH)	0.516	0.813	1.318				0.026	0.041	0.064	
		(LL)	0.608	0.972	1.542				0.031	0.043	0.061	
	EN → Y	(HZ)	0.470	0.634	0.937							
		(LZ)	0.470	0.700	1.088							
		(ZH)	0.466	0.709	1.136				0.026	0.041	0.064	
		(ZL)	0.639	0.961	1.484				0.030	0.043	0.061	
B007	A → Y	(HH)	0.486	0.768	1.252				0.020	0.031	0.048	
		(LL)	0.564	0.920	1.474				0.023	0.033	0.047	
	EN → Y	(HZ)	0.521	0.695	1.056							
		(LZ)	0.485	0.724	1.127							
		(ZH)	0.433	0.659	1.059				0.020	0.030	0.048	
		(ZL)	0.584	0.889	1.390				0.023	0.033	0.047	
B0D7	A → Y	(HH)	0.486	0.768	1.252				0.020	0.031	0.048	
		(LL)	0.564	0.920	1.474				0.023	0.033	0.047	
	EN → Y	(HZ)	0.521	0.695	1.056							
		(LZ)	0.485	0.724	1.127							
		(ZH)	0.433	0.659	1.059				0.020	0.030	0.048	
		(ZL)	0.584	0.889	1.390				0.023	0.033	0.047	
B0U7	A → Y	(HH)	0.486	0.768	1.252				0.020	0.031	0.048	
		(LL)	0.564	0.920	1.474				0.023	0.033	0.047	
	EN → Y	(HZ)	0.521	0.695	1.056							
		(LZ)	0.485	0.724	1.127							
		(ZH)	0.433	0.659	1.059				0.020	0.030	0.048	
		(ZL)	0.584	0.889	1.390				0.023	0.033	0.047	
B0W7	A → Y	(HH)	0.486	0.768	1.252				0.020	0.031	0.048	
		(LL)	0.564	0.920	1.474				0.023	0.033	0.047	
	EN → Y	(HZ)	0.521	0.695	1.056							
		(LZ)	0.485	0.724	1.127							
		(ZH)	0.433	0.659	1.059				0.020	0.030	0.048	
		(ZL)	0.584	0.889	1.390				0.023	0.033	0.047	
B009	A → Y	(HH)	0.449	0.723	1.185				0.013	0.021	0.033	
		(LL)	0.512	0.848	1.388				0.016	0.023	0.033	
	EN → Y	(HZ)	0.642	0.858	1.306							
		(LZ)	0.525	0.784	1.224							
		(ZH)	0.414	0.633	1.023				0.013	0.021	0.033	
		(ZL)	0.534	0.822	1.302				0.016	0.023	0.032	
B0D9	A → Y	(HH)	0.449	0.723	1.185				0.013	0.021	0.033	
		(LL)	0.512	0.848	1.388				0.016	0.023	0.033	
	EN → Y	(HZ)	0.642	0.858	1.306							
		(LZ)	0.525	0.784	1.224							
		(ZH)	0.414	0.633	1.023				0.013	0.021	0.033	
		(ZL)	0.534	0.822	1.302				0.016	0.023	0.032	

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
B0U9	A → Y	(HH)	0.449	0.723	1.185				0.013	0.021	0.033	
		(LL)	0.512	0.848	1.388				0.016	0.023	0.033	
	EN → Y	(HZ)	0.642	0.858	1.306							
		(LZ)	0.525	0.784	1.224							
		(ZH)	0.414	0.633	1.023				0.013	0.021	0.033	
		(ZL)	0.534	0.822	1.302				0.016	0.023	0.032	
B0W9	A → Y	(HH)	0.449	0.723	1.185				0.013	0.021	0.033	
		(LL)	0.512	0.848	1.388				0.016	0.023	0.033	
	EN → Y	(HZ)	0.642	0.858	1.306							
		(LZ)	0.525	0.784	1.224							
		(ZH)	0.414	0.633	1.023				0.013	0.021	0.033	
		(ZL)	0.534	0.822	1.302				0.016	0.023	0.032	
B00H	A → Y	(HH)	0.446	0.723	1.192				0.010	0.016	0.025	
		(LL)	0.493	0.824	1.361				0.013	0.018	0.026	
	EN → Y	(HZ)	0.717	0.983	1.502							
		(LZ)	0.552	0.820	1.283							
		(ZH)	0.405	0.624	1.015				0.010	0.016	0.025	
		(ZL)	0.503	0.780	1.244				0.013	0.018	0.026	
B0DH	A → Y	(HH)	0.446	0.723	1.192				0.010	0.016	0.025	
		(LL)	0.493	0.824	1.361				0.013	0.018	0.026	
	EN → Y	(HZ)	0.717	0.983	1.502							
		(LZ)	0.552	0.820	1.283							
		(ZH)	0.405	0.624	1.015				0.010	0.016	0.025	
		(ZL)	0.503	0.780	1.244				0.013	0.018	0.026	
B0UH	A → Y	(HH)	0.446	0.723	1.192				0.010	0.016	0.025	
		(LL)	0.493	0.824	1.361				0.013	0.018	0.026	
	EN → Y	(HZ)	0.717	0.983	1.502							
		(LZ)	0.552	0.820	1.283							
		(ZH)	0.405	0.624	1.015				0.010	0.016	0.025	
		(ZL)	0.503	0.780	1.244				0.013	0.018	0.026	
B0WH	A → Y	(HH)	0.446	0.723	1.192				0.010	0.016	0.025	
		(LL)	0.493	0.824	1.361				0.013	0.018	0.026	
	EN → Y	(HZ)	0.717	0.983	1.502							
		(LZ)	0.552	0.820	1.283							
		(ZH)	0.405	0.624	1.015				0.010	0.016	0.025	
		(ZL)	0.503	0.780	1.244				0.013	0.018	0.026	

Function	Low-noise 3-State Buffer					3.3V
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA						
6mA	BE0E	BEDE	BEUE	BEWE	1	11
9mA	BE08	BED8	BEU8	BEW8	1	11
12mA	BE07	BED7	BEU7	BEW7	1	11
18mA	BE09	BED9	BEU9	BEW9	1	11
24mA	BE0H	BEDH	BEUH	BEWH	1	11

Logic Diagram



Truth Table

A	EN	Y
0	1	0
1	1	1
X	0	Z

X:Irrelevant

Z:High Impedance

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
BE0E to BEWE	A	17.9	Y	-
	EN	4.7		
BE08 to BEW8	A	17.9	Y	-
	EN	4.7		
BE07 to BEW7	A	18.0	Y	-
	EN	4.7		
BE09 to BEW9	A	17.9	Y	-
	EN	4.7		
BE0H to BEWH	A	17.9	Y	-
	EN	4.8		

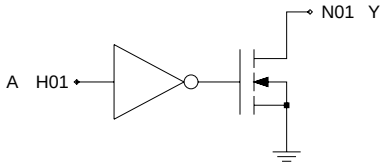
Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BE0E	A → Y	(HH)	1.252	2.055	3.607				0.039	0.060	0.096
		(LL)	1.683	2.680	4.263				0.047	0.067	0.096
	EN → Y	(HZ)	1.462	1.952	2.936						
		(LZ)	1.374	2.000	3.156						
		(ZH)	1.186	2.023	3.621				0.038	0.060	0.096
		(ZL)	1.772	2.844	4.464				0.047	0.067	0.097
BEDE	A → Y	(HH)	1.252	2.055	3.607				0.039	0.060	0.096
		(LL)	1.683	2.680	4.263				0.047	0.067	0.096
	EN → Y	(HZ)	1.462	1.952	2.936						
		(LZ)	1.374	2.000	3.156						
		(ZH)	1.186	2.023	3.621				0.038	0.060	0.096
		(ZL)	1.772	2.844	4.464				0.047	0.067	0.097
BEUE	A → Y	(HH)	1.252	2.055	3.607				0.039	0.060	0.096
		(LL)	1.683	2.680	4.263				0.047	0.067	0.096
	EN → Y	(HZ)	1.462	1.952	2.936						
		(LZ)	1.374	2.000	3.156						
		(ZH)	1.186	2.023	3.621				0.038	0.060	0.096
		(ZL)	1.772	2.844	4.464				0.047	0.067	0.097
BEWE	A → Y	(HH)	1.252	2.055	3.607				0.039	0.060	0.096
		(LL)	1.683	2.680	4.263				0.047	0.067	0.096
	EN → Y	(HZ)	1.462	1.952	2.936						
		(LZ)	1.374	2.000	3.156						
		(ZH)	1.186	2.023	3.621				0.038	0.060	0.096
		(ZL)	1.772	2.844	4.464				0.047	0.067	0.097
BE08	A → Y	(HH)	1.203	1.995	3.518				0.028	0.044	0.070
		(LL)	1.533	2.502	4.013				0.035	0.049	0.070
	EN → Y	(HZ)	1.639	2.216	3.338						
		(LZ)	1.466	2.142	3.382						
		(ZH)	1.138	1.961	3.524				0.028	0.044	0.070
		(ZL)	1.636	2.629	4.209				0.034	0.049	0.070
BED8	A → Y	(HH)	1.203	1.995	3.518				0.028	0.044	0.070
		(LL)	1.533	2.502	4.013				0.035	0.049	0.070
	EN → Y	(HZ)	1.639	2.216	3.338						
		(LZ)	1.466	2.142	3.382						
		(ZH)	1.138	1.961	3.524				0.028	0.044	0.070
		(ZL)	1.636	2.629	4.209				0.034	0.049	0.070
BEU8	A → Y	(HH)	1.203	1.995	3.518				0.028	0.044	0.070
		(LL)	1.533	2.502	4.013				0.035	0.049	0.070
	EN → Y	(HZ)	1.639	2.216	3.338						
		(LZ)	1.466	2.142	3.382						
		(ZH)	1.138	1.961	3.524				0.028	0.044	0.070
		(ZL)	1.636	2.629	4.209				0.034	0.049	0.070
BEW8	A → Y	(HH)	1.203	1.995	3.518				0.028	0.044	0.070
		(LL)	1.533	2.502	4.013				0.035	0.049	0.070
	EN → Y	(HZ)	1.639	2.216	3.338						
		(LZ)	1.466	2.142	3.382						
		(ZH)	1.138	1.961	3.524				0.028	0.044	0.070
		(ZL)	1.636	2.629	4.209				0.034	0.049	0.070
BE07	A → Y	(HH)	1.180	1.976	3.499				0.022	0.035	0.057
		(LL)	1.471	2.399	3.881				0.028	0.040	0.058
	EN → Y	(HZ)	1.826	2.477	3.737						
		(LZ)	1.567	2.295	3.638						
		(ZH)	1.115	1.942	3.509				0.022	0.035	0.056
		(ZL)	1.568	2.571	4.122				0.028	0.040	0.058

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BED7	A → Y	(HH)	1.180	1.976	3.499				0.022	0.035	0.057
		(LL)	1.471	2.399	3.881				0.028	0.040	0.058
	EN → Y	(HZ)	1.826	2.477	3.737						
		(LZ)	1.567	2.295	3.638						
		(ZH)	1.115	1.942	3.509				0.022	0.035	0.056
		(ZL)	1.568	2.571	4.122				0.028	0.040	0.058
BEU7	A → Y	(HH)	1.180	1.976	3.499				0.022	0.035	0.057
		(LL)	1.471	2.399	3.881				0.028	0.040	0.058
	EN → Y	(HZ)	1.826	2.477	3.737						
		(LZ)	1.567	2.295	3.638						
		(ZH)	1.115	1.942	3.509				0.022	0.035	0.056
		(ZL)	1.568	2.571	4.122				0.028	0.040	0.058
BEW7	A → Y	(HH)	1.180	1.976	3.499				0.022	0.035	0.057
		(LL)	1.471	2.399	3.881				0.028	0.040	0.058
	EN → Y	(HZ)	1.826	2.477	3.737						
		(LZ)	1.567	2.295	3.638						
		(ZH)	1.115	1.942	3.509				0.022	0.035	0.056
		(ZL)	1.568	2.571	4.122				0.028	0.040	0.058
BE09	A → Y	(HH)	1.211	2.067	3.692				0.018	0.027	0.045
		(LL)	1.453	2.417	3.957				0.023	0.032	0.047
	EN → Y	(HZ)	2.268	3.078	4.670						
		(LZ)	1.825	2.687	4.274						
		(ZH)	1.152	2.036	3.698				0.018	0.027	0.045
		(ZL)	1.550	2.569	4.204				0.023	0.033	0.046
BED9	A → Y	(HH)	1.211	2.067	3.692				0.018	0.027	0.045
		(LL)	1.453	2.417	3.957				0.023	0.032	0.047
	EN → Y	(HZ)	2.268	3.078	4.670						
		(LZ)	1.825	2.687	4.274						
		(ZH)	1.152	2.036	3.698				0.018	0.027	0.045
		(ZL)	1.550	2.569	4.204				0.023	0.033	0.046
BEU9	A → Y	(HH)	1.211	2.067	3.692				0.018	0.027	0.045
		(LL)	1.453	2.417	3.957				0.023	0.032	0.047
	EN → Y	(HZ)	2.268	3.078	4.670						
		(LZ)	1.825	2.687	4.274						
		(ZH)	1.152	2.036	3.698				0.018	0.027	0.045
		(ZL)	1.550	2.569	4.204				0.023	0.033	0.046
BEW9	A → Y	(HH)	1.211	2.067	3.692				0.018	0.027	0.045
		(LL)	1.453	2.417	3.957				0.023	0.032	0.047
	EN → Y	(HZ)	2.268	3.078	4.670						
		(LZ)	1.825	2.687	4.274						
		(ZH)	1.152	2.036	3.698				0.018	0.027	0.045
		(ZL)	1.550	2.569	4.204				0.023	0.033	0.046
BE0H	A → Y	(HH)	1.219	2.089	3.749				0.015	0.024	0.040
		(LL)	1.389	2.355	3.852				0.020	0.028	0.041
	EN → Y	(HZ)	2.548	3.508	5.358						
		(LZ)	1.967	2.904	4.632						
		(ZH)	1.154	2.057	3.752				0.015	0.024	0.040
		(ZL)	1.492	2.494	4.081				0.020	0.028	0.041
BEDH	A → Y	(HH)	1.219	2.089	3.749				0.015	0.024	0.040
		(LL)	1.389	2.355	3.852				0.020	0.028	0.041
	EN → Y	(HZ)	2.548	3.508	5.358						
		(LZ)	1.967	2.904	4.632						
		(ZH)	1.154	2.057	3.752				0.015	0.024	0.040
		(ZL)	1.492	2.494	4.081				0.020	0.028	0.041

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BEUH	A → Y	(HH)	1.219	2.089	3.749				0.015	0.024	0.040
		(LL)	1.389	2.355	3.852				0.020	0.028	0.041
	EN → Y	(HZ)	2.548	3.508	5.358						
		(LZ)	1.967	2.904	4.632						
		(ZH)	1.154	2.057	3.752				0.015	0.024	0.040
		(ZL)	1.492	2.494	4.081				0.020	0.028	0.041
BEWH	A → Y	(HH)	1.219	2.089	3.749				0.015	0.024	0.040
		(LL)	1.389	2.355	3.852				0.020	0.028	0.041
	EN → Y	(HZ)	2.548	3.508	5.358						
		(LZ)	1.967	2.904	4.632						
		(ZH)	1.154	2.057	3.752				0.015	0.024	0.040
		(ZL)	1.492	2.494	4.081				0.020	0.028	0.041

Function	N-ch Open drain Buffer				3.3V	
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA	EXTH		EXUH	EXWH	1	8
6mA	EXTJ		EXUJ	EXWJ	1	8
9mA	EXT1		EXT3	EXW3	1	8
12mA	EXT9		EXTB	EXWB	1	8
18mA	EXT5		EXT7	EXW7	1	18
24mA	EXTD		EXTF	EXWF	1	18

Logic Diagram



Truth Table

A	Y
1	Z
0	0

Z:High Impedance

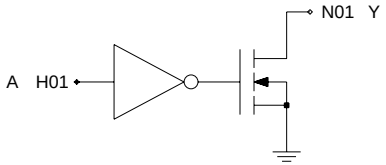
Connect a pull-up resistor to get a high level

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
EXTH to EXWH	A	19.2	Y	-
EXTJ to EXWJ	A	19.2	Y	-
EXT1 to EXW3	A	19.2	Y	-
EXT9 to EXWB	A	19.2	Y	-
EXT5 to EXW7	A	42.7	Y	-
EXTD to EXWF	A	42.8	Y	-

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
EXTH	A → Y	(LZ)	0.095	0.116	0.153						
		(ZL)	0.737	1.052	1.518				0.087	0.124	0.179
EXUH	A → Y	(LZ)	0.095	0.116	0.153						
		(ZL)	0.737	1.052	1.518				0.087	0.124	0.179
EXWH	A → Y	(LZ)	0.095	0.116	0.153						
		(ZL)	0.737	1.052	1.518				0.087	0.124	0.179
EXTJ	A → Y	(LZ)	0.203	0.260	0.360						
		(ZL)	0.488	0.723	1.059				0.044	0.063	0.090
EXUJ	A → Y	(LZ)	0.203	0.260	0.360						
		(ZL)	0.488	0.723	1.059				0.044	0.063	0.090
EXWJ	A → Y	(LZ)	0.203	0.260	0.360						
		(ZL)	0.488	0.723	1.059				0.044	0.063	0.090
EXT1	A → Y	(LZ)	0.218	0.281	0.392						
		(ZL)	0.390	0.588	0.867				0.030	0.043	0.061
EXT3	A → Y	(LZ)	0.218	0.281	0.392						
		(ZL)	0.390	0.588	0.867				0.030	0.043	0.061
EXW3	A → Y	(LZ)	0.218	0.281	0.392						
		(ZL)	0.390	0.588	0.867				0.030	0.043	0.061
EXT9	A → Y	(LZ)	0.226	0.291	0.410						
		(ZL)	0.341	0.512	0.765				0.023	0.032	0.046
EXTB	A → Y	(LZ)	0.226	0.291	0.410						
		(ZL)	0.341	0.512	0.765				0.023	0.032	0.046
EXWB	A → Y	(LZ)	0.226	0.291	0.410						
		(ZL)	0.341	0.512	0.765				0.023	0.032	0.046
EXT5	A → Y	(LZ)	0.249	0.318	0.450						
		(ZL)	0.220	0.347	0.525				0.016	0.022	0.031
EXT7	A → Y	(LZ)	0.249	0.318	0.450						
		(ZL)	0.220	0.347	0.525				0.016	0.022	0.031
EXW7	A → Y	(LZ)	0.249	0.318	0.450						
		(ZL)	0.220	0.347	0.525				0.016	0.022	0.031
EXTD	A → Y	(LZ)	0.266	0.343	0.491						
		(ZL)	0.199	0.317	0.487				0.012	0.017	0.023
EXTF	A → Y	(LZ)	0.266	0.343	0.491						
		(ZL)	0.199	0.317	0.487				0.012	0.017	0.023
EXWF	A → Y	(LZ)	0.266	0.343	0.491						
		(ZL)	0.199	0.317	0.487				0.012	0.017	0.023

Function	Low-noise N-ch Open drain Buffer				3.3V	
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA						
6mA	EETJ		EEUJ	EEWJ	1	5
9mA	EET1		EET3	EEW3	1	5
12mA	EET9		EETB	EEWB	1	5
18mA	EET5		EET7	EEW7	1	5
24mA	EETD		EETF	EEWF	1	5

Logic Diagram



Truth Table

A	Y
1	Z
0	0

Z:High Impedance

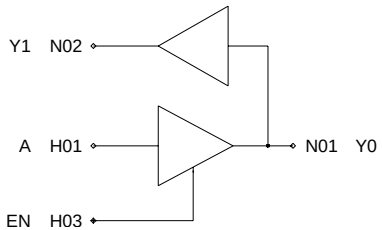
Connect a pull-up resistor to get a high level

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
EETJ to EEWJ	A	10.5	Y	-
EET1 to EEW3	A	10.5	Y	-
EET9 to EEWB	A	10.5	Y	-
EET5 to EEW7	A	10.6	Y	-
EETD to EEWF	A	10.4	Y	-

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
EETJ	A → Y	(LZ)	0.384	0.512	0.765							
		(ZL)	1.686	2.679	4.258				0.047	0.067	0.096	
EEUJ	A → Y	(LZ)	0.384	0.512	0.765							
		(ZL)	1.686	2.679	4.258				0.047	0.067	0.096	
EEWJ	A → Y	(LZ)	0.384	0.512	0.765							
		(ZL)	1.686	2.679	4.258				0.047	0.067	0.096	
EET1	A → Y	(LZ)	0.423	0.571	0.864							
		(ZL)	1.591	2.595	4.133				0.035	0.049	0.071	
EET3	A → Y	(LZ)	0.423	0.571	0.864							
		(ZL)	1.591	2.595	4.133				0.035	0.049	0.071	
EEW3	A → Y	(LZ)	0.423	0.571	0.864							
		(ZL)	1.591	2.595	4.133				0.035	0.049	0.071	
EET9	A → Y	(LZ)	0.435	0.593	0.897							
		(ZL)	1.482	2.412	3.917				0.028	0.040	0.057	
EETB	A → Y	(LZ)	0.435	0.593	0.897							
		(ZL)	1.482	2.412	3.917				0.028	0.040	0.057	
EEWB	A → Y	(LZ)	0.435	0.593	0.897							
		(ZL)	1.482	2.412	3.917				0.028	0.040	0.057	
EET5	A → Y	(LZ)	0.502	0.693	1.059							
		(ZL)	1.456	2.428	3.927				0.023	0.032	0.048	
EET7	A → Y	(LZ)	0.502	0.693	1.059							
		(ZL)	1.456	2.428	3.927				0.023	0.032	0.048	
EEW7	A → Y	(LZ)	0.502	0.693	1.059							
		(ZL)	1.456	2.428	3.927				0.023	0.032	0.048	
EETD	A → Y	(LZ)	0.543	0.756	1.161							
		(ZL)	1.407	2.357	3.851				0.020	0.028	0.041	
EETF	A → Y	(LZ)	0.543	0.756	1.161							
		(ZL)	1.407	2.357	3.851				0.020	0.028	0.041	
EEWF	A → Y	(LZ)	0.543	0.756	1.161							
		(ZL)	1.407	2.357	3.851				0.020	0.028	0.041	

Function	I/O Buffer					3.3V
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA	B00U	B0DU	B0UU	B0WU	1	25
6mA	B00C	B0DC	B0UC	B0WC	1	25
9mA	B003	B0D3	B0U3	B0W3	1	25
12mA	B001	B0D1	B0U1	B0W1	1	25
18mA	B005	B0D5	B0U5	B0W5	1	27
24mA	B00F	B0DF	B0UF	B0WF	1	27

Logic Diagram



Truth Table

A	EN	Y0
0	1	0
1	1	1
X	0	Z

X:Irrelevant

Z:High Impedance

Y0	Y1
0	0
1	1

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
B00U to B0WU	A	22.5	Y1	358
	EN	11.4		
B00C to B0WC	A	22.4	Y1	358
	EN	11.5		
B003 to B0W3	A	22.4	Y1	358
	EN	11.5		
B001 to B0W1	A	22.4	Y1	358
	EN	11.5		
B005 to B0W5	A	27.2	Y1	358
	EN	11.6		
B00F to B0WF	A	27.1	Y1	358
	EN	11.6		

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
B00U	A → Y0	(HH)	0.703	1.103	1.744				0.072	0.113	0.181
		(LL)	0.834	1.210	1.793				0.087	0.125	0.179
	EN → Y0	(HZ)	0.156	0.201	0.285						
		(LZ)	0.305	0.460	0.709						
		(ZH)	0.683	1.066	1.676				0.072	0.113	0.181
		(ZL)	0.946	1.352	1.966				0.087	0.124	0.179
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
B0DU	A → Y0	(HH)	0.703	1.103	1.744				0.072	0.113	0.181
		(LL)	0.834	1.210	1.793				0.087	0.125	0.179
	EN → Y0	(HZ)	0.156	0.201	0.285						
		(LZ)	0.305	0.460	0.709						
		(ZH)	0.683	1.066	1.676				0.072	0.113	0.181
		(ZL)	0.946	1.352	1.966				0.087	0.124	0.179
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
B0UU	A → Y0	(HH)	0.703	1.103	1.744				0.072	0.113	0.181
		(LL)	0.834	1.210	1.793				0.087	0.125	0.179
	EN → Y0	(HZ)	0.156	0.201	0.285						
		(LZ)	0.305	0.460	0.709						
		(ZH)	0.683	1.066	1.676				0.072	0.113	0.181
		(ZL)	0.946	1.352	1.966				0.087	0.124	0.179
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
B0WU	A → Y0	(HH)	0.703	1.103	1.744				0.072	0.113	0.181
		(LL)	0.834	1.210	1.793				0.087	0.125	0.179
	EN → Y0	(HZ)	0.156	0.201	0.285						
		(LZ)	0.305	0.460	0.709						
		(ZH)	0.683	1.066	1.676				0.072	0.113	0.181
		(ZL)	0.946	1.352	1.966				0.087	0.124	0.179
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
B00C	A → Y0	(HH)	0.579	0.912	1.484				0.037	0.059	0.093
		(LL)	0.704	1.100	1.720				0.045	0.063	0.090
	EN → Y0	(HZ)	0.422	0.556	0.826						
		(LZ)	0.455	0.679	1.055						
		(ZH)	0.533	0.820	1.312				0.037	0.059	0.093
		(ZL)	0.738	1.105	1.692				0.045	0.063	0.090
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
B0DC	A → Y0	(HH)	0.579	0.912	1.484				0.037	0.059	0.093
		(LL)	0.704	1.100	1.720				0.045	0.063	0.090
	EN → Y0	(HZ)	0.422	0.556	0.826						
		(LZ)	0.455	0.679	1.055						
		(ZH)	0.533	0.820	1.312				0.037	0.059	0.093
		(ZL)	0.738	1.105	1.692				0.045	0.063	0.090
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
B0UC	A → Y0	(HH)	0.579	0.912	1.484				0.037	0.059	0.093
		(LL)	0.704	1.100	1.720				0.045	0.063	0.090
	EN → Y0	(HZ)	0.422	0.556	0.826						
		(LZ)	0.455	0.679	1.055						
		(ZH)	0.533	0.820	1.312				0.037	0.059	0.093
		(ZL)	0.738	1.105	1.692				0.045	0.063	0.090
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
B0WC	A → Y0	(HH)	0.579	0.912	1.484				0.037	0.059	0.093
		(LL)	0.704	1.100	1.720				0.045	0.063	0.090
	EN → Y0	(HZ)	0.422	0.556	0.826						
		(LZ)	0.455	0.679	1.055						
		(ZH)	0.533	0.820	1.312				0.037	0.059	0.093
		(ZL)	0.738	1.105	1.692				0.045	0.063	0.090
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
B003	A → Y0	(HH)	0.516	0.813	1.318				0.026	0.041	0.064
		(LL)	0.608	0.972	1.542				0.031	0.043	0.061
	EN → Y0	(HZ)	0.470	0.634	0.937						
		(LZ)	0.470	0.700	1.088						
		(ZH)	0.466	0.709	1.136				0.026	0.041	0.064
		(ZL)	0.639	0.961	1.484				0.030	0.043	0.061
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
B0D3	A → Y0	(HH)	0.516	0.813	1.318				0.026	0.041	0.064
		(LL)	0.608	0.972	1.542				0.031	0.043	0.061
	EN → Y0	(HZ)	0.470	0.634	0.937						
		(LZ)	0.470	0.700	1.088						
		(ZH)	0.466	0.709	1.136				0.026	0.041	0.064
		(ZL)	0.639	0.961	1.484				0.030	0.043	0.061
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
B0U3	A → Y0	(HH)	0.516	0.813	1.318				0.026	0.041	0.064
		(LL)	0.608	0.972	1.542				0.031	0.043	0.061
	EN → Y0	(HZ)	0.470	0.634	0.937						
		(LZ)	0.470	0.700	1.088						
		(ZH)	0.466	0.709	1.136				0.026	0.041	0.064
		(ZL)	0.639	0.961	1.484				0.030	0.043	0.061
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
B0W3	A → Y0	(HH)	0.516	0.813	1.318				0.026	0.041	0.064
		(LL)	0.608	0.972	1.542				0.031	0.043	0.061
	EN → Y0	(HZ)	0.470	0.634	0.937						
		(LZ)	0.470	0.700	1.088						
		(ZH)	0.466	0.709	1.136				0.026	0.041	0.064
		(ZL)	0.639	0.961	1.484				0.030	0.043	0.061
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
B001	A → Y0	(HH)	0.486	0.768	1.252				0.020	0.031	0.048
		(LL)	0.564	0.920	1.474				0.023	0.033	0.047
	EN → Y0	(HZ)	0.521	0.695	1.056						
		(LZ)	0.485	0.724	1.127						
		(ZH)	0.433	0.659	1.059				0.020	0.030	0.048
		(ZL)	0.584	0.889	1.390				0.023	0.033	0.047
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
B0D1	A → Y0	(HH)	0.486	0.768	1.252				0.020	0.031	0.048
		(LL)	0.564	0.920	1.474				0.023	0.033	0.047
	EN → Y0	(HZ)	0.521	0.695	1.056						
		(LZ)	0.485	0.724	1.127						
		(ZH)	0.433	0.659	1.059				0.020	0.030	0.048
		(ZL)	0.584	0.889	1.390				0.023	0.033	0.047
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			

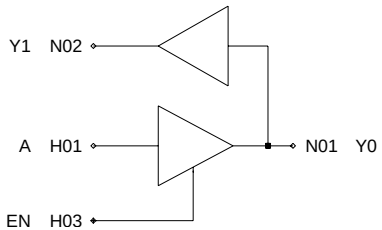
Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
B0U1	A → Y0	(HH)	0.486	0.768	1.252				0.020	0.031	0.048
		(LL)	0.564	0.920	1.474				0.023	0.033	0.047
	EN → Y0	(HZ)	0.521	0.695	1.056						
		(LZ)	0.485	0.724	1.127						
		(ZH)	0.433	0.659	1.059				0.020	0.030	0.048
		(ZL)	0.584	0.889	1.390				0.023	0.033	0.047
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
B0W1	A → Y0	(HH)	0.486	0.768	1.252				0.020	0.031	0.048
		(LL)	0.564	0.920	1.474				0.023	0.033	0.047
	EN → Y0	(HZ)	0.521	0.695	1.056						
		(LZ)	0.485	0.724	1.127						
		(ZH)	0.433	0.659	1.059				0.020	0.030	0.048
		(ZL)	0.584	0.889	1.390				0.023	0.033	0.047
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
B005	A → Y0	(HH)	0.449	0.723	1.185				0.013	0.021	0.033
		(LL)	0.512	0.848	1.388				0.016	0.023	0.033
	EN → Y0	(HZ)	0.642	0.858	1.306						
		(LZ)	0.525	0.784	1.224						
		(ZH)	0.414	0.633	1.023				0.013	0.021	0.033
		(ZL)	0.534	0.822	1.302				0.016	0.023	0.032
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
B0D5	A → Y0	(HH)	0.449	0.723	1.185				0.013	0.021	0.033
		(LL)	0.512	0.848	1.388				0.016	0.023	0.033
	EN → Y0	(HZ)	0.642	0.858	1.306						
		(LZ)	0.525	0.784	1.224						
		(ZH)	0.414	0.633	1.023				0.013	0.021	0.033
		(ZL)	0.534	0.822	1.302				0.016	0.023	0.032
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
B0U5	A → Y0	(HH)	0.449	0.723	1.185				0.013	0.021	0.033
		(LL)	0.512	0.848	1.388				0.016	0.023	0.033
	EN → Y0	(HZ)	0.642	0.858	1.306						
		(LZ)	0.525	0.784	1.224						
		(ZH)	0.414	0.633	1.023				0.013	0.021	0.033
		(ZL)	0.534	0.822	1.302				0.016	0.023	0.032
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
B0W5	A → Y0	(HH)	0.449	0.723	1.185				0.013	0.021	0.033
		(LL)	0.512	0.848	1.388				0.016	0.023	0.033
	EN → Y0	(HZ)	0.642	0.858	1.306						
		(LZ)	0.525	0.784	1.224						
		(ZH)	0.414	0.633	1.023				0.013	0.021	0.033
		(ZL)	0.534	0.822	1.302				0.016	0.023	0.032
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
B00F	A → Y0	(HH)	0.446	0.723	1.192				0.010	0.016	0.025
		(LL)	0.493	0.824	1.361				0.013	0.018	0.026
	EN → Y0	(HZ)	0.717	0.983	1.502						
		(LZ)	0.552	0.820	1.283						
		(ZH)	0.405	0.624	1.015				0.010	0.016	0.025
		(ZL)	0.503	0.780	1.244				0.013	0.018	0.026
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
B0DF	A → Y0	(HH)	0.446	0.723	1.192				0.010	0.016	0.025
		(LL)	0.493	0.824	1.361				0.013	0.018	0.026
	EN → Y0	(HZ)	0.717	0.983	1.502						
		(LZ)	0.552	0.820	1.283						
		(ZH)	0.405	0.624	1.015				0.010	0.016	0.025
		(ZL)	0.503	0.780	1.244				0.013	0.018	0.026
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
B0UF	A → Y0	(HH)	0.446	0.723	1.192				0.010	0.016	0.025
		(LL)	0.493	0.824	1.361				0.013	0.018	0.026
	EN → Y0	(HZ)	0.717	0.983	1.502						
		(LZ)	0.552	0.820	1.283						
		(ZH)	0.405	0.624	1.015				0.010	0.016	0.025
		(ZL)	0.503	0.780	1.244				0.013	0.018	0.026
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
B0WF	A → Y0	(HH)	0.446	0.723	1.192				0.010	0.016	0.025
		(LL)	0.493	0.824	1.361				0.013	0.018	0.026
	EN → Y0	(HZ)	0.717	0.983	1.502						
		(LZ)	0.552	0.820	1.283						
		(ZH)	0.405	0.624	1.015				0.010	0.016	0.025
		(ZL)	0.503	0.780	1.244				0.013	0.018	0.026
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			

[MEMO]

Function	Low-noise I/O Buffer					3.3V
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA						
6mA	BE0C	BEDC	BEUC	BEWC	1	18
9mA	BE03	BED3	BEU3	BEW3	1	18
12mA	BE01	BED1	BEU1	BEW1	1	18
18mA	BE05	BED5	BEU5	BEW5	1	18
24mA	BE0F	BEDF	BEUF	BEWF	1	18

Logic Diagram



Truth Table

A	EN	Y0
0	1	0
1	1	1
X	0	Z

X:Irrelevant

Z:High Impedance

Y0	Y1
0	0
1	1

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
BE0C to BEWC	A	17.9	Y1	358
	EN	4.7		
BE03 to BEW3	A	17.9	Y1	358
	EN	4.7		
BE01 to BEW1	A	18.0	Y1	358
	EN	4.7		
BE05 to BEW5	A	17.9	Y1	358
	EN	4.7		
BE0F to BEWF	A	17.9	Y1	358
	EN	4.8		

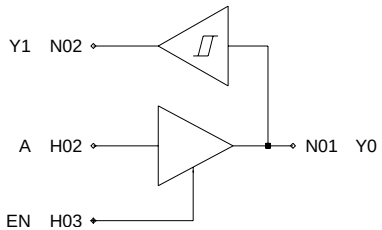
Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
BE0C	A → Y0	(HH)	1.252	2.055	3.607				0.039	0.060	0.096	
		(LL)	1.683	2.680	4.263				0.047	0.067	0.096	
	EN → Y0	(HZ)	1.462	1.952	2.936							
		(LZ)	1.374	2.000	3.156							
		(ZH)	1.186	2.023	3.621				0.038	0.060	0.096	
		(ZL)	1.772	2.844	4.464				0.047	0.067	0.097	
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003				
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003				
BEDC	A → Y0	(HH)	1.252	2.055	3.607				0.039	0.060	0.096	
		(LL)	1.683	2.680	4.263				0.047	0.067	0.096	
	EN → Y0	(HZ)	1.462	1.952	2.936							
		(LZ)	1.374	2.000	3.156							
		(ZH)	1.186	2.023	3.621				0.038	0.060	0.096	
		(ZL)	1.772	2.844	4.464				0.047	0.067	0.097	
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003				
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003				
BEUC	A → Y0	(HH)	1.252	2.055	3.607				0.039	0.060	0.096	
		(LL)	1.683	2.680	4.263				0.047	0.067	0.096	
	EN → Y0	(HZ)	1.462	1.952	2.936							
		(LZ)	1.374	2.000	3.156							
		(ZH)	1.186	2.023	3.621				0.038	0.060	0.096	
		(ZL)	1.772	2.844	4.464				0.047	0.067	0.097	
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003				
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003				
BEWC	A → Y0	(HH)	1.252	2.055	3.607				0.039	0.060	0.096	
		(LL)	1.683	2.680	4.263				0.047	0.067	0.096	
	EN → Y0	(HZ)	1.462	1.952	2.936							
		(LZ)	1.374	2.000	3.156							
		(ZH)	1.186	2.023	3.621				0.038	0.060	0.096	
		(ZL)	1.772	2.844	4.464				0.047	0.067	0.097	
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003				
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003				
BE03	A → Y0	(HH)	1.203	1.995	3.518				0.028	0.044	0.070	
		(LL)	1.533	2.502	4.013				0.035	0.049	0.070	
	EN → Y0	(HZ)	1.639	2.216	3.338							
		(LZ)	1.466	2.142	3.382							
		(ZH)	1.138	1.961	3.524				0.028	0.044	0.070	
		(ZL)	1.636	2.629	4.209				0.034	0.049	0.070	
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003				
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003				
BED3	A → Y0	(HH)	1.203	1.995	3.518				0.028	0.044	0.070	
		(LL)	1.533	2.502	4.013				0.035	0.049	0.070	
	EN → Y0	(HZ)	1.639	2.216	3.338							
		(LZ)	1.466	2.142	3.382							
		(ZH)	1.138	1.961	3.524				0.028	0.044	0.070	
		(ZL)	1.636	2.629	4.209				0.034	0.049	0.070	
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003				
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003				
BEU3	A → Y0	(HH)	1.203	1.995	3.518				0.028	0.044	0.070	
		(LL)	1.533	2.502	4.013				0.035	0.049	0.070	
	EN → Y0	(HZ)	1.639	2.216	3.338							
		(LZ)	1.466	2.142	3.382							
		(ZH)	1.138	1.961	3.524				0.028	0.044	0.070	
		(ZL)	1.636	2.629	4.209				0.034	0.049	0.070	
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003				
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003				

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BEW3	A → Y0	(HH)	1.203	1.995	3.518				0.028	0.044	0.070
		(LL)	1.533	2.502	4.013				0.035	0.049	0.070
	EN → Y0	(HZ)	1.639	2.216	3.338						
		(LZ)	1.466	2.142	3.382						
		(ZH)	1.138	1.961	3.524				0.028	0.044	0.070
		(ZL)	1.636	2.629	4.209				0.034	0.049	0.070
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
BE01	A → Y0	(HH)	1.180	1.976	3.499				0.022	0.035	0.057
		(LL)	1.471	2.399	3.881				0.028	0.040	0.058
	EN → Y0	(HZ)	1.826	2.477	3.737						
		(LZ)	1.567	2.295	3.638						
		(ZH)	1.115	1.942	3.509				0.022	0.035	0.056
		(ZL)	1.568	2.571	4.122				0.028	0.040	0.058
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
BED1	A → Y0	(HH)	1.180	1.976	3.499				0.022	0.035	0.057
		(LL)	1.471	2.399	3.881				0.028	0.040	0.058
	EN → Y0	(HZ)	1.826	2.477	3.737						
		(LZ)	1.567	2.295	3.638						
		(ZH)	1.115	1.942	3.509				0.022	0.035	0.056
		(ZL)	1.568	2.571	4.122				0.028	0.040	0.058
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
BEU1	A → Y0	(HH)	1.180	1.976	3.499				0.022	0.035	0.057
		(LL)	1.471	2.399	3.881				0.028	0.040	0.058
	EN → Y0	(HZ)	1.826	2.477	3.737						
		(LZ)	1.567	2.295	3.638						
		(ZH)	1.115	1.942	3.509				0.022	0.035	0.056
		(ZL)	1.568	2.571	4.122				0.028	0.040	0.058
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
BEW1	A → Y0	(HH)	1.180	1.976	3.499				0.022	0.035	0.057
		(LL)	1.471	2.399	3.881				0.028	0.040	0.058
	EN → Y0	(HZ)	1.826	2.477	3.737						
		(LZ)	1.567	2.295	3.638						
		(ZH)	1.115	1.942	3.509				0.022	0.035	0.056
		(ZL)	1.568	2.571	4.122				0.028	0.040	0.058
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
BE05	A → Y0	(HH)	1.211	2.067	3.692				0.018	0.027	0.045
		(LL)	1.453	2.417	3.957				0.023	0.032	0.047
	EN → Y0	(HZ)	2.268	3.078	4.670						
		(LZ)	1.825	2.687	4.274						
		(ZH)	1.152	2.036	3.698				0.018	0.027	0.045
		(ZL)	1.550	2.569	4.204				0.023	0.033	0.046
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
BED5	A → Y0	(HH)	1.211	2.067	3.692				0.018	0.027	0.045
		(LL)	1.453	2.417	3.957				0.023	0.032	0.047
	EN → Y0	(HZ)	2.268	3.078	4.670						
		(LZ)	1.825	2.687	4.274						
		(ZH)	1.152	2.036	3.698				0.018	0.027	0.045
		(ZL)	1.550	2.569	4.204				0.023	0.033	0.046
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BEU5	A → Y0	(HH)	1.211	2.067	3.692				0.018	0.027	0.045
		(LL)	1.453	2.417	3.957				0.023	0.032	0.047
	EN → Y0	(HZ)	2.268	3.078	4.670						
		(LZ)	1.825	2.687	4.274						
		(ZH)	1.152	2.036	3.698				0.018	0.027	0.045
		(ZL)	1.550	2.569	4.204				0.023	0.033	0.046
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
BEW5	A → Y0	(HH)	1.211	2.067	3.692				0.018	0.027	0.045
		(LL)	1.453	2.417	3.957				0.023	0.032	0.047
	EN → Y0	(HZ)	2.268	3.078	4.670						
		(LZ)	1.825	2.687	4.274						
		(ZH)	1.152	2.036	3.698				0.018	0.027	0.045
		(ZL)	1.550	2.569	4.204				0.023	0.033	0.046
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
BE0F	A → Y0	(HH)	1.219	2.089	3.749				0.015	0.024	0.040
		(LL)	1.389	2.355	3.852				0.020	0.028	0.041
	EN → Y0	(HZ)	2.548	3.508	5.358						
		(LZ)	1.967	2.904	4.632						
		(ZH)	1.154	2.057	3.752				0.015	0.024	0.040
		(ZL)	1.492	2.494	4.081				0.020	0.028	0.041
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
BEDF	A → Y0	(HH)	1.219	2.089	3.749				0.015	0.024	0.040
		(LL)	1.389	2.355	3.852				0.020	0.028	0.041
	EN → Y0	(HZ)	2.548	3.508	5.358						
		(LZ)	1.967	2.904	4.632						
		(ZH)	1.154	2.057	3.752				0.015	0.024	0.040
		(ZL)	1.492	2.494	4.081				0.020	0.028	0.041
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
BEUF	A → Y0	(HH)	1.219	2.089	3.749				0.015	0.024	0.040
		(LL)	1.389	2.355	3.852				0.020	0.028	0.041
	EN → Y0	(HZ)	2.548	3.508	5.358						
		(LZ)	1.967	2.904	4.632						
		(ZH)	1.154	2.057	3.752				0.015	0.024	0.040
		(ZL)	1.492	2.494	4.081				0.020	0.028	0.041
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
BEWF	A → Y0	(HH)	1.219	2.089	3.749				0.015	0.024	0.040
		(LL)	1.389	2.355	3.852				0.020	0.028	0.041
	EN → Y0	(HZ)	2.548	3.508	5.358						
		(LZ)	1.967	2.904	4.632						
		(ZH)	1.154	2.057	3.752				0.015	0.024	0.040
		(ZL)	1.492	2.494	4.081				0.020	0.028	0.041
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			

Function	Schmitt I/O Buffer					3.3V
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA	BSIU	BSDU	BSUU	BSWU	1	29
6mA	BSIC	BSDC	BSUC	BSWC	1	29
9mA	BSI3	BSD3	BSU3	BSW3	1	29
12mA	BSI1	BSD1	BSU1	BSW1	1	29
18mA	BSI5	BSD5	BSU5	BSW5	1	31
24mA	BSIF	BSDF	BSUF	BSWF	1	31

Logic Diagram



Truth Table

A	EN	Y0
0	1	0
1	1	1
X	0	Z

X:Irrelevant

Z:High Impedance

Y0	Y1
0	0
1	1

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
BSIU to BSWU	A	22.5	Y1	229
	EN	11.4		
BSIC to BSWC	A	22.4	Y1	229
	EN	11.5		
BSI3 to BSW3	A	22.4	Y1	229
	EN	11.5		
BSI1 to BSW1	A	22.4	Y1	229
	EN	11.5		
BSI5 to BSW5	A	27.2	Y1	229
	EN	11.6		
BSIF to BSWF	A	27.1	Y1	229
	EN	11.6		

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BSIU	A → Y0	(HH)	0.703	1.103	1.744				0.072	0.113	0.181
		(LL)	0.834	1.210	1.793				0.087	0.125	0.179
	EN → Y0	(HZ)	0.156	0.201	0.285						
		(LZ)	0.305	0.460	0.709						
		(ZH)	0.683	1.066	1.676				0.072	0.113	0.181
		(ZL)	0.946	1.352	1.966				0.087	0.124	0.179
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BSDU	A → Y0	(HH)	0.703	1.103	1.744				0.072	0.113	0.181
		(LL)	0.834	1.210	1.793				0.087	0.125	0.179
	EN → Y0	(HZ)	0.156	0.201	0.285						
		(LZ)	0.305	0.460	0.709						
		(ZH)	0.683	1.066	1.676				0.072	0.113	0.181
		(ZL)	0.946	1.352	1.966				0.087	0.124	0.179
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BSUU	A → Y0	(HH)	0.703	1.103	1.744				0.072	0.113	0.181
		(LL)	0.834	1.210	1.793				0.087	0.125	0.179
	EN → Y0	(HZ)	0.156	0.201	0.285						
		(LZ)	0.305	0.460	0.709						
		(ZH)	0.683	1.066	1.676				0.072	0.113	0.181
		(ZL)	0.946	1.352	1.966				0.087	0.124	0.179
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BSWU	A → Y0	(HH)	0.703	1.103	1.744				0.072	0.113	0.181
		(LL)	0.834	1.210	1.793				0.087	0.125	0.179
	EN → Y0	(HZ)	0.156	0.201	0.285						
		(LZ)	0.305	0.460	0.709						
		(ZH)	0.683	1.066	1.676				0.072	0.113	0.181
		(ZL)	0.946	1.352	1.966				0.087	0.124	0.179
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BSIC	A → Y0	(HH)	0.579	0.912	1.484				0.037	0.059	0.093
		(LL)	0.704	1.100	1.720				0.045	0.063	0.090
	EN → Y0	(HZ)	0.422	0.556	0.826						
		(LZ)	0.455	0.679	1.055						
		(ZH)	0.533	0.820	1.312				0.037	0.059	0.093
		(ZL)	0.738	1.105	1.692				0.045	0.063	0.090
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BSDC	A → Y0	(HH)	0.579	0.912	1.484				0.037	0.059	0.093
		(LL)	0.704	1.100	1.720				0.045	0.063	0.090
	EN → Y0	(HZ)	0.422	0.556	0.826						
		(LZ)	0.455	0.679	1.055						
		(ZH)	0.533	0.820	1.312				0.037	0.059	0.093
		(ZL)	0.738	1.105	1.692				0.045	0.063	0.090
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BSUC	A → Y0	(HH)	0.579	0.912	1.484				0.037	0.059	0.093
		(LL)	0.704	1.100	1.720				0.045	0.063	0.090
	EN → Y0	(HZ)	0.422	0.556	0.826						
		(LZ)	0.455	0.679	1.055						
		(ZH)	0.533	0.820	1.312				0.037	0.059	0.093
		(ZL)	0.738	1.105	1.692				0.045	0.063	0.090
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BSWC	A → Y0	(HH)	0.579	0.912	1.484				0.037	0.059	0.093
		(LL)	0.704	1.100	1.720				0.045	0.063	0.090
	EN → Y0	(HZ)	0.422	0.556	0.826						
		(LZ)	0.455	0.679	1.055						
		(ZH)	0.533	0.820	1.312				0.037	0.059	0.093
		(ZL)	0.738	1.105	1.692				0.045	0.063	0.090
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BSI3	A → Y0	(HH)	0.516	0.813	1.318				0.026	0.041	0.064
		(LL)	0.608	0.972	1.542				0.031	0.043	0.061
	EN → Y0	(HZ)	0.470	0.634	0.937						
		(LZ)	0.470	0.700	1.088						
		(ZH)	0.466	0.709	1.136				0.026	0.041	0.064
		(ZL)	0.639	0.961	1.484				0.030	0.043	0.061
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BSD3	A → Y0	(HH)	0.516	0.813	1.318				0.026	0.041	0.064
		(LL)	0.608	0.972	1.542				0.031	0.043	0.061
	EN → Y0	(HZ)	0.470	0.634	0.937						
		(LZ)	0.470	0.700	1.088						
		(ZH)	0.466	0.709	1.136				0.026	0.041	0.064
		(ZL)	0.639	0.961	1.484				0.030	0.043	0.061
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BSU3	A → Y0	(HH)	0.516	0.813	1.318				0.026	0.041	0.064
		(LL)	0.608	0.972	1.542				0.031	0.043	0.061
	EN → Y0	(HZ)	0.470	0.634	0.937						
		(LZ)	0.470	0.700	1.088						
		(ZH)	0.466	0.709	1.136				0.026	0.041	0.064
		(ZL)	0.639	0.961	1.484				0.030	0.043	0.061
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BSW3	A → Y0	(HH)	0.516	0.813	1.318				0.026	0.041	0.064
		(LL)	0.608	0.972	1.542				0.031	0.043	0.061
	EN → Y0	(HZ)	0.470	0.634	0.937						
		(LZ)	0.470	0.700	1.088						
		(ZH)	0.466	0.709	1.136				0.026	0.041	0.064
		(ZL)	0.639	0.961	1.484				0.030	0.043	0.061
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BSI1	A → Y0	(HH)	0.486	0.768	1.252				0.020	0.031	0.048
		(LL)	0.564	0.920	1.474				0.023	0.033	0.047
	EN → Y0	(HZ)	0.521	0.695	1.056						
		(LZ)	0.485	0.724	1.127						
		(ZH)	0.433	0.659	1.059				0.020	0.030	0.048
		(ZL)	0.584	0.889	1.390				0.023	0.033	0.047
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BSD1	A → Y0	(HH)	0.486	0.768	1.252				0.020	0.031	0.048
		(LL)	0.564	0.920	1.474				0.023	0.033	0.047
	EN → Y0	(HZ)	0.521	0.695	1.056						
		(LZ)	0.485	0.724	1.127						
		(ZH)	0.433	0.659	1.059				0.020	0.030	0.048
		(ZL)	0.584	0.889	1.390				0.023	0.033	0.047
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			

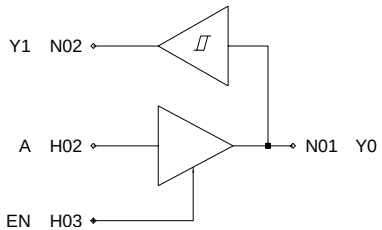
Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BSU1	A → Y0	(HH)	0.486	0.768	1.252				0.020	0.031	0.048
		(LL)	0.564	0.920	1.474				0.023	0.033	0.047
	EN → Y0	(HZ)	0.521	0.695	1.056						
		(LZ)	0.485	0.724	1.127						
		(ZH)	0.433	0.659	1.059				0.020	0.030	0.048
		(ZL)	0.584	0.889	1.390				0.023	0.033	0.047
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BSW1	A → Y0	(HH)	0.486	0.768	1.252				0.020	0.031	0.048
		(LL)	0.564	0.920	1.474				0.023	0.033	0.047
	EN → Y0	(HZ)	0.521	0.695	1.056						
		(LZ)	0.485	0.724	1.127						
		(ZH)	0.433	0.659	1.059				0.020	0.030	0.048
		(ZL)	0.584	0.889	1.390				0.023	0.033	0.047
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BSI5	A → Y0	(HH)	0.449	0.723	1.185				0.013	0.021	0.033
		(LL)	0.512	0.848	1.388				0.016	0.023	0.033
	EN → Y0	(HZ)	0.642	0.858	1.306						
		(LZ)	0.525	0.784	1.224						
		(ZH)	0.414	0.633	1.023				0.013	0.021	0.033
		(ZL)	0.534	0.822	1.302				0.016	0.023	0.032
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BSD5	A → Y0	(HH)	0.449	0.723	1.185				0.013	0.021	0.033
		(LL)	0.512	0.848	1.388				0.016	0.023	0.033
	EN → Y0	(HZ)	0.642	0.858	1.306						
		(LZ)	0.525	0.784	1.224						
		(ZH)	0.414	0.633	1.023				0.013	0.021	0.033
		(ZL)	0.534	0.822	1.302				0.016	0.023	0.032
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BSU5	A → Y0	(HH)	0.449	0.723	1.185				0.013	0.021	0.033
		(LL)	0.512	0.848	1.388				0.016	0.023	0.033
	EN → Y0	(HZ)	0.642	0.858	1.306						
		(LZ)	0.525	0.784	1.224						
		(ZH)	0.414	0.633	1.023				0.013	0.021	0.033
		(ZL)	0.534	0.822	1.302				0.016	0.023	0.032
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BSW5	A → Y0	(HH)	0.449	0.723	1.185				0.013	0.021	0.033
		(LL)	0.512	0.848	1.388				0.016	0.023	0.033
	EN → Y0	(HZ)	0.642	0.858	1.306						
		(LZ)	0.525	0.784	1.224						
		(ZH)	0.414	0.633	1.023				0.013	0.021	0.033
		(ZL)	0.534	0.822	1.302				0.016	0.023	0.032
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BSIF	A → Y0	(HH)	0.446	0.723	1.192				0.010	0.016	0.025
		(LL)	0.493	0.824	1.361				0.013	0.018	0.026
	EN → Y0	(HZ)	0.717	0.983	1.502						
		(LZ)	0.552	0.820	1.283						
		(ZH)	0.405	0.624	1.015				0.010	0.016	0.025
		(ZL)	0.503	0.780	1.244				0.013	0.018	0.026
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BSDF	A → Y0	(HH)	0.446	0.723	1.192				0.010	0.016	0.025
		(LL)	0.493	0.824	1.361				0.013	0.018	0.026
	EN → Y0	(HZ)	0.717	0.983	1.502						
		(LZ)	0.552	0.820	1.283						
		(ZH)	0.405	0.624	1.015				0.010	0.016	0.025
		(ZL)	0.503	0.780	1.244				0.013	0.018	0.026
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BSUF	A → Y0	(HH)	0.446	0.723	1.192				0.010	0.016	0.025
		(LL)	0.493	0.824	1.361				0.013	0.018	0.026
	EN → Y0	(HZ)	0.717	0.983	1.502						
		(LZ)	0.552	0.820	1.283						
		(ZH)	0.405	0.624	1.015				0.010	0.016	0.025
		(ZL)	0.503	0.780	1.244				0.013	0.018	0.026
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BSWF	A → Y0	(HH)	0.446	0.723	1.192				0.010	0.016	0.025
		(LL)	0.493	0.824	1.361				0.013	0.018	0.026
	EN → Y0	(HZ)	0.717	0.983	1.502						
		(LZ)	0.552	0.820	1.283						
		(ZH)	0.405	0.624	1.015				0.010	0.016	0.025
		(ZL)	0.503	0.780	1.244				0.013	0.018	0.026
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			

[MEMO]

Function	Low-noise Schmitt I/O Buffer					3.3V
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA						
6mA	BFIC	BFDC	BFUC	BFWC	1	22
9mA	BFI3	BFD3	BFU3	BFW3	1	22
12mA	BFI1	BFD1	BFU1	BFW1	1	22
18mA	BFI5	BFD5	BFU5	BFW5	1	22
24mA	BFIF	BFDF	BFUF	BFWF	1	22

Logic Diagram



Truth Table

A	EN	Y0
0	1	0
1	1	1
X	0	Z

X:Irrelevant

Z:High Impedance

Y0	Y1
0	0
1	1

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
BFIC to BFWC	A	17.9	Y1	229
	EN	4.7		
BFI3 to BFW3	A	17.9	Y1	229
	EN	4.7		
BFI1 to BFW1	A	18.0	Y1	229
	EN	4.7		
BFI5 to BFW5	A	17.9	Y1	229
	EN	4.7		
BFIF to BFWF	A	17.9	Y1	229
	EN	4.8		

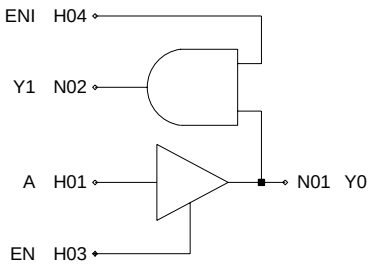
Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
BFIC	A → Y0	(HH)	1.252	2.055	3.607				0.039	0.060	0.096	
		(LL)	1.683	2.680	4.263				0.047	0.067	0.096	
	EN → Y0	(HZ)	1.462	1.952	2.936							
		(LZ)	1.374	2.000	3.156							
		(ZH)	1.186	2.023	3.621				0.038	0.060	0.096	
		(ZL)	1.772	2.844	4.464				0.047	0.067	0.097	
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004				
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007				
BFDC	A → Y0	(HH)	1.252	2.055	3.607				0.039	0.060	0.096	
		(LL)	1.683	2.680	4.263				0.047	0.067	0.096	
	EN → Y0	(HZ)	1.462	1.952	2.936							
		(LZ)	1.374	2.000	3.156							
		(ZH)	1.186	2.023	3.621				0.038	0.060	0.096	
		(ZL)	1.772	2.844	4.464				0.047	0.067	0.097	
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004				
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007				
BFUC	A → Y0	(HH)	1.252	2.055	3.607				0.039	0.060	0.096	
		(LL)	1.683	2.680	4.263				0.047	0.067	0.096	
	EN → Y0	(HZ)	1.462	1.952	2.936							
		(LZ)	1.374	2.000	3.156							
		(ZH)	1.186	2.023	3.621				0.038	0.060	0.096	
		(ZL)	1.772	2.844	4.464				0.047	0.067	0.097	
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004				
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007				
BFWC	A → Y0	(HH)	1.252	2.055	3.607				0.039	0.060	0.096	
		(LL)	1.683	2.680	4.263				0.047	0.067	0.096	
	EN → Y0	(HZ)	1.462	1.952	2.936							
		(LZ)	1.374	2.000	3.156							
		(ZH)	1.186	2.023	3.621				0.038	0.060	0.096	
		(ZL)	1.772	2.844	4.464				0.047	0.067	0.097	
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004				
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007				
BFI3	A → Y0	(HH)	1.203	1.995	3.518				0.028	0.044	0.070	
		(LL)	1.533	2.502	4.013				0.035	0.049	0.070	
	EN → Y0	(HZ)	1.639	2.216	3.338							
		(LZ)	1.466	2.142	3.382							
		(ZH)	1.138	1.961	3.524				0.028	0.044	0.070	
		(ZL)	1.636	2.629	4.209				0.034	0.049	0.070	
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004				
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007				
BFD3	A → Y0	(HH)	1.203	1.995	3.518				0.028	0.044	0.070	
		(LL)	1.533	2.502	4.013				0.035	0.049	0.070	
	EN → Y0	(HZ)	1.639	2.216	3.338							
		(LZ)	1.466	2.142	3.382							
		(ZH)	1.138	1.961	3.524				0.028	0.044	0.070	
		(ZL)	1.636	2.629	4.209				0.034	0.049	0.070	
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004				
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007				
BFU3	A → Y0	(HH)	1.203	1.995	3.518				0.028	0.044	0.070	
		(LL)	1.533	2.502	4.013				0.035	0.049	0.070	
	EN → Y0	(HZ)	1.639	2.216	3.338							
		(LZ)	1.466	2.142	3.382							
		(ZH)	1.138	1.961	3.524				0.028	0.044	0.070	
		(ZL)	1.636	2.629	4.209				0.034	0.049	0.070	
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004				
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007				

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BFW3	A → Y0	(HH)	1.203	1.995	3.518				0.028	0.044	0.070
		(LL)	1.533	2.502	4.013				0.035	0.049	0.070
	EN → Y0	(HZ)	1.639	2.216	3.338						
		(LZ)	1.466	2.142	3.382						
		(ZH)	1.138	1.961	3.524				0.028	0.044	0.070
		(ZL)	1.636	2.629	4.209				0.034	0.049	0.070
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BFI1	A → Y0	(HH)	1.180	1.976	3.499				0.022	0.035	0.057
		(LL)	1.471	2.399	3.881				0.028	0.040	0.058
	EN → Y0	(HZ)	1.826	2.477	3.737						
		(LZ)	1.567	2.295	3.638						
		(ZH)	1.115	1.942	3.509				0.022	0.035	0.056
		(ZL)	1.568	2.571	4.122				0.028	0.040	0.058
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BFD1	A → Y0	(HH)	1.180	1.976	3.499				0.022	0.035	0.057
		(LL)	1.471	2.399	3.881				0.028	0.040	0.058
	EN → Y0	(HZ)	1.826	2.477	3.737						
		(LZ)	1.567	2.295	3.638						
		(ZH)	1.115	1.942	3.509				0.022	0.035	0.056
		(ZL)	1.568	2.571	4.122				0.028	0.040	0.058
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BFU1	A → Y0	(HH)	1.180	1.976	3.499				0.022	0.035	0.057
		(LL)	1.471	2.399	3.881				0.028	0.040	0.058
	EN → Y0	(HZ)	1.826	2.477	3.737						
		(LZ)	1.567	2.295	3.638						
		(ZH)	1.115	1.942	3.509				0.022	0.035	0.056
		(ZL)	1.568	2.571	4.122				0.028	0.040	0.058
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BFW1	A → Y0	(HH)	1.180	1.976	3.499				0.022	0.035	0.057
		(LL)	1.471	2.399	3.881				0.028	0.040	0.058
	EN → Y0	(HZ)	1.826	2.477	3.737						
		(LZ)	1.567	2.295	3.638						
		(ZH)	1.115	1.942	3.509				0.022	0.035	0.056
		(ZL)	1.568	2.571	4.122				0.028	0.040	0.058
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BFI5	A → Y0	(HH)	1.211	2.067	3.692				0.018	0.027	0.045
		(LL)	1.453	2.417	3.957				0.023	0.032	0.047
	EN → Y0	(HZ)	2.268	3.078	4.670						
		(LZ)	1.825	2.687	4.274						
		(ZH)	1.152	2.036	3.698				0.018	0.027	0.045
		(ZL)	1.550	2.569	4.204				0.023	0.033	0.046
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BFD5	A → Y0	(HH)	1.211	2.067	3.692				0.018	0.027	0.045
		(LL)	1.453	2.417	3.957				0.023	0.032	0.047
	EN → Y0	(HZ)	2.268	3.078	4.670						
		(LZ)	1.825	2.687	4.274						
		(ZH)	1.152	2.036	3.698				0.018	0.027	0.045
		(ZL)	1.550	2.569	4.204				0.023	0.033	0.046
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BFU5	A → Y0	(HH)	1.211	2.067	3.692				0.018	0.027	0.045
		(LL)	1.453	2.417	3.957				0.023	0.032	0.047
	EN → Y0	(HZ)	2.268	3.078	4.670						
		(LZ)	1.825	2.687	4.274						
		(ZH)	1.152	2.036	3.698				0.018	0.027	0.045
		(ZL)	1.550	2.569	4.204				0.023	0.033	0.046
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BFW5	A → Y0	(HH)	1.211	2.067	3.692				0.018	0.027	0.045
		(LL)	1.453	2.417	3.957				0.023	0.032	0.047
	EN → Y0	(HZ)	2.268	3.078	4.670						
		(LZ)	1.825	2.687	4.274						
		(ZH)	1.152	2.036	3.698				0.018	0.027	0.045
		(ZL)	1.550	2.569	4.204				0.023	0.033	0.046
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BFIF	A → Y0	(HH)	1.219	2.089	3.749				0.015	0.024	0.040
		(LL)	1.389	2.355	3.852				0.020	0.028	0.041
	EN → Y0	(HZ)	2.548	3.508	5.358						
		(LZ)	1.967	2.904	4.632						
		(ZH)	1.154	2.057	3.752				0.015	0.024	0.040
		(ZL)	1.492	2.494	4.081				0.020	0.028	0.041
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BFDF	A → Y0	(HH)	1.219	2.089	3.749				0.015	0.024	0.040
		(LL)	1.389	2.355	3.852				0.020	0.028	0.041
	EN → Y0	(HZ)	2.548	3.508	5.358						
		(LZ)	1.967	2.904	4.632						
		(ZH)	1.154	2.057	3.752				0.015	0.024	0.040
		(ZL)	1.492	2.494	4.081				0.020	0.028	0.041
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BFUF	A → Y0	(HH)	1.219	2.089	3.749				0.015	0.024	0.040
		(LL)	1.389	2.355	3.852				0.020	0.028	0.041
	EN → Y0	(HZ)	2.548	3.508	5.358						
		(LZ)	1.967	2.904	4.632						
		(ZH)	1.154	2.057	3.752				0.015	0.024	0.040
		(ZL)	1.492	2.494	4.081				0.020	0.028	0.041
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BFWF	A → Y0	(HH)	1.219	2.089	3.749				0.015	0.024	0.040
		(LL)	1.389	2.355	3.852				0.020	0.028	0.041
	EN → Y0	(HZ)	2.548	3.508	5.358						
		(LZ)	1.967	2.904	4.632						
		(ZH)	1.154	2.057	3.752				0.015	0.024	0.040
		(ZL)	1.492	2.494	4.081				0.020	0.028	0.041
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			

Function	I/O Buffer with EN(AND)					3.3V
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA	BN2U	BN4U			1	26
6mA	BN2C	BN4C			1	26
9mA	BN23	BN43			1	26
12mA	BN21	BN41			1	26
18mA	BN25	BN45			1	28
24mA	BN2F	BN4F			1	28

Logic Diagram



Truth Table

A	EN	Y0
0	1	0
1	1	1
X	0	Z

X:Irrelevant

Z:High Impedance

Y0	ENI	Y1
0	0	0
0	1	0
1	0	0
1	1	1

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
BN2U to BN4U	A	22.5	Y1	361
	EN	11.4		
	ENI	3.6		
BN2C to BN4C	A	22.4	Y1	361
	EN	11.5		
	ENI	3.6		
BN23 to BN43	A	22.4	Y1	361
	EN	11.5		
	ENI	3.6		
BN21 to BN41	A	22.4	Y1	361
	EN	11.5		
	ENI	3.6		
BN25 to BN45	A	27.2	Y1	361
	EN	11.6		
	ENI	3.6		
BN2F to BN4F	A	27.1	Y1	361
	EN	11.6		
	ENI	3.6		

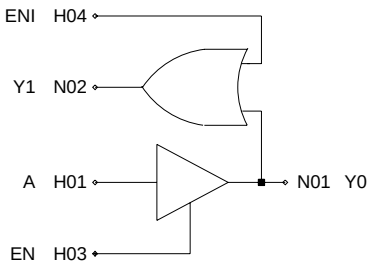
Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BN2U	A → Y0	(HH)	0.703	1.103	1.744				0.072	0.113	0.181
		(LL)	0.834	1.210	1.793				0.087	0.125	0.179
	EN → Y0	(HZ)	0.156	0.201	0.285						
		(LZ)	0.305	0.460	0.709						
		(ZH)	0.683	1.066	1.676				0.072	0.113	0.181
		(ZL)	0.946	1.352	1.966				0.087	0.124	0.179
	ENI → Y1	(HH)	0.155	0.233	0.360	0.001	0.002	0.004			
		(LL)	0.215	0.324	0.493	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.164	0.240	0.361	0.001	0.002	0.004			
		(LL)	0.208	0.313	0.477	0.002	0.003	0.005			
BN4U	A → Y0	(HH)	0.703	1.103	1.744				0.072	0.113	0.181
		(LL)	0.834	1.210	1.793				0.087	0.125	0.179
	EN → Y0	(HZ)	0.156	0.201	0.285						
		(LZ)	0.305	0.460	0.709						
		(ZH)	0.683	1.066	1.676				0.072	0.113	0.181
		(ZL)	0.946	1.352	1.966				0.087	0.124	0.179
	ENI → Y1	(HH)	0.155	0.233	0.360	0.001	0.002	0.004			
		(LL)	0.215	0.324	0.493	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.164	0.240	0.361	0.001	0.002	0.004			
		(LL)	0.208	0.313	0.477	0.002	0.003	0.005			
BN2C	A → Y0	(HH)	0.579	0.912	1.484				0.037	0.059	0.093
		(LL)	0.704	1.100	1.720				0.045	0.063	0.090
	EN → Y0	(HZ)	0.422	0.556	0.826						
		(LZ)	0.455	0.679	1.055						
		(ZH)	0.533	0.820	1.312				0.037	0.059	0.093
		(ZL)	0.738	1.105	1.692				0.045	0.063	0.090
	ENI → Y1	(HH)	0.155	0.233	0.360	0.001	0.002	0.004			
		(LL)	0.215	0.324	0.493	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.164	0.240	0.361	0.001	0.002	0.004			
		(LL)	0.208	0.313	0.477	0.002	0.003	0.005			
BN4C	A → Y0	(HH)	0.579	0.912	1.484				0.037	0.059	0.093
		(LL)	0.704	1.100	1.720				0.045	0.063	0.090
	EN → Y0	(HZ)	0.422	0.556	0.826						
		(LZ)	0.455	0.679	1.055						
		(ZH)	0.533	0.820	1.312				0.037	0.059	0.093
		(ZL)	0.738	1.105	1.692				0.045	0.063	0.090
	ENI → Y1	(HH)	0.155	0.233	0.360	0.001	0.002	0.004			
		(LL)	0.215	0.324	0.493	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.164	0.240	0.361	0.001	0.002	0.004			
		(LL)	0.208	0.313	0.477	0.002	0.003	0.005			
BN23	A → Y0	(HH)	0.516	0.813	1.318				0.026	0.041	0.064
		(LL)	0.608	0.972	1.542				0.031	0.043	0.061
	EN → Y0	(HZ)	0.470	0.634	0.937						
		(LZ)	0.470	0.700	1.088						
		(ZH)	0.466	0.709	1.136				0.026	0.041	0.064
		(ZL)	0.639	0.961	1.484				0.030	0.043	0.061
	ENI → Y1	(HH)	0.155	0.233	0.360	0.001	0.002	0.004			
		(LL)	0.215	0.324	0.493	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.164	0.240	0.361	0.001	0.002	0.004			
		(LL)	0.208	0.313	0.477	0.002	0.003	0.005			
BN43	A → Y0	(HH)	0.516	0.813	1.318				0.026	0.041	0.064
		(LL)	0.608	0.972	1.542				0.031	0.043	0.061
	EN → Y0	(HZ)	0.470	0.634	0.937						
		(LZ)	0.470	0.700	1.088						
		(ZH)	0.466	0.709	1.136				0.026	0.041	0.064
		(ZL)	0.639	0.961	1.484				0.030	0.043	0.061

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
	ENI → Y1	(HH)	0.155	0.233	0.360	0.001	0.002	0.004			
		(LL)	0.215	0.324	0.493	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.164	0.240	0.361	0.001	0.002	0.004			
		(LL)	0.208	0.313	0.477	0.002	0.003	0.005			
BN21	A → Y0	(HH)	0.486	0.768	1.252				0.020	0.031	0.048
		(LL)	0.564	0.920	1.474				0.023	0.033	0.047
	EN → Y0	(HZ)	0.521	0.695	1.056						
		(LZ)	0.485	0.724	1.127						
		(ZH)	0.433	0.659	1.059				0.020	0.030	0.048
		(ZL)	0.584	0.889	1.390				0.023	0.033	0.047
	ENI → Y1	(HH)	0.155	0.233	0.360	0.001	0.002	0.004			
		(LL)	0.215	0.324	0.493	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.164	0.240	0.361	0.001	0.002	0.004			
		(LL)	0.208	0.313	0.477	0.002	0.003	0.005			
BN41	A → Y0	(HH)	0.486	0.768	1.252				0.020	0.031	0.048
		(LL)	0.564	0.920	1.474				0.023	0.033	0.047
	EN → Y0	(HZ)	0.521	0.695	1.056						
		(LZ)	0.485	0.724	1.127						
		(ZH)	0.433	0.659	1.059				0.020	0.030	0.048
		(ZL)	0.584	0.889	1.390				0.023	0.033	0.047
	ENI → Y1	(HH)	0.155	0.233	0.360	0.001	0.002	0.004			
		(LL)	0.215	0.324	0.493	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.164	0.240	0.361	0.001	0.002	0.004			
		(LL)	0.208	0.313	0.477	0.002	0.003	0.005			
BN25	A → Y0	(HH)	0.449	0.723	1.185				0.013	0.021	0.033
		(LL)	0.512	0.848	1.388				0.016	0.023	0.033
	EN → Y0	(HZ)	0.642	0.858	1.306						
		(LZ)	0.525	0.784	1.224						
		(ZH)	0.414	0.633	1.023				0.013	0.021	0.033
		(ZL)	0.534	0.822	1.302				0.016	0.023	0.032
	ENI → Y1	(HH)	0.155	0.233	0.360	0.001	0.002	0.004			
		(LL)	0.215	0.324	0.493	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.164	0.240	0.361	0.001	0.002	0.004			
		(LL)	0.208	0.313	0.477	0.002	0.003	0.005			
BN45	A → Y0	(HH)	0.449	0.723	1.185				0.013	0.021	0.033
		(LL)	0.512	0.848	1.388				0.016	0.023	0.033
	EN → Y0	(HZ)	0.642	0.858	1.306						
		(LZ)	0.525	0.784	1.224						
		(ZH)	0.414	0.633	1.023				0.013	0.021	0.033
		(ZL)	0.534	0.822	1.302				0.016	0.023	0.032
	ENI → Y1	(HH)	0.155	0.233	0.360	0.001	0.002	0.004			
		(LL)	0.215	0.324	0.493	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.164	0.240	0.361	0.001	0.002	0.004			
		(LL)	0.208	0.313	0.477	0.002	0.003	0.005			
BN2F	A → Y0	(HH)	0.446	0.723	1.192				0.010	0.016	0.025
		(LL)	0.493	0.824	1.361				0.013	0.018	0.026
	EN → Y0	(HZ)	0.717	0.983	1.502						
		(LZ)	0.552	0.820	1.283						
		(ZH)	0.405	0.624	1.015				0.010	0.016	0.025
		(ZL)	0.503	0.780	1.244				0.013	0.018	0.026
	ENI → Y1	(HH)	0.155	0.233	0.360	0.001	0.002	0.004			
		(LL)	0.215	0.324	0.493	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.164	0.240	0.361	0.001	0.002	0.004			
		(LL)	0.208	0.313	0.477	0.002	0.003	0.005			

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BN4F	A → Y0	(HH)	0.446	0.723	1.192				0.010	0.016	0.025
		(LL)	0.493	0.824	1.361				0.013	0.018	0.026
	EN → Y0	(HZ)	0.717	0.983	1.502						
		(LZ)	0.552	0.820	1.283						
		(ZH)	0.405	0.624	1.015				0.010	0.016	0.025
		(ZL)	0.503	0.780	1.244				0.013	0.018	0.026
	ENI → Y1	(HH)	0.155	0.233	0.360	0.001	0.002	0.004			
		(LL)	0.215	0.324	0.493	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.164	0.240	0.361	0.001	0.002	0.004			
		(LL)	0.208	0.313	0.477	0.002	0.003	0.005			

Function	I/O Buffer with EN(OR)				3.3V	
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA	BN3U	BN5U			1	26
6mA	BN3C	BN5C			1	26
9mA	BN33	BN53			1	26
12mA	BN31	BN51			1	26
18mA	BN35	BN55			1	28
24mA	BN3F	BN5F			1	28

Logic Diagram



Truth Table

A	EN	Y0
0	1	0
1	1	1
X	0	Z

X:Irrelevant

Z:High Impedance

Y0	ENI	Y1
0	0	0
0	1	1
1	0	1
1	1	1

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
BN3U to BN5U	A	22.5	Y1	350
	EN	11.4		
	ENI	3.6		
BN3C to BN5C	A	22.4	Y1	350
	EN	11.5		
	ENI	3.6		
BN33 to BN53	A	22.4	Y1	350
	EN	11.5		
	ENI	3.6		
BN31 to BN51	A	22.4	Y1	350
	EN	11.5		
	ENI	3.6		
BN35 to BN55	A	27.2	Y1	350
	EN	11.6		
	ENI	3.6		
BN3F to BN5F	A	27.1	Y1	350
	EN	11.6		
	ENI	3.6		

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BN3U	A → Y0	(HH)	0.703	1.103	1.744				0.072	0.113	0.181
		(LL)	0.834	1.210	1.793				0.087	0.125	0.179
	EN → Y0	(HZ)	0.156	0.201	0.285						
		(LZ)	0.305	0.460	0.709						
		(ZH)	0.683	1.066	1.676				0.072	0.113	0.181
		(ZL)	0.946	1.352	1.966				0.087	0.124	0.179
	ENI → Y1	(HH)	0.131	0.194	0.274	0.001	0.002	0.003			
		(LL)	0.314	0.490	0.774	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.132	0.195	0.275	0.001	0.002	0.003			
		(LL)	0.313	0.490	0.774	0.002	0.003	0.005			
BN5U	A → Y0	(HH)	0.703	1.103	1.744				0.072	0.113	0.181
		(LL)	0.834	1.210	1.793				0.087	0.125	0.179
	EN → Y0	(HZ)	0.156	0.201	0.285						
		(LZ)	0.305	0.460	0.709						
		(ZH)	0.683	1.066	1.676				0.072	0.113	0.181
		(ZL)	0.946	1.352	1.966				0.087	0.124	0.179
	ENI → Y1	(HH)	0.131	0.194	0.274	0.001	0.002	0.003			
		(LL)	0.314	0.490	0.774	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.132	0.195	0.275	0.001	0.002	0.003			
		(LL)	0.313	0.490	0.774	0.002	0.003	0.005			
BN3C	A → Y0	(HH)	0.579	0.912	1.484				0.037	0.059	0.093
		(LL)	0.704	1.100	1.720				0.045	0.063	0.090
	EN → Y0	(HZ)	0.422	0.556	0.826						
		(LZ)	0.455	0.679	1.055						
		(ZH)	0.533	0.820	1.312				0.037	0.059	0.093
		(ZL)	0.738	1.105	1.692				0.045	0.063	0.090
	ENI → Y1	(HH)	0.131	0.194	0.274	0.001	0.002	0.003			
		(LL)	0.314	0.490	0.774	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.132	0.195	0.275	0.001	0.002	0.003			
		(LL)	0.313	0.490	0.774	0.002	0.003	0.005			
BN5C	A → Y0	(HH)	0.579	0.912	1.484				0.037	0.059	0.093
		(LL)	0.704	1.100	1.720				0.045	0.063	0.090
	EN → Y0	(HZ)	0.422	0.556	0.826						
		(LZ)	0.455	0.679	1.055						
		(ZH)	0.533	0.820	1.312				0.037	0.059	0.093
		(ZL)	0.738	1.105	1.692				0.045	0.063	0.090
	ENI → Y1	(HH)	0.131	0.194	0.274	0.001	0.002	0.003			
		(LL)	0.314	0.490	0.774	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.132	0.195	0.275	0.001	0.002	0.003			
		(LL)	0.313	0.490	0.774	0.002	0.003	0.005			
BN33	A → Y0	(HH)	0.516	0.813	1.318				0.026	0.041	0.064
		(LL)	0.608	0.972	1.542				0.031	0.043	0.061
	EN → Y0	(HZ)	0.470	0.634	0.937						
		(LZ)	0.470	0.700	1.088						
		(ZH)	0.466	0.709	1.136				0.026	0.041	0.064
		(ZL)	0.639	0.961	1.484				0.030	0.043	0.061
	ENI → Y1	(HH)	0.131	0.194	0.274	0.001	0.002	0.003			
		(LL)	0.314	0.490	0.774	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.132	0.195	0.275	0.001	0.002	0.003			
		(LL)	0.313	0.490	0.774	0.002	0.003	0.005			
BN53	A → Y0	(HH)	0.516	0.813	1.318				0.026	0.041	0.064
		(LL)	0.608	0.972	1.542				0.031	0.043	0.061
	EN → Y0	(HZ)	0.470	0.634	0.937						
		(LZ)	0.470	0.700	1.088						
		(ZH)	0.466	0.709	1.136				0.026	0.041	0.064
		(ZL)	0.639	0.961	1.484				0.030	0.043	0.061

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
	ENI → Y1	(HH)	0.131	0.194	0.274	0.001	0.002	0.003			
		(LL)	0.314	0.490	0.774	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.132	0.195	0.275	0.001	0.002	0.003			
		(LL)	0.313	0.490	0.774	0.002	0.003	0.005			
BN31	A → Y0	(HH)	0.486	0.768	1.252				0.020	0.031	0.048
		(LL)	0.564	0.920	1.474				0.023	0.033	0.047
	EN → Y0	(HZ)	0.521	0.695	1.056						
		(LZ)	0.485	0.724	1.127						
		(ZH)	0.433	0.659	1.059				0.020	0.030	0.048
		(ZL)	0.584	0.889	1.390				0.023	0.033	0.047
	ENI → Y1	(HH)	0.131	0.194	0.274	0.001	0.002	0.003			
		(LL)	0.314	0.490	0.774	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.132	0.195	0.275	0.001	0.002	0.003			
		(LL)	0.313	0.490	0.774	0.002	0.003	0.005			
BN51	A → Y0	(HH)	0.486	0.768	1.252				0.020	0.031	0.048
		(LL)	0.564	0.920	1.474				0.023	0.033	0.047
	EN → Y0	(HZ)	0.521	0.695	1.056						
		(LZ)	0.485	0.724	1.127						
		(ZH)	0.433	0.659	1.059				0.020	0.030	0.048
		(ZL)	0.584	0.889	1.390				0.023	0.033	0.047
	ENI → Y1	(HH)	0.131	0.194	0.274	0.001	0.002	0.003			
		(LL)	0.314	0.490	0.774	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.132	0.195	0.275	0.001	0.002	0.003			
		(LL)	0.313	0.490	0.774	0.002	0.003	0.005			
BN35	A → Y0	(HH)	0.449	0.723	1.185				0.013	0.021	0.033
		(LL)	0.512	0.848	1.388				0.016	0.023	0.033
	EN → Y0	(HZ)	0.642	0.858	1.306						
		(LZ)	0.525	0.784	1.224						
		(ZH)	0.414	0.633	1.023				0.013	0.021	0.033
		(ZL)	0.534	0.822	1.302				0.016	0.023	0.032
	ENI → Y1	(HH)	0.131	0.194	0.274	0.001	0.002	0.003			
		(LL)	0.314	0.490	0.774	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.132	0.195	0.275	0.001	0.002	0.003			
		(LL)	0.313	0.490	0.774	0.002	0.003	0.005			
BN55	A → Y0	(HH)	0.449	0.723	1.185				0.013	0.021	0.033
		(LL)	0.512	0.848	1.388				0.016	0.023	0.033
	EN → Y0	(HZ)	0.642	0.858	1.306						
		(LZ)	0.525	0.784	1.224						
		(ZH)	0.414	0.633	1.023				0.013	0.021	0.033
		(ZL)	0.534	0.822	1.302				0.016	0.023	0.032
	ENI → Y1	(HH)	0.131	0.194	0.274	0.001	0.002	0.003			
		(LL)	0.314	0.490	0.774	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.132	0.195	0.275	0.001	0.002	0.003			
		(LL)	0.313	0.490	0.774	0.002	0.003	0.005			
BN3F	A → Y0	(HH)	0.446	0.723	1.192				0.010	0.016	0.025
		(LL)	0.493	0.824	1.361				0.013	0.018	0.026
	EN → Y0	(HZ)	0.717	0.983	1.502						
		(LZ)	0.552	0.820	1.283						
		(ZH)	0.405	0.624	1.015				0.010	0.016	0.025
		(ZL)	0.503	0.780	1.244				0.013	0.018	0.026
	ENI → Y1	(HH)	0.131	0.194	0.274	0.001	0.002	0.003			
		(LL)	0.314	0.490	0.774	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.132	0.195	0.275	0.001	0.002	0.003			
		(LL)	0.313	0.490	0.774	0.002	0.003	0.005			

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BN5F	A → Y0	(HH)	0.446	0.723	1.192				0.010	0.016	0.025
		(LL)	0.493	0.824	1.361				0.013	0.018	0.026
	EN → Y0	(HZ)	0.717	0.983	1.502						
		(LZ)	0.552	0.820	1.283						
		(ZH)	0.405	0.624	1.015				0.010	0.016	0.025
		(ZL)	0.503	0.780	1.244				0.013	0.018	0.026
	ENI → Y1	(HH)	0.131	0.194	0.274	0.001	0.002	0.003			
		(LL)	0.314	0.490	0.774	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.132	0.195	0.275	0.001	0.002	0.003			
		(LL)	0.313	0.490	0.774	0.002	0.003	0.005			

[MEMO]

[MEMO]

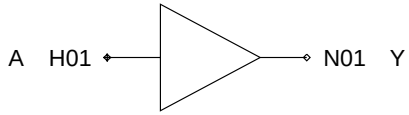
1.2 5V Interface

[MEMO]

Function	Input Buffer				5V	
Block type						
Function	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
Normal	FIV1	FDV1			1	7
Schmitt	FIF1	FDF1			1	11
Clock	FIG1	FDG1			1	56

Logic Diagram

"Normal"



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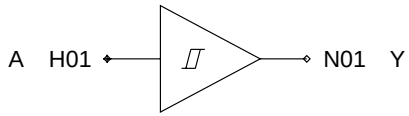
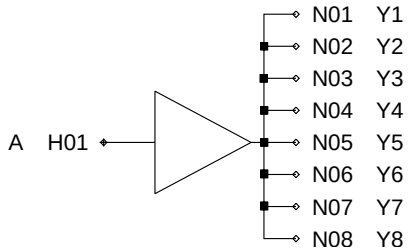


"Clock"



Truth Table

A	Yn
1	1
0	0

(n=1 to 8)

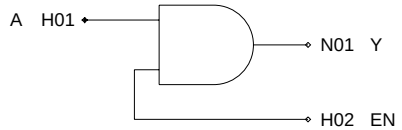
Block type	Input		Output	
	Symbol	Fan-In	Symbol	Fan-Out
FIV1 to FDV1	A	-	Y	367
FIF1 to FDF1	A	-	Y	227
FIG1 to FDG1	A	-	Y1	228
	:	:	Y2	228
			:	:
			Y7	228
			Y8	228

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
FIV1	A → Y	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
FDV1	A → Y	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
FIF1	A → Y	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
FDF1	A → Y	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
FIG1	A → Yn	(HH)	0.149	0.225	0.355	0.000	0.000	0.000			
		(LL)	0.206	0.313	0.486	0.000	0.001	0.001			
	(n = 1 to 8)										
FDG1	A → Yn	(HH)	0.149	0.225	0.355	0.000	0.000	0.000			
		(LL)	0.206	0.313	0.486	0.000	0.001	0.001			
	(n = 1 to 8)										

Function	Input Buffer with EN(AND)				5V	
Block type						
Function	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
Normal	FN1135	FN2135			1	8
Schmitt						
Clock						

Logic Diagram

"Normal"



"Schmitt"

"Clock"

Truth Table

A	EN	Y
0	0	0
0	1	0
1	0	0
1	1	1

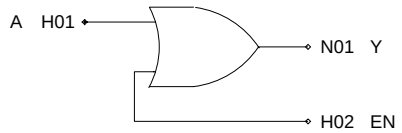
Block type	Input		Output	
	Symbol	Fan-In	Symbol	Fan-Out
FN1135 to FN2135	A	-	Y	354
	EN	3.6		

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
FN1135	A → Y	(HH)	0.192	0.292	0.473	0.001	0.002	0.004			
		(LL)	0.234	0.358	0.555	0.002	0.003	0.005			
	EN → Y	(HH)	0.155	0.233	0.362	0.001	0.002	0.004			
		(LL)	0.215	0.324	0.492	0.002	0.003	0.005			
FN2135	A → Y	(HH)	0.192	0.292	0.473	0.001	0.002	0.004			
		(LL)	0.234	0.358	0.555	0.002	0.003	0.005			
	EN → Y	(HH)	0.155	0.233	0.362	0.001	0.002	0.004			
		(LL)	0.215	0.324	0.492	0.002	0.003	0.005			

Function	Input Buffer with EN(OR)				5V	
Block type						
Function	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
Normal	FN1335	FN2335			1	8
Schmitt						
Clock						

Logic Diagram

"Normal"



"Schmitt"

"Clock"

Truth Table

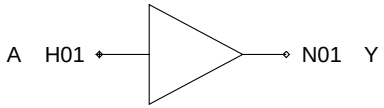
A	EN	Y
0	0	0
0	1	1
1	0	1
1	1	1

Block type	Input		Output	
	Symbol	Fan-In	Symbol	Fan-Out
FN1335 to FN2335	A	-	Y	349
	EN	3.6		

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
FN1335	A → Y	(HH)	0.160	0.245	0.385	0.001	0.002	0.003			
		(LL)	0.340	0.533	0.848	0.002	0.003	0.005			
	EN → Y	(HH)	0.131	0.194	0.274	0.001	0.002	0.003			
		(LL)	0.314	0.490	0.774	0.002	0.003	0.005			
FN2335	A → Y	(HH)	0.160	0.245	0.385	0.001	0.002	0.003			
		(LL)	0.340	0.533	0.848	0.002	0.003	0.005			
	EN → Y	(HH)	0.131	0.194	0.274	0.001	0.002	0.003			
		(LL)	0.314	0.490	0.774	0.002	0.003	0.005			

Function	Output Buffer					CMOS 5V
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA	FY09				1	26
6mA	FY04				1	26
9mA	FY01				1	28
12mA	FY02				1	28
18mA	FY03				1	28
24mA	FY06				1	28

Logic Diagram



Truth Table

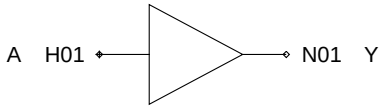
A	Y
1	1
0	0

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
FY09	A	20.4	Y	-
FY04	A	20.5	Y	-
FY01	A	25.3	Y	-
FY02	A	25.5	Y	-
FY03	A	25.3	Y	-
FY06	A	25.3	Y	-

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
FY09	A → Y	(HH)	1.519	2.443	3.987				0.076	0.119	0.190
		(LL)	1.679	2.406	3.496				0.094	0.133	0.189
FY04	A → Y	(HH)	0.825	1.297	2.134				0.028	0.043	0.067
		(LL)	0.893	1.311	1.986				0.033	0.046	0.066
FY01	A → Y	(HH)	0.614	0.956	1.561				0.020	0.032	0.050
		(LL)	0.829	1.218	1.856				0.025	0.035	0.050
FY02	A → Y	(HH)	0.510	0.786	1.278				0.011	0.017	0.027
		(LL)	0.808	1.190	1.821				0.017	0.023	0.032
FY03	A → Y	(HH)	0.538	0.828	1.346				0.011	0.016	0.026
		(LL)	0.828	1.221	1.865				0.013	0.018	0.025
FY06	A → Y	(HH)	0.574	0.881	1.437				0.010	0.016	0.026
		(LL)	0.824	1.219	1.861				0.012	0.016	0.023

Function	Low-noise Output Buffer					CMOS 5V
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA						
6mA						
9mA						
12mA	FZ02				1	28
18mA	FZ03				1	28
24mA	FZ06				1	28

Logic Diagram



Truth Table

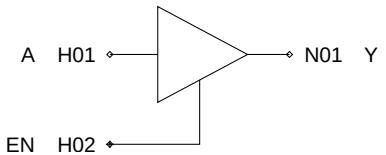
A	Y
1	1
0	0

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
FZ02	A	22.3	Y	-
FZ03	A	22.2	Y	-
FZ06	A	22.2	Y	-

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
FZ02	A → Y	(HH)	1.276	2.156	3.837				0.013	0.021	0.034
		(LL)	1.769	2.934	4.743				0.019	0.028	0.040
FZ03	A → Y	(HH)	1.279	2.164	3.854				0.013	0.021	0.034
		(LL)	1.812	3.039	4.954				0.017	0.025	0.037
FZ06	A → Y	(HH)	1.283	2.164	3.853				0.013	0.021	0.034
		(LL)	1.876	3.186	5.201				0.016	0.023	0.034

Function	3-State Buffer					CMOS 5V
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA	BD0T				1	45
6mA	BD0E				1	45
9mA	BD08				1	47
12mA	BD07				1	47
18mA	BD09				1	47
24mA	BD0H				1	47

Logic Diagram



Truth Table

A	EN	Y
0	1	0
1	1	1
X	0	Z

X:Irrelevant

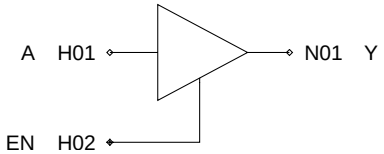
Z:High Impedance

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
BD0T	A	32.3	Y	-
	EN	1.2		
BD0E	A	32.3	Y	-
	EN	1.2		
BD08	A	37.3	Y	-
	EN	1.2		
BD07	A	37.4	Y	-
	EN	1.2		
BD09	A	37.4	Y	-
	EN	1.2		
BD0H	A	37.4	Y	-
	EN	1.2		

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
BD0T	A → Y	(HH)	1.479	2.409	3.980				0.076	0.120	0.190	
		(LL)	1.713	2.472	3.622				0.094	0.133	0.189	
	EN → Y	(HZ)	0.554	0.853	1.347							
		(LZ)	0.363	0.553	0.857							
		(ZH)	1.888	3.038	4.962				0.076	0.120	0.190	
		(ZL)	1.811	2.632	3.791				0.094	0.132	0.190	
BD0E	A → Y	(HH)	0.727	1.178	1.990				0.028	0.043	0.067	
		(LL)	0.927	1.411	2.198				0.033	0.046	0.066	
	EN → Y	(HZ)	0.999	1.459	2.275							
		(LZ)	0.553	0.839	1.315							
		(ZH)	1.157	1.845	3.033				0.028	0.043	0.067	
		(ZL)	1.114	1.670	2.554				0.033	0.046	0.066	
BD08	A → Y	(HH)	0.605	0.992	1.694				0.020	0.032	0.050	
		(LL)	0.844	1.279	1.999				0.025	0.035	0.050	
	EN → Y	(HZ)	1.078	1.558	2.427							
		(LZ)	0.574	0.870	1.361							
		(ZH)	1.047	1.671	2.745				0.020	0.032	0.050	
		(ZL)	1.043	1.561	2.404				0.025	0.035	0.050	
BD07	A → Y	(HH)	0.505	0.838	1.443				0.011	0.017	0.027	
		(LL)	0.807	1.221	1.914				0.017	0.023	0.032	
	EN → Y	(HZ)	1.337	1.913	2.984							
		(LZ)	0.638	0.963	1.512							
		(ZH)	0.951	1.519	2.497				0.011	0.017	0.027	
		(ZL)	1.009	1.507	2.334				0.017	0.023	0.032	
BD09	A → Y	(HH)	0.520	0.854	1.465				0.011	0.017	0.027	
		(LL)	0.832	1.261	1.978				0.013	0.018	0.025	
	EN → Y	(HZ)	1.341	1.929	2.997							
		(LZ)	0.695	1.047	1.643							
		(ZH)	0.957	1.528	2.513				0.011	0.017	0.027	
		(ZL)	1.037	1.553	2.403				0.013	0.018	0.025	
BD0H	A → Y	(HH)	0.541	0.872	1.485				0.011	0.017	0.027	
		(LL)	0.833	1.270	1.996				0.012	0.016	0.023	
	EN → Y	(HZ)	1.341	1.928	2.982							
		(LZ)	0.772	1.159	1.824							
		(ZH)	0.957	1.528	2.514				0.011	0.017	0.027	
		(ZL)	1.044	1.564	2.422				0.012	0.016	0.023	

Function	Low-noise 3-State Buffer					CMOS 5V
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA						
6mA						
9mA						
12mA	BJ07				1	40
18mA	BJ09				1	40
24mA	BJ0H				1	40

Logic Diagram



Truth Table

A	EN	Y
0	1	0
1	1	1
X	0	Z

X:Irrelevant

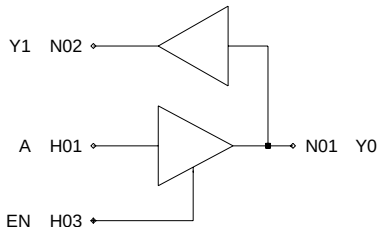
Z:High Impedance

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
BJ07	A	19.3	Y	-
	EN	6.3		
BJ09	A	19.3	Y	-
	EN	6.3		
BJ0H	A	19.3	Y	-
	EN	6.3		

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BJ07	A → Y	(HH)	1.456	2.509	4.527				0.017	0.026	0.044
		(LL)	1.688	2.714	4.574				0.023	0.028	0.048
	EN → Y	(HZ)	2.603	3.580	5.487						
		(LZ)	2.054	3.031	4.846						
		(ZH)	1.392	2.472	4.528				0.017	0.026	0.043
		(ZL)	1.738	2.931	4.706				0.023	0.033	0.049
BJ09	A → Y	(HH)	1.464	2.516	4.548				0.017	0.026	0.044
		(LL)	1.733	2.829	4.773				0.021	0.026	0.045
	EN → Y	(HZ)	2.623	3.586	5.521						
		(LZ)	2.413	3.580	5.727						
		(ZH)	1.399	2.484	4.548				0.017	0.026	0.044
		(ZL)	1.770	3.024	4.886				0.021	0.031	0.047
BJ0H	A → Y	(HH)	1.473	2.523	4.548				0.017	0.026	0.044
		(LL)	1.793	2.982	5.028				0.019	0.024	0.043
	EN → Y	(HZ)	2.623	3.591	5.517						
		(LZ)	2.916	4.339	6.958						
		(ZH)	1.399	2.484	4.548				0.017	0.026	0.044
		(ZL)	1.825	3.153	5.124				0.019	0.029	0.044

Function	I/O Buffer					CMOS 5V
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA	BM0U				1	52
6mA	BM0C				1	52
9mA	BM03				1	54
12mA	BM01				1	54
18mA	BM05				1	54
24mA	BM0F				1	54

Logic Diagram



Truth Table

A	EN	Y0
0	1	0
1	1	1
X	0	Z

X:Irrelevant

Z:High Impedance

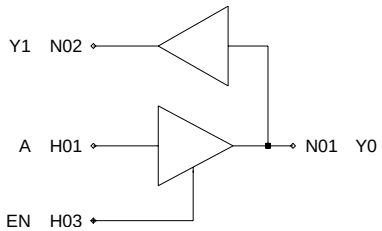
Y0	Y1
0	0
1	1

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
BM0U	A	32.3	Y1	367
	EN	1.2		
BM0C	A	32.3	Y1	367
	EN	1.2		
BM03	A	37.3	Y1	367
	EN	1.2		
BM01	A	37.4	Y1	367
	EN	1.2		
BM05	A	37.4	Y1	367
	EN	1.2		
BM0F	A	37.4	Y1	367
	EN	1.2		

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BM0U	A → Y0	(HH)	1.479	2.409	3.980				0.076	0.120	0.190
		(LL)	1.713	2.472	3.622				0.094	0.133	0.189
	EN → Y0	(HZ)	0.554	0.853	1.347						
		(LZ)	0.363	0.553	0.857						
		(ZH)	1.888	3.038	4.962				0.076	0.120	0.190
		(ZL)	1.811	2.632	3.791				0.094	0.132	0.190
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
BM0C	A → Y0	(HH)	0.727	1.178	1.990				0.028	0.043	0.067
		(LL)	0.927	1.411	2.198				0.033	0.046	0.066
	EN → Y0	(HZ)	0.999	1.459	2.275						
		(LZ)	0.553	0.839	1.315						
		(ZH)	1.157	1.845	3.033				0.028	0.043	0.067
		(ZL)	1.114	1.670	2.554				0.033	0.046	0.066
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
BM03	A → Y0	(HH)	0.605	0.992	1.694				0.020	0.032	0.050
		(LL)	0.844	1.279	1.999				0.025	0.035	0.050
	EN → Y0	(HZ)	1.078	1.558	2.427						
		(LZ)	0.574	0.870	1.361						
		(ZH)	1.047	1.671	2.745				0.020	0.032	0.050
		(ZL)	1.043	1.561	2.404				0.025	0.035	0.050
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
BM01	A → Y0	(HH)	0.505	0.838	1.443				0.011	0.017	0.027
		(LL)	0.807	1.221	1.914				0.017	0.023	0.032
	EN → Y0	(HZ)	1.337	1.913	2.984						
		(LZ)	0.638	0.963	1.512						
		(ZH)	0.951	1.519	2.497				0.011	0.017	0.027
		(ZL)	1.009	1.507	2.334				0.017	0.023	0.032
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
BM05	A → Y0	(HH)	0.520	0.854	1.465				0.011	0.017	0.027
		(LL)	0.832	1.261	1.978				0.013	0.018	0.025
	EN → Y0	(HZ)	1.341	1.929	2.997						
		(LZ)	0.695	1.047	1.643						
		(ZH)	0.957	1.528	2.513				0.011	0.017	0.027
		(ZL)	1.037	1.553	2.403				0.013	0.018	0.025
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
BM0F	A → Y0	(HH)	0.541	0.872	1.485				0.011	0.017	0.027
		(LL)	0.833	1.270	1.996				0.012	0.016	0.023
	EN → Y0	(HZ)	1.341	1.928	2.982						
		(LZ)	0.772	1.159	1.824						
		(ZH)	0.957	1.528	2.514				0.011	0.017	0.027
		(ZL)	1.044	1.564	2.422				0.012	0.016	0.023
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			

Function	Low-noise I/O Buffer					CMOS 5V
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA						
6mA						
9mA						
12mA	BP01				1	47
18mA	BP05				1	47
24mA	BP0F				1	47

Logic Diagram



Truth Table

A	EN	Y0
0	1	0
1	1	1
X	0	Z

X:Irrelevant

Z:High Impedance

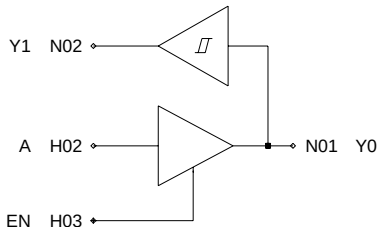
Y0	Y1
0	0
1	1

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
BP01	A	19.3	Y1	367
	EN	6.3		
BP05	A	19.3	Y1	367
	EN	6.3		
BP0F	A	19.3	Y1	367
	EN	6.3		

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BP01	A → Y0	(HH)	1.456	2.509	4.527				0.017	0.026	0.044
		(LL)	1.688	2.714	4.574				0.023	0.028	0.048
	EN → Y0	(HZ)	2.603	3.580	5.487						
		(LZ)	2.054	3.031	4.846						
		(ZH)	1.392	2.472	4.528				0.017	0.026	0.043
		(ZL)	1.738	2.931	4.706				0.023	0.033	0.049
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
BP05	A → Y0	(HH)	1.464	2.516	4.548				0.017	0.026	0.044
		(LL)	1.733	2.829	4.773				0.021	0.026	0.045
	EN → Y0	(HZ)	2.623	3.586	5.521						
		(LZ)	2.413	3.580	5.727						
		(ZH)	1.399	2.484	4.548				0.017	0.026	0.044
		(ZL)	1.770	3.024	4.886				0.021	0.031	0.047
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
BP0F	A → Y0	(HH)	1.473	2.523	4.548				0.017	0.026	0.044
		(LL)	1.793	2.982	5.028				0.019	0.024	0.043
	EN → Y0	(HZ)	2.623	3.591	5.517						
		(LZ)	2.916	4.339	6.958						
		(ZH)	1.399	2.484	4.548				0.017	0.026	0.044
		(ZL)	1.825	3.153	5.124				0.019	0.029	0.044
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			

Function	Schmitt I/O Buffer					CMOS 5V
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA	BQIU				1	56
6mA	BQIC				1	56
9mA	BQI3				1	58
12mA	BQI1				1	58
18mA	BQI5				1	58
24mA	BQIF				1	58

Logic Diagram



Truth Table

A	EN	Y0
0	1	0
1	1	1
X	0	Z

X:Irrelevant

Z:High Impedance

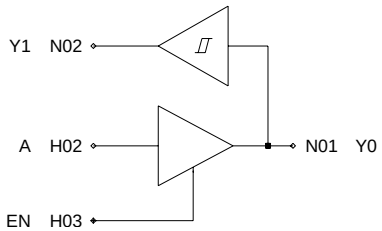
Y0	Y1
0	0
1	1

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
BQIU	A	32.3	Y1	227
	EN	1.2		
BQIC	A	32.3	Y1	227
	EN	1.2		
BQI3	A	37.3	Y1	227
	EN	1.2		
BQI1	A	37.4	Y1	227
	EN	1.2		
BQI5	A	37.4	Y1	227
	EN	1.2		
BQIF	A	37.4	Y1	227
	EN	1.2		

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BQIU	A → Y0	(HH)	1.479	2.409	3.980				0.076	0.120	0.190
		(LL)	1.713	2.472	3.622				0.094	0.133	0.189
	EN → Y0	(HZ)	0.554	0.853	1.347						
		(LZ)	0.363	0.553	0.857						
		(ZH)	1.888	3.038	4.962				0.076	0.120	0.190
		(ZL)	1.811	2.632	3.791				0.094	0.132	0.190
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BQIC	A → Y0	(HH)	0.727	1.178	1.990				0.028	0.043	0.067
		(LL)	0.927	1.411	2.198				0.033	0.046	0.066
	EN → Y0	(HZ)	0.999	1.459	2.275						
		(LZ)	0.553	0.839	1.315						
		(ZH)	1.157	1.845	3.033				0.028	0.043	0.067
		(ZL)	1.114	1.670	2.554				0.033	0.046	0.066
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BQI3	A → Y0	(HH)	0.605	0.992	1.694				0.020	0.032	0.050
		(LL)	0.844	1.279	1.999				0.025	0.035	0.050
	EN → Y0	(HZ)	1.078	1.558	2.427						
		(LZ)	0.574	0.870	1.361						
		(ZH)	1.047	1.671	2.745				0.020	0.032	0.050
		(ZL)	1.043	1.561	2.404				0.025	0.035	0.050
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BQI1	A → Y0	(HH)	0.505	0.838	1.443				0.011	0.017	0.027
		(LL)	0.807	1.221	1.914				0.017	0.023	0.032
	EN → Y0	(HZ)	1.337	1.913	2.984						
		(LZ)	0.638	0.963	1.512						
		(ZH)	0.951	1.519	2.497				0.011	0.017	0.027
		(ZL)	1.009	1.507	2.334				0.017	0.023	0.032
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BQI5	A → Y0	(HH)	0.520	0.854	1.465				0.011	0.017	0.027
		(LL)	0.832	1.261	1.978				0.013	0.018	0.025
	EN → Y0	(HZ)	1.341	1.929	2.997						
		(LZ)	0.695	1.047	1.643						
		(ZH)	0.957	1.528	2.513				0.011	0.017	0.027
		(ZL)	1.037	1.553	2.403				0.013	0.018	0.025
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BQIF	A → Y0	(HH)	0.541	0.872	1.485				0.011	0.017	0.027
		(LL)	0.833	1.270	1.996				0.012	0.016	0.023
	EN → Y0	(HZ)	1.341	1.928	2.982						
		(LZ)	0.772	1.159	1.824						
		(ZH)	0.957	1.528	2.514				0.011	0.017	0.027
		(ZL)	1.044	1.564	2.422				0.012	0.016	0.023
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			

Function	Low-noise Schmitt I/O Buffer					CMOS 5V
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA						
6mA						
9mA						
12mA	BUI1				1	51
18mA	BUI5				1	51
24mA	BUIF				1	51

Logic Diagram



Truth Table

A	EN	Y0
0	1	0
1	1	1
X	0	Z

X:Irrelevant

Z:High Impedance

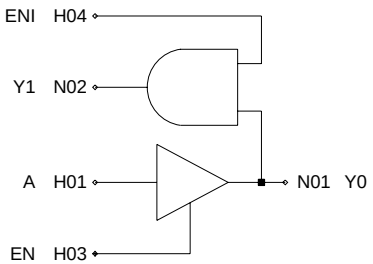
Y0	Y1
0	0
1	1

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
BUI1	A	19.3	Y1	227
	EN	6.3		
BUI5	A	19.3	Y1	227
	EN	6.3		
BUIF	A	19.3	Y1	227
	EN	6.3		

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BUI1	A → Y0	(HH)	1.456	2.509	4.527				0.017	0.026	0.044
		(LL)	1.688	2.714	4.574				0.023	0.028	0.048
	EN → Y0	(HZ)	2.603	3.580	5.487						
		(LZ)	2.054	3.031	4.846						
		(ZH)	1.392	2.472	4.528				0.017	0.026	0.043
		(ZL)	1.738	2.931	4.706				0.023	0.033	0.049
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BUI5	A → Y0	(HH)	1.464	2.516	4.548				0.017	0.026	0.044
		(LL)	1.733	2.829	4.773				0.021	0.026	0.045
	EN → Y0	(HZ)	2.623	3.586	5.521						
		(LZ)	2.413	3.580	5.727						
		(ZH)	1.399	2.484	4.548				0.017	0.026	0.044
		(ZL)	1.770	3.024	4.886				0.021	0.031	0.047
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BUIF	A → Y0	(HH)	1.473	2.523	4.548				0.017	0.026	0.044
		(LL)	1.793	2.982	5.028				0.019	0.024	0.043
	EN → Y0	(HZ)	2.623	3.591	5.517						
		(LZ)	2.916	4.339	6.958						
		(ZH)	1.399	2.484	4.548				0.017	0.026	0.044
		(ZL)	1.825	3.153	5.124				0.019	0.029	0.044
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			

Function	I/O Buffer with EN(AND)					CMOS 5V
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA	BNXU35				1	53
6mA	BNXC35				1	53
9mA	BNX335				1	55
12mA	BNX135				1	55
18mA	BNX535				1	55
24mA	BNXF35				1	55

Logic Diagram



Truth Table

A	EN	Y0
0	1	0
1	1	1
X	0	Z

X:Irrelevant

Z:High Impedance

Y0	ENI	Y1
0	0	0
0	1	0
1	0	0
1	1	1

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
BNXU35	A	32.3	Y1	354
	EN	1.2		
	ENI	3.6		
BNXC35	A	32.3	Y1	354
	EN	1.2		
	ENI	3.6		
BNX335	A	37.3	Y1	354
	EN	1.2		
	ENI	3.6		
BNX135	A	37.4	Y1	354
	EN	1.2		
	ENI	3.6		
BNX535	A	37.4	Y1	354
	EN	1.2		
	ENI	3.6		
BNXF35	A	37.4	Y1	354
	EN	1.2		
	ENI	3.6		

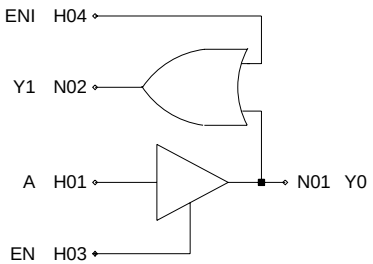
Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BNXU35	A → Y0	(HH)	1.479	2.409	3.980				0.076	0.120	0.190
		(LL)	1.713	2.472	3.622				0.094	0.133	0.189
	EN → Y0	(HZ)	0.554	0.853	1.347						
		(LZ)	0.363	0.553	0.857						
		(ZH)	1.888	3.038	4.962				0.076	0.120	0.190
		(ZL)	1.811	2.632	3.791				0.094	0.132	0.190
	ENI → Y1	(HH)	0.155	0.233	0.362	0.001	0.002	0.004			
		(LL)	0.215	0.324	0.492	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.192	0.292	0.473	0.001	0.002	0.004			
		(LL)	0.234	0.358	0.555	0.002	0.003	0.005			
BNXC35	A → Y0	(HH)	0.727	1.178	1.990				0.028	0.043	0.067
		(LL)	0.927	1.411	2.198				0.033	0.046	0.066
	EN → Y0	(HZ)	0.999	1.459	2.275						
		(LZ)	0.553	0.839	1.315						
		(ZH)	1.157	1.845	3.033				0.028	0.043	0.067
		(ZL)	1.114	1.670	2.554				0.033	0.046	0.066
	ENI → Y1	(HH)	0.155	0.233	0.362	0.001	0.002	0.004			
		(LL)	0.215	0.324	0.492	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.192	0.292	0.473	0.001	0.002	0.004			
		(LL)	0.234	0.358	0.555	0.002	0.003	0.005			
BNX335	A → Y0	(HH)	0.605	0.992	1.694				0.020	0.032	0.050
		(LL)	0.844	1.279	1.999				0.025	0.035	0.050
	EN → Y0	(HZ)	1.078	1.558	2.427						
		(LZ)	0.574	0.870	1.361						
		(ZH)	1.047	1.671	2.745				0.020	0.032	0.050
		(ZL)	1.043	1.561	2.404				0.025	0.035	0.050
	ENI → Y1	(HH)	0.155	0.233	0.362	0.001	0.002	0.004			
		(LL)	0.215	0.324	0.492	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.192	0.292	0.473	0.001	0.002	0.004			
		(LL)	0.234	0.358	0.555	0.002	0.003	0.005			
BNX135	A → Y0	(HH)	0.505	0.838	1.443				0.011	0.017	0.027
		(LL)	0.807	1.221	1.914				0.017	0.023	0.032
	EN → Y0	(HZ)	1.337	1.913	2.984						
		(LZ)	0.638	0.963	1.512						
		(ZH)	0.951	1.519	2.497				0.011	0.017	0.027
		(ZL)	1.009	1.507	2.334				0.017	0.023	0.032
	ENI → Y1	(HH)	0.155	0.233	0.362	0.001	0.002	0.004			
		(LL)	0.215	0.324	0.492	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.192	0.292	0.473	0.001	0.002	0.004			
		(LL)	0.234	0.358	0.555	0.002	0.003	0.005			
BNX535	A → Y0	(HH)	0.520	0.854	1.465				0.011	0.017	0.027
		(LL)	0.832	1.261	1.978				0.013	0.018	0.025
	EN → Y0	(HZ)	1.341	1.929	2.997						
		(LZ)	0.695	1.047	1.643						
		(ZH)	0.957	1.528	2.513				0.011	0.017	0.027
		(ZL)	1.037	1.553	2.403				0.013	0.018	0.025
	ENI → Y1	(HH)	0.155	0.233	0.362	0.001	0.002	0.004			
		(LL)	0.215	0.324	0.492	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.192	0.292	0.473	0.001	0.002	0.004			
		(LL)	0.234	0.358	0.555	0.002	0.003	0.005			
BNXF35	A → Y0	(HH)	0.541	0.872	1.485				0.011	0.017	0.027
		(LL)	0.833	1.270	1.996				0.012	0.016	0.023
	EN → Y0	(HZ)	1.341	1.928	2.982						
		(LZ)	0.772	1.159	1.824						
		(ZH)	0.957	1.528	2.514				0.011	0.017	0.027
		(ZL)	1.044	1.564	2.422				0.012	0.016	0.023

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
	ENI → Y1	(HH)	0.155	0.233	0.362	0.001	0.002	0.004			
		(LL)	0.215	0.324	0.492	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.192	0.292	0.473	0.001	0.002	0.004			
		(LL)	0.234	0.358	0.555	0.002	0.003	0.005			

[MEMO]

Function	I/O Buffer with EN(OR)					CMOS 5V
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA	BNMU35				1	53
6mA	BNMC35				1	53
9mA	BNM335				1	55
12mA	BNM135				1	55
18mA	BNM535				1	55
24mA	BNMF35				1	55

Logic Diagram



Truth Table

A	EN	Y0
0	1	0
1	1	1
X	0	Z

X:Irrelevant

Z:High Impedance

Y0	ENI	Y1
0	0	0
0	1	1
1	0	1
1	1	1

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
BNMU35	A	32.3	Y1	349
	EN	1.2		
	ENI	3.6		
BNMC35	A	32.3	Y1	349
	EN	1.2		
	ENI	3.6		
BNM335	A	37.3	Y1	349
	EN	1.2		
	ENI	3.6		
BNM135	A	37.4	Y1	349
	EN	1.2		
	ENI	3.6		
BNM535	A	37.4	Y1	349
	EN	1.2		
	ENI	3.6		
BNMF35	A	37.4	Y1	349
	EN	1.2		
	ENI	3.6		

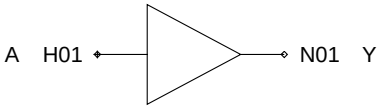
Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BNMU35	A → Y0	(HH)	1.479	2.409	3.980				0.076	0.120	0.190
		(LL)	1.713	2.472	3.622				0.094	0.133	0.189
	EN → Y0	(HZ)	0.554	0.853	1.347						
		(LZ)	0.363	0.553	0.857						
		(ZH)	1.888	3.038	4.962				0.076	0.120	0.190
		(ZL)	1.811	2.632	3.791				0.094	0.132	0.190
	ENI → Y1	(HH)	0.131	0.194	0.274	0.001	0.002	0.003			
		(LL)	0.314	0.490	0.774	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.160	0.245	0.385	0.001	0.002	0.003			
		(LL)	0.340	0.533	0.848	0.002	0.003	0.005			
BNMC35	A → Y0	(HH)	0.727	1.178	1.990				0.028	0.043	0.067
		(LL)	0.927	1.411	2.198				0.033	0.046	0.066
	EN → Y0	(HZ)	0.999	1.459	2.275						
		(LZ)	0.553	0.839	1.315						
		(ZH)	1.157	1.845	3.033				0.028	0.043	0.067
		(ZL)	1.114	1.670	2.554				0.033	0.046	0.066
	ENI → Y1	(HH)	0.131	0.194	0.274	0.001	0.002	0.003			
		(LL)	0.314	0.490	0.774	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.160	0.245	0.385	0.001	0.002	0.003			
		(LL)	0.340	0.533	0.848	0.002	0.003	0.005			
BNM335	A → Y0	(HH)	0.605	0.992	1.694				0.020	0.032	0.050
		(LL)	0.844	1.279	1.999				0.025	0.035	0.050
	EN → Y0	(HZ)	1.078	1.558	2.427						
		(LZ)	0.574	0.870	1.361						
		(ZH)	1.047	1.671	2.745				0.020	0.032	0.050
		(ZL)	1.043	1.561	2.404				0.025	0.035	0.050
	ENI → Y1	(HH)	0.131	0.194	0.274	0.001	0.002	0.003			
		(LL)	0.314	0.490	0.774	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.160	0.245	0.385	0.001	0.002	0.003			
		(LL)	0.340	0.533	0.848	0.002	0.003	0.005			
BNM135	A → Y0	(HH)	0.505	0.838	1.443				0.011	0.017	0.027
		(LL)	0.807	1.221	1.914				0.017	0.023	0.032
	EN → Y0	(HZ)	1.337	1.913	2.984						
		(LZ)	0.638	0.963	1.512						
		(ZH)	0.951	1.519	2.497				0.011	0.017	0.027
		(ZL)	1.009	1.507	2.334				0.017	0.023	0.032
	ENI → Y1	(HH)	0.131	0.194	0.274	0.001	0.002	0.003			
		(LL)	0.314	0.490	0.774	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.160	0.245	0.385	0.001	0.002	0.003			
		(LL)	0.340	0.533	0.848	0.002	0.003	0.005			
BNM535	A → Y0	(HH)	0.520	0.854	1.465				0.011	0.017	0.027
		(LL)	0.832	1.261	1.978				0.013	0.018	0.025
	EN → Y0	(HZ)	1.341	1.929	2.997						
		(LZ)	0.695	1.047	1.643						
		(ZH)	0.957	1.528	2.513				0.011	0.017	0.027
		(ZL)	1.037	1.553	2.403				0.013	0.018	0.025
	ENI → Y1	(HH)	0.131	0.194	0.274	0.001	0.002	0.003			
		(LL)	0.314	0.490	0.774	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.160	0.245	0.385	0.001	0.002	0.003			
		(LL)	0.340	0.533	0.848	0.002	0.003	0.005			
BNMF35	A → Y0	(HH)	0.541	0.872	1.485				0.011	0.017	0.027
		(LL)	0.833	1.270	1.996				0.012	0.016	0.023
	EN → Y0	(HZ)	1.341	1.928	2.982						
		(LZ)	0.772	1.159	1.824						
		(ZH)	0.957	1.528	2.514				0.011	0.017	0.027
		(ZL)	1.044	1.564	2.422				0.012	0.016	0.023

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
	ENI → Y1	(HH)	0.131	0.194	0.274	0.001	0.002	0.003			
		(LL)	0.314	0.490	0.774	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.160	0.245	0.385	0.001	0.002	0.003			
		(LL)	0.340	0.533	0.848	0.002	0.003	0.005			

[MEMO]

Function	Output Buffer				TTL 5V
Block type					
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA	FV0A				1	8
2mA	FV0B				1	8
3mA	FV09				1	8
6mA	FV04				1	8
9mA	FV01				1	18
12mA	FV02				1	18
18mA	FV03				1	18
24mA	FV06				1	18

Logic Diagram



Truth Table

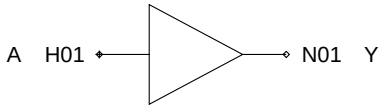
A	Y
1	1
0	0

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
FV0A	A	19.4	Y	-
FV0B	A	19.4	Y	-
FV09	A	19.4	Y	-
FV04	A	19.3	Y	-
FV01	A	42.7	Y	-
FV02	A	42.7	Y	-
FV03	A	42.7	Y	-
FV06	A	42.7	Y	-

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
FV0A	A → Y	(HH)	1.960	3.102	4.993				0.076	0.122	0.200
		(LL)	3.161	4.601	7.056				0.139	0.202	0.312
FV0B	A → Y	(HH)	1.718	2.690	4.307				0.074	0.118	0.189
		(LL)	2.200	3.228	4.895				0.104	0.154	0.233
FV09	A → Y	(HH)	1.809	2.851	4.508				0.073	0.114	0.183
		(LL)	2.045	2.859	4.054				0.088	0.125	0.179
FV04	A → Y	(HH)	0.893	1.363	2.153				0.027	0.042	0.066
		(LL)	0.960	1.391	2.051				0.031	0.044	0.062
FV01	A → Y	(HH)	0.749	1.137	1.794				0.020	0.031	0.050
		(LL)	0.690	1.001	1.464				0.024	0.033	0.047
FV02	A → Y	(HH)	0.587	0.890	1.419				0.011	0.017	0.027
		(LL)	0.498	0.739	1.109				0.013	0.018	0.025
FV03	A → Y	(HH)	0.621	0.941	1.498				0.011	0.017	0.027
		(LL)	0.449	0.673	1.023				0.010	0.014	0.020
FV06	A → Y	(HH)	0.657	0.996	1.589				0.011	0.017	0.027
		(LL)	0.405	0.614	0.943				0.008	0.011	0.016

Function	Low-noise Output Buffer					TTL 5V
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA						
6mA						
9mA						
12mA	FW02				1	10
18mA	FW03				1	10
24mA	FW06				1	10

Logic Diagram



Truth Table

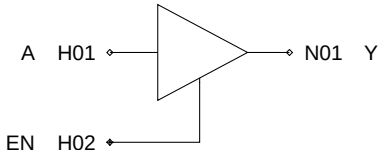
A	Y
1	1
0	0

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
FW02	A	23.5	Y	-
FW03	A	23.5	Y	-
FW06	A	23.4	Y	-

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
FW02	A → Y	(HH)	1.359	2.256	3.956				0.013	0.020	0.034
		(LL)	1.851	3.024	4.827				0.018	0.025	0.037
FW03	A → Y	(HH)	1.393	2.317	4.057				0.013	0.021	0.034
		(LL)	1.925	3.194	5.157				0.016	0.023	0.034
FW06	A → Y	(HH)	1.397	2.316	4.060				0.013	0.021	0.034
		(LL)	1.970	3.317	5.377				0.015	0.021	0.032

Function	3-State Buffer					TTL 5V
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA	BV0Q	BVDQ			1	40
2mA	BV0M	BVDM			1	40
3mA	BV0T	BVDT			1	40
6mA	BV0E	BVDE			1	40
9mA	BV08	BVD8			1	42
12mA	BV07	BVD7			1	42
18mA	BV09	BVD9			1	42
24mA	BV0H	BVDH			1	42

Logic Diagram



Truth Table

A	EN	Y
0	1	0
1	1	1
X	0	Z

X:Irrelevant

Z:High Impedance

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
BV0Q to BVDQ	A	30.7	Y	-
	EN	1.2		
BV0M to BVDM	A	30.7	Y	-
	EN	1.2		
BV0T to BVDT	A	30.7	Y	-
	EN	1.2		
BV0E to BVDE	A	30.6	Y	-
	EN	1.2		
BV08 to BVD8	A	35.7	Y	-
	EN	1.2		
BV07 to BVD7	A	35.7	Y	-
	EN	1.2		
BV09 to BVD9	A	35.6	Y	-
	EN	1.2		
BV0H to BVDH	A	35.6	Y	-
	EN	1.2		

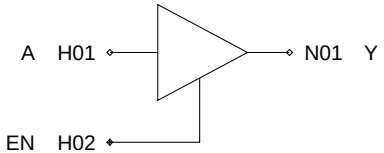
Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
BV0Q	A → Y	(HH)	1.597	2.613	4.430				0.081	0.128	0.204	
		(LL)	2.916	4.254	6.601				0.144	0.209	0.322	
	EN → Y	(HZ)	0.563	0.869	1.372							
		(LZ)	0.349	0.529	0.820							
		(ZH)	1.586	2.597	4.217				0.077	0.125	0.204	
		(ZL)	2.986	4.351	6.629				0.143	0.209	0.322	
BVDQ	A → Y	(HH)	1.597	2.613	4.430				0.081	0.128	0.204	
		(LL)	2.916	4.254	6.601				0.144	0.209	0.322	
	EN → Y	(HZ)	0.563	0.869	1.372							
		(LZ)	0.349	0.529	0.820							
		(ZH)	1.586	2.597	4.217				0.077	0.125	0.204	
		(ZL)	2.986	4.351	6.629				0.143	0.209	0.322	
BV0M	A → Y	(HH)	1.445	2.337	3.872				0.077	0.122	0.195	
		(LL)	1.958	2.921	4.529				0.108	0.160	0.242	
	EN → Y	(HZ)	0.563	0.869	1.372							
		(LZ)	0.349	0.528	0.821							
		(ZH)	1.491	2.419	3.890				0.074	0.119	0.192	
		(ZL)	2.085	3.108	4.724				0.108	0.159	0.242	
BVDM	A → Y	(HH)	1.445	2.337	3.872				0.077	0.122	0.195	
		(LL)	1.958	2.921	4.529				0.108	0.160	0.242	
	EN → Y	(HZ)	0.563	0.869	1.372							
		(LZ)	0.349	0.528	0.821							
		(ZH)	1.491	2.419	3.890				0.074	0.119	0.192	
		(ZL)	2.085	3.108	4.724				0.108	0.159	0.242	
BV0T	A → Y	(HH)	1.484	2.413	3.982				0.077	0.121	0.189	
		(LL)	1.688	2.430	3.560				0.093	0.132	0.189	
	EN → Y	(HZ)	0.562	0.869	1.374							
		(LZ)	0.349	0.529	0.820							
		(ZH)	1.493	2.427	3.895				0.073	0.117	0.187	
		(ZL)	1.830	2.638	3.826				0.094	0.133	0.191	
BVDT	A → Y	(HH)	1.484	2.413	3.982				0.077	0.121	0.189	
		(LL)	1.688	2.430	3.560				0.093	0.132	0.189	
	EN → Y	(HZ)	0.562	0.869	1.374							
		(LZ)	0.349	0.529	0.820							
		(ZH)	1.493	2.427	3.895				0.073	0.117	0.187	
		(ZL)	1.830	2.638	3.826				0.094	0.133	0.191	
BV0E	A → Y	(HH)	0.727	1.179	1.993				0.028	0.043	0.067	
		(LL)	0.897	1.378	2.143				0.033	0.046	0.066	
	EN → Y	(HZ)	1.016	1.466	2.292							
		(LZ)	0.537	0.811	1.268							
		(ZH)	1.092	1.733	2.798				0.026	0.042	0.066	
		(ZL)	1.203	1.789	2.759				0.033	0.046	0.065	
BVDE	A → Y	(HH)	0.727	1.179	1.993				0.028	0.043	0.067	
		(LL)	0.897	1.378	2.143				0.033	0.046	0.066	
	EN → Y	(HZ)	1.016	1.466	2.292							
		(LZ)	0.537	0.811	1.268							
		(ZH)	1.092	1.733	2.798				0.026	0.042	0.066	
		(ZL)	1.203	1.789	2.759				0.033	0.046	0.065	
BV08	A → Y	(HH)	0.703	1.145	1.937				0.028	0.043	0.067	
		(LL)	0.868	1.321	2.047				0.032	0.045	0.064	
	EN → Y	(HZ)	0.999	1.445	2.265							
		(LZ)	0.531	0.802	1.256							
		(ZH)	1.072	1.703	2.741				0.027	0.042	0.066	
		(ZL)	1.207	1.786	2.746				0.032	0.045	0.064	

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BVD8	A → Y	(HH)	0.703	1.145	1.937				0.028	0.043	0.067
		(LL)	0.868	1.321	2.047				0.032	0.045	0.064
	EN → Y	(HZ)	0.999	1.445	2.265						
		(LZ)	0.531	0.802	1.256						
		(ZH)	1.072	1.703	2.741				0.027	0.042	0.066
		(ZL)	1.207	1.786	2.746				0.032	0.045	0.064
BV07	A → Y	(HH)	0.507	0.839	1.444				0.011	0.017	0.027
		(LL)	0.762	1.162	1.818				0.015	0.020	0.029
	EN → Y	(HZ)	1.320	1.902	2.977						
		(LZ)	0.613	0.922	1.448						
		(ZH)	0.949	1.508	2.455				0.011	0.017	0.027
		(ZL)	1.162	1.740	2.702				0.015	0.020	0.029
BVD7	A → Y	(HH)	0.507	0.839	1.444				0.011	0.017	0.027
		(LL)	0.762	1.162	1.818				0.015	0.020	0.029
	EN → Y	(HZ)	1.320	1.902	2.977						
		(LZ)	0.613	0.922	1.448						
		(ZH)	0.949	1.508	2.455				0.011	0.017	0.027
		(ZL)	1.162	1.740	2.702				0.015	0.020	0.029
BV09	A → Y	(HH)	0.520	0.856	1.469				0.011	0.017	0.027
		(LL)	0.769	1.182	1.851				0.013	0.018	0.025
	EN → Y	(HZ)	1.343	1.933	3.017						
		(LZ)	0.678	1.017	1.597						
		(ZH)	0.958	1.522	2.477				0.011	0.017	0.027
		(ZL)	1.166	1.748	2.721				0.013	0.018	0.025
BVD9	A → Y	(HH)	0.520	0.856	1.469				0.011	0.017	0.027
		(LL)	0.769	1.182	1.851				0.013	0.018	0.025
	EN → Y	(HZ)	1.343	1.933	3.017						
		(LZ)	0.678	1.017	1.597						
		(ZH)	0.958	1.522	2.477				0.011	0.017	0.027
		(ZL)	1.166	1.748	2.721				0.013	0.018	0.025
BV0H	A → Y	(HH)	0.542	0.874	1.487				0.011	0.017	0.027
		(LL)	0.772	1.194	1.885				0.012	0.016	0.023
	EN → Y	(HZ)	1.343	1.935	3.015						
		(LZ)	0.756	1.129	1.776						
		(ZH)	0.958	1.522	2.477				0.011	0.017	0.027
		(ZL)	1.169	1.755	2.722				0.012	0.016	0.023
BVDH	A → Y	(HH)	0.542	0.874	1.487				0.011	0.017	0.027
		(LL)	0.772	1.194	1.885				0.012	0.016	0.023
	EN → Y	(HZ)	1.343	1.935	3.015						
		(LZ)	0.756	1.129	1.776						
		(ZH)	0.958	1.522	2.477				0.011	0.017	0.027
		(ZL)	1.169	1.755	2.722				0.012	0.016	0.023

[MEMO]

Function	Low-noise 3-State Buffer				TTL 5V	
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA						
6mA						
9mA						
12mA	BY07	BYD7			1	28
18mA	BY09	BYD9			1	28
24mA	BY0H	BYDH			1	28

Logic Diagram



Truth Table

A	EN	Y
0	1	0
1	1	1
X	0	Z

X:Irrelevant

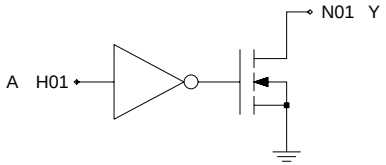
Z:High Impedance

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
BY07 to BYD7	A	18.2	Y	-
	EN	8.7		
BY09 to BYD9	A	18.2	Y	-
	EN	8.7		
BY0H to BYDH	A	18.0	Y	-
	EN	8.7		

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BY07	A → Y	(HH)	1.467	2.509	4.524				0.014	0.023	0.037
		(LL)	1.697	2.818	4.564				0.019	0.027	0.039
	EN → Y	(HZ)	2.550	3.483	5.320						
		(LZ)	1.957	2.893	4.614						
		(ZH)	1.273	2.268	4.106				0.015	0.023	0.040
		(ZL)	1.725	2.913	4.682				0.019	0.028	0.040
BYD7	A → Y	(HH)	1.467	2.509	4.524				0.014	0.023	0.037
		(LL)	1.697	2.818	4.564				0.019	0.027	0.039
	EN → Y	(HZ)	2.550	3.483	5.320						
		(LZ)	1.957	2.893	4.614						
		(ZH)	1.273	2.268	4.106				0.015	0.023	0.040
		(ZL)	1.725	2.913	4.682				0.019	0.028	0.040
BY09	A → Y	(HH)	1.498	2.571	4.640				0.015	0.023	0.038
		(LL)	1.784	3.007	4.901				0.018	0.025	0.037
	EN → Y	(HZ)	2.625	3.586	5.463						
		(LZ)	2.379	3.523	5.624						
		(ZH)	1.305	2.329	4.218				0.015	0.024	0.040
		(ZL)	1.810	3.088	5.009				0.018	0.025	0.037
BYD9	A → Y	(HH)	1.498	2.571	4.640				0.015	0.023	0.038
		(LL)	1.784	3.007	4.901				0.018	0.025	0.037
	EN → Y	(HZ)	2.625	3.586	5.463						
		(LZ)	2.379	3.523	5.624						
		(ZH)	1.305	2.329	4.218				0.015	0.024	0.040
		(ZL)	1.810	3.088	5.009				0.018	0.025	0.037
BY0H	A → Y	(HH)	1.506	2.572	4.641				0.015	0.023	0.038
		(LL)	1.851	3.151	5.161				0.016	0.023	0.035
	EN → Y	(HZ)	2.619	3.586	5.463						
		(LZ)	2.870	4.281	6.862						
		(ZH)	1.305	2.328	4.217				0.015	0.024	0.040
		(ZL)	1.858	3.213	5.246				0.016	0.023	0.035
BYDH	A → Y	(HH)	1.506	2.572	4.641				0.015	0.023	0.038
		(LL)	1.851	3.151	5.161				0.016	0.023	0.035
	EN → Y	(HZ)	2.619	3.586	5.463						
		(LZ)	2.870	4.281	6.862						
		(ZH)	1.305	2.328	4.217				0.015	0.024	0.040
		(ZL)	1.858	3.213	5.246				0.016	0.023	0.035

Function	N-ch Open drain Buffer					TTL 5V
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA	EVTT				1	8
2mA	EVTK				1	8
3mA	EVTH				1	8
6mA	EVTJ				1	8
9mA	EVT1				1	18
12mA	EVT9				1	18
18mA	EVT5				1	18
24mA	EVTD				1	18

Logic Diagram



Truth Table

A	Y
1	Z
0	0

Z:High Impedance

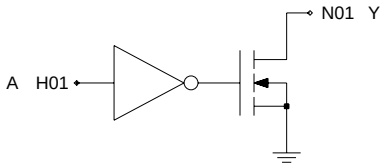
Connect a pull-up resistor to get a high level

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
EVTT	A	19.3	Y	-
EVTK	A	19.3	Y	-
EVTH	A	19.4	Y	-
EVTJ	A	19.3	Y	-
EVT1	A	42.8	Y	-
EVT9	A	42.7	Y	-
EVT5	A	42.6	Y	-
EVTD	A	42.7	Y	-

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
EVTT	A → Y	(LZ)	0.094	0.116	0.154						
		(ZL)	2.907	4.198	6.395				0.138	0.202	0.312
EVTK	A → Y	(LZ)	0.093	0.115	0.154						
		(ZL)	2.001	2.920	4.405				0.104	0.153	0.233
EVTH	A → Y	(LZ)	0.094	0.116	0.153						
		(ZL)	1.851	2.591	3.677				0.089	0.126	0.179
EVTJ	A → Y	(LZ)	0.218	0.280	0.392						
		(ZL)	0.785	1.125	1.626				0.031	0.044	0.062
EVT1	A → Y	(LZ)	0.231	0.290	0.406						
		(ZL)	0.566	0.821	1.193				0.024	0.033	0.047
EVT9	A → Y	(LZ)	0.269	0.345	0.496						
		(ZL)	0.370	0.550	0.819				0.013	0.018	0.025
EVT5	A → Y	(LZ)	0.301	0.391	0.570						
		(ZL)	0.325	0.493	0.744				0.010	0.014	0.020
EVTD	A → Y	(LZ)	0.348	0.460	0.678						
		(ZL)	0.292	0.448	0.690				0.008	0.011	0.015

Function	Low-noise N-ch Open drain Buffer					TTL 5V
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA						
6mA						
9mA						
12mA	EYT9				1	5
18mA	EYT5				1	5
24mA	EYTD				1	5

Logic Diagram



Truth Table

A	Y
1	Z
0	0

Z:High Impedance

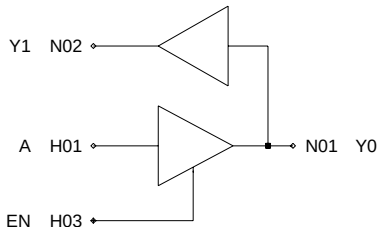
Connect a pull-up resistor to get a high level

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
EYT9	A	10.5	Y	-
EYT5	A	11.6	Y	-
EYTD	A	11.5	Y	-

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
EYT9	A → Y	(LZ)	0.556	0.773	1.191						
		(ZL)	1.801	2.959	4.738				0.021	0.030	0.045
EYT5	A → Y	(LZ)	0.537	0.750	1.157						
		(ZL)	1.866	3.100	5.023				0.016	0.024	0.034
EYTD	A → Y	(LZ)	0.647	0.915	1.423						
		(ZL)	1.918	3.228	5.266				0.015	0.022	0.032

Function	I/O Buffer					TTL 5V
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA	BW0X	BWDX			1	47
2mA	BW0K	BWDK			1	47
3mA	BW0U	BWDU			1	47
6mA	BW0C	BWDC			1	47
9mA	BW03	BWD3			1	49
12mA	BW01	BWD1			1	49
18mA	BW05	BWD5			1	49
24mA	BW0F	BWDF			1	49

Logic Diagram



Truth Table

A	EN	Y0
0	1	0
1	1	1
X	0	Z

X:Irrelevant

Z:High Impedance

Y0	Y1
0	0
1	1

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
BW0X to BWDX	A	30.7	Y1	367
	EN	1.2		
BW0K to BWDK	A	30.7	Y1	367
	EN	1.2		
BW0U to BWDU	A	30.7	Y1	367
	EN	1.2		
BW0C to BWDC	A	30.6	Y1	367
	EN	1.2		
BW03 to BWD3	A	35.7	Y1	367
	EN	1.2		
BW01 to BWD1	A	35.7	Y1	367
	EN	1.2		
BW05 to BWD5	A	35.6	Y1	367
	EN	1.2		
BW0F to BWDF	A	35.6	Y1	367
	EN	1.2		

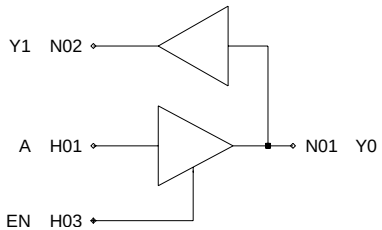
Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BW0X	A → Y0	(HH)	1.597	2.613	4.430				0.081	0.128	0.204
		(LL)	2.916	4.254	6.601				0.144	0.209	0.322
	EN → Y0	(HZ)	0.563	0.869	1.372						
		(LZ)	0.349	0.529	0.820						
		(ZH)	1.586	2.597	4.217				0.077	0.125	0.204
		(ZL)	2.986	4.351	6.629				0.143	0.209	0.322
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
BWDX	A → Y0	(HH)	1.597	2.613	4.430				0.081	0.128	0.204
		(LL)	2.916	4.254	6.601				0.144	0.209	0.322
	EN → Y0	(HZ)	0.563	0.869	1.372						
		(LZ)	0.349	0.529	0.820						
		(ZH)	1.586	2.597	4.217				0.077	0.125	0.204
		(ZL)	2.986	4.351	6.629				0.143	0.209	0.322
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
BW0K	A → Y0	(HH)	1.445	2.337	3.872				0.077	0.122	0.195
		(LL)	1.958	2.921	4.529				0.108	0.160	0.242
	EN → Y0	(HZ)	0.563	0.869	1.372						
		(LZ)	0.349	0.528	0.821						
		(ZH)	1.491	2.419	3.890				0.074	0.119	0.192
		(ZL)	2.085	3.108	4.724				0.108	0.159	0.242
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
BWDK	A → Y0	(HH)	1.445	2.337	3.872				0.077	0.122	0.195
		(LL)	1.958	2.921	4.529				0.108	0.160	0.242
	EN → Y0	(HZ)	0.563	0.869	1.372						
		(LZ)	0.349	0.528	0.821						
		(ZH)	1.491	2.419	3.890				0.074	0.119	0.192
		(ZL)	2.085	3.108	4.724				0.108	0.159	0.242
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
BW0U	A → Y0	(HH)	1.484	2.413	3.982				0.077	0.121	0.189
		(LL)	1.688	2.430	3.560				0.093	0.132	0.189
	EN → Y0	(HZ)	0.562	0.869	1.374						
		(LZ)	0.349	0.529	0.820						
		(ZH)	1.493	2.427	3.895				0.073	0.117	0.187
		(ZL)	1.830	2.638	3.826				0.094	0.133	0.191
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
BWDU	A → Y0	(HH)	1.484	2.413	3.982				0.077	0.121	0.189
		(LL)	1.688	2.430	3.560				0.093	0.132	0.189
	EN → Y0	(HZ)	0.562	0.869	1.374						
		(LZ)	0.349	0.529	0.820						
		(ZH)	1.493	2.427	3.895				0.073	0.117	0.187
		(ZL)	1.830	2.638	3.826				0.094	0.133	0.191
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
BW0C	A → Y0	(HH)	0.727	1.179	1.993				0.028	0.043	0.067
		(LL)	0.897	1.378	2.143				0.033	0.046	0.066
	EN → Y0	(HZ)	1.016	1.466	2.292						
		(LZ)	0.537	0.811	1.268						
		(ZH)	1.092	1.733	2.798				0.026	0.042	0.066
		(ZL)	1.203	1.789	2.759				0.033	0.046	0.065
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BWDC	A → Y0	(HH)	0.727	1.179	1.993				0.028	0.043	0.067
		(LL)	0.897	1.378	2.143				0.033	0.046	0.066
	EN → Y0	(HZ)	1.016	1.466	2.292						
		(LZ)	0.537	0.811	1.268						
		(ZH)	1.092	1.733	2.798				0.026	0.042	0.066
		(ZL)	1.203	1.789	2.759				0.033	0.046	0.065
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
BW03	A → Y0	(HH)	0.703	1.145	1.937				0.028	0.043	0.067
		(LL)	0.868	1.321	2.047				0.032	0.045	0.064
	EN → Y0	(HZ)	0.999	1.445	2.265						
		(LZ)	0.531	0.802	1.256						
		(ZH)	1.072	1.703	2.741				0.027	0.042	0.066
		(ZL)	1.207	1.786	2.746				0.032	0.045	0.064
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
BWD3	A → Y0	(HH)	0.703	1.145	1.937				0.028	0.043	0.067
		(LL)	0.868	1.321	2.047				0.032	0.045	0.064
	EN → Y0	(HZ)	0.999	1.445	2.265						
		(LZ)	0.531	0.802	1.256						
		(ZH)	1.072	1.703	2.741				0.027	0.042	0.066
		(ZL)	1.207	1.786	2.746				0.032	0.045	0.064
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
BW01	A → Y0	(HH)	0.507	0.839	1.444				0.011	0.017	0.027
		(LL)	0.762	1.162	1.818				0.015	0.020	0.029
	EN → Y0	(HZ)	1.320	1.902	2.977						
		(LZ)	0.613	0.922	1.448						
		(ZH)	0.949	1.508	2.455				0.011	0.017	0.027
		(ZL)	1.162	1.740	2.702				0.015	0.020	0.029
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
BWD1	A → Y0	(HH)	0.507	0.839	1.444				0.011	0.017	0.027
		(LL)	0.762	1.162	1.818				0.015	0.020	0.029
	EN → Y0	(HZ)	1.320	1.902	2.977						
		(LZ)	0.613	0.922	1.448						
		(ZH)	0.949	1.508	2.455				0.011	0.017	0.027
		(ZL)	1.162	1.740	2.702				0.015	0.020	0.029
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
BW05	A → Y0	(HH)	0.520	0.856	1.469				0.011	0.017	0.027
		(LL)	0.769	1.182	1.851				0.013	0.018	0.025
	EN → Y0	(HZ)	1.343	1.933	3.017						
		(LZ)	0.678	1.017	1.597						
		(ZH)	0.958	1.522	2.477				0.011	0.017	0.027
		(ZL)	1.166	1.748	2.721				0.013	0.018	0.025
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
BWD5	A → Y0	(HH)	0.520	0.856	1.469				0.011	0.017	0.027
		(LL)	0.769	1.182	1.851				0.013	0.018	0.025
	EN → Y0	(HZ)	1.343	1.933	3.017						
		(LZ)	0.678	1.017	1.597						
		(ZH)	0.958	1.522	2.477				0.011	0.017	0.027
		(ZL)	1.166	1.748	2.721				0.013	0.018	0.025
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BW0F	A → Y0	(HH)	0.542	0.874	1.487				0.011	0.017	0.027
		(LL)	0.772	1.194	1.885				0.012	0.016	0.023
	EN → Y0	(HZ)	1.343	1.935	3.015						
		(LZ)	0.756	1.129	1.776						
		(ZH)	0.958	1.522	2.477				0.011	0.017	0.027
		(ZL)	1.169	1.755	2.722				0.012	0.016	0.023
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
BWDF	A → Y0	(HH)	0.542	0.874	1.487				0.011	0.017	0.027
		(LL)	0.772	1.194	1.885				0.012	0.016	0.023
	EN → Y0	(HZ)	1.343	1.935	3.015						
		(LZ)	0.756	1.129	1.776						
		(ZH)	0.958	1.522	2.477				0.011	0.017	0.027
		(ZL)	1.169	1.755	2.722				0.012	0.016	0.023
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			

Function	Low-noise I/O Buffer					TTL 5V
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA						
6mA						
9mA						
12mA	BX01	BXD1			1	35
18mA	BX05	BXD5			1	35
24mA	BX0F	BXDF			1	35

Logic Diagram



Truth Table

A	EN	Y0
0	1	0
1	1	1
X	0	Z

X:Irrelevant

Z:High Impedance

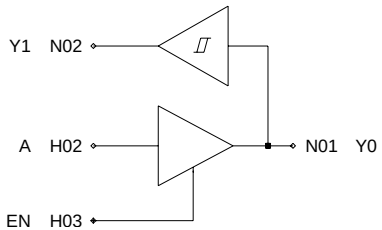
Y0	Y1
0	0
1	1

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
BX01 to BXD1	A	18.2	Y1	367
	EN	8.7		
BX05 to BXD5	A	18.2	Y1	367
	EN	8.7		
BX0F to BXDF	A	18.0	Y1	367
	EN	8.7		

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BX01	A → Y0	(HH)	1.467	2.509	4.524				0.014	0.023	0.037
		(LL)	1.697	2.818	4.564				0.019	0.027	0.039
	EN → Y0	(HZ)	2.550	3.483	5.320						
		(LZ)	1.957	2.893	4.614						
		(ZH)	1.273	2.268	4.106				0.015	0.023	0.040
		(ZL)	1.725	2.913	4.682				0.019	0.028	0.040
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
BXD1	A → Y0	(HH)	1.467	2.509	4.524				0.014	0.023	0.037
		(LL)	1.697	2.818	4.564				0.019	0.027	0.039
	EN → Y0	(HZ)	2.550	3.483	5.320						
		(LZ)	1.957	2.893	4.614						
		(ZH)	1.273	2.268	4.106				0.015	0.023	0.040
		(ZL)	1.725	2.913	4.682				0.019	0.028	0.040
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
BX05	A → Y0	(HH)	1.498	2.571	4.640				0.015	0.023	0.038
		(LL)	1.784	3.007	4.901				0.018	0.025	0.037
	EN → Y0	(HZ)	2.625	3.586	5.463						
		(LZ)	2.379	3.523	5.624						
		(ZH)	1.305	2.329	4.218				0.015	0.024	0.040
		(ZL)	1.810	3.088	5.009				0.018	0.025	0.037
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
BXD5	A → Y0	(HH)	1.498	2.571	4.640				0.015	0.023	0.038
		(LL)	1.784	3.007	4.901				0.018	0.025	0.037
	EN → Y0	(HZ)	2.625	3.586	5.463						
		(LZ)	2.379	3.523	5.624						
		(ZH)	1.305	2.329	4.218				0.015	0.024	0.040
		(ZL)	1.810	3.088	5.009				0.018	0.025	0.037
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
BX0F	A → Y0	(HH)	1.506	2.572	4.641				0.015	0.023	0.038
		(LL)	1.851	3.151	5.161				0.016	0.023	0.035
	EN → Y0	(HZ)	2.619	3.586	5.463						
		(LZ)	2.870	4.281	6.862						
		(ZH)	1.305	2.328	4.217				0.015	0.024	0.040
		(ZL)	1.858	3.213	5.246				0.016	0.023	0.035
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
BXDF	A → Y0	(HH)	1.506	2.572	4.641				0.015	0.023	0.038
		(LL)	1.851	3.151	5.161				0.016	0.023	0.035
	EN → Y0	(HZ)	2.619	3.586	5.463						
		(LZ)	2.870	4.281	6.862						
		(ZH)	1.305	2.328	4.217				0.015	0.024	0.040
		(ZL)	1.858	3.213	5.246				0.016	0.023	0.035
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			

Function	Schmitt I/O Buffer					TTL 5V
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA	BKIX	BKDX			1	51
2mA	BKIK	BKDK			1	51
3mA	BKIU	BKDU			1	51
6mA	BKIC	BKDC			1	51
9mA	BKI3	BKD3			1	53
12mA	BKI1	BKD1			1	53
18mA	BKI5	BKD5			1	53
24mA	BKIF	BKDF			1	53

Logic Diagram



Truth Table

A	EN	Y0
0	1	0
1	1	1
X	0	Z

X:Irrelevant

Z:High Impedance

Y0	Y1
0	0
1	1

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
BKIX to BKDX	A	30.7	Y1	227
	EN	1.2		
BKIK to BKDK	A	30.7	Y1	227
	EN	1.2		
BKIU to BKDU	A	30.7	Y1	227
	EN	1.2		
BKIC to BKDC	A	30.6	Y1	227
	EN	1.2		
BKI3 to BKD3	A	35.7	Y1	227
	EN	1.2		
BKI1 to BKD1	A	35.7	Y1	227
	EN	1.2		
BKI5 to BKD5	A	35.6	Y1	227
	EN	1.2		
BKIF to BKDF	A	35.6	Y1	227
	EN	1.2		

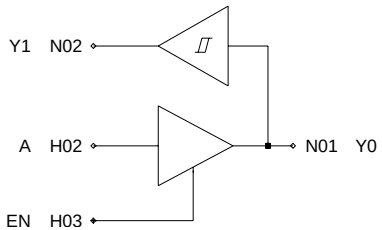
Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BKIX	A → Y0	(HH)	1.597	2.613	4.430				0.081	0.128	0.204
		(LL)	2.916	4.254	6.601				0.144	0.209	0.322
	EN → Y0	(HZ)	0.563	0.869	1.372						
		(LZ)	0.349	0.529	0.820						
		(ZH)	1.586	2.597	4.217				0.077	0.125	0.204
		(ZL)	2.986	4.351	6.629				0.143	0.209	0.322
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BKDX	A → Y0	(HH)	1.597	2.613	4.430				0.081	0.128	0.204
		(LL)	2.916	4.254	6.601				0.144	0.209	0.322
	EN → Y0	(HZ)	0.563	0.869	1.372						
		(LZ)	0.349	0.529	0.820						
		(ZH)	1.586	2.597	4.217				0.077	0.125	0.204
		(ZL)	2.986	4.351	6.629				0.143	0.209	0.322
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BKIK	A → Y0	(HH)	1.445	2.337	3.872				0.077	0.122	0.195
		(LL)	1.958	2.921	4.529				0.108	0.160	0.242
	EN → Y0	(HZ)	0.563	0.869	1.372						
		(LZ)	0.349	0.528	0.821						
		(ZH)	1.491	2.419	3.890				0.074	0.119	0.192
		(ZL)	2.085	3.108	4.724				0.108	0.159	0.242
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BKDK	A → Y0	(HH)	1.445	2.337	3.872				0.077	0.122	0.195
		(LL)	1.958	2.921	4.529				0.108	0.160	0.242
	EN → Y0	(HZ)	0.563	0.869	1.372						
		(LZ)	0.349	0.528	0.821						
		(ZH)	1.491	2.419	3.890				0.074	0.119	0.192
		(ZL)	2.085	3.108	4.724				0.108	0.159	0.242
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BKIU	A → Y0	(HH)	1.484	2.413	3.982				0.077	0.121	0.189
		(LL)	1.688	2.430	3.560				0.093	0.132	0.189
	EN → Y0	(HZ)	0.562	0.869	1.374						
		(LZ)	0.349	0.529	0.820						
		(ZH)	1.493	2.427	3.895				0.073	0.117	0.187
		(ZL)	1.830	2.638	3.826				0.094	0.133	0.191
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BKDU	A → Y0	(HH)	1.484	2.413	3.982				0.077	0.121	0.189
		(LL)	1.688	2.430	3.560				0.093	0.132	0.189
	EN → Y0	(HZ)	0.562	0.869	1.374						
		(LZ)	0.349	0.529	0.820						
		(ZH)	1.493	2.427	3.895				0.073	0.117	0.187
		(ZL)	1.830	2.638	3.826				0.094	0.133	0.191
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BKIC	A → Y0	(HH)	0.727	1.179	1.993				0.028	0.043	0.067
		(LL)	0.897	1.378	2.143				0.033	0.046	0.066
	EN → Y0	(HZ)	1.016	1.466	2.292						
		(LZ)	0.537	0.811	1.268						
		(ZH)	1.092	1.733	2.798				0.026	0.042	0.066
		(ZL)	1.203	1.789	2.759				0.033	0.046	0.065
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BKDC	A → Y0	(HH)	0.727	1.179	1.993				0.028	0.043	0.067
		(LL)	0.897	1.378	2.143				0.033	0.046	0.066
	EN → Y0	(HZ)	1.016	1.466	2.292						
		(LZ)	0.537	0.811	1.268						
		(ZH)	1.092	1.733	2.798				0.026	0.042	0.066
		(ZL)	1.203	1.789	2.759				0.033	0.046	0.065
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BKI3	A → Y0	(HH)	0.703	1.145	1.937				0.028	0.043	0.067
		(LL)	0.868	1.321	2.047				0.032	0.045	0.064
	EN → Y0	(HZ)	0.999	1.445	2.265						
		(LZ)	0.531	0.802	1.256						
		(ZH)	1.072	1.703	2.741				0.027	0.042	0.066
		(ZL)	1.207	1.786	2.746				0.032	0.045	0.064
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BKD3	A → Y0	(HH)	0.703	1.145	1.937				0.028	0.043	0.067
		(LL)	0.868	1.321	2.047				0.032	0.045	0.064
	EN → Y0	(HZ)	0.999	1.445	2.265						
		(LZ)	0.531	0.802	1.256						
		(ZH)	1.072	1.703	2.741				0.027	0.042	0.066
		(ZL)	1.207	1.786	2.746				0.032	0.045	0.064
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BKI1	A → Y0	(HH)	0.507	0.839	1.444				0.011	0.017	0.027
		(LL)	0.762	1.162	1.818				0.015	0.020	0.029
	EN → Y0	(HZ)	1.320	1.902	2.977						
		(LZ)	0.613	0.922	1.448						
		(ZH)	0.949	1.508	2.455				0.011	0.017	0.027
		(ZL)	1.162	1.740	2.702				0.015	0.020	0.029
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BKD1	A → Y0	(HH)	0.507	0.839	1.444				0.011	0.017	0.027
		(LL)	0.762	1.162	1.818				0.015	0.020	0.029
	EN → Y0	(HZ)	1.320	1.902	2.977						
		(LZ)	0.613	0.922	1.448						
		(ZH)	0.949	1.508	2.455				0.011	0.017	0.027
		(ZL)	1.162	1.740	2.702				0.015	0.020	0.029
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BKI5	A → Y0	(HH)	0.520	0.856	1.469				0.011	0.017	0.027
		(LL)	0.769	1.182	1.851				0.013	0.018	0.025
	EN → Y0	(HZ)	1.343	1.933	3.017						
		(LZ)	0.678	1.017	1.597						
		(ZH)	0.958	1.522	2.477				0.011	0.017	0.027
		(ZL)	1.166	1.748	2.721				0.013	0.018	0.025
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BKD5	A → Y0	(HH)	0.520	0.856	1.469				0.011	0.017	0.027
		(LL)	0.769	1.182	1.851				0.013	0.018	0.025
	EN → Y0	(HZ)	1.343	1.933	3.017						
		(LZ)	0.678	1.017	1.597						
		(ZH)	0.958	1.522	2.477				0.011	0.017	0.027
		(ZL)	1.166	1.748	2.721				0.013	0.018	0.025
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BKIF	A → Y0	(HH)	0.542	0.874	1.487				0.011	0.017	0.027
		(LL)	0.772	1.194	1.885				0.012	0.016	0.023
	EN → Y0	(HZ)	1.343	1.935	3.015						
		(LZ)	0.756	1.129	1.776						
		(ZH)	0.958	1.522	2.477				0.011	0.017	0.027
		(ZL)	1.169	1.755	2.722				0.012	0.016	0.023
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BKDF	A → Y0	(HH)	0.542	0.874	1.487				0.011	0.017	0.027
		(LL)	0.772	1.194	1.885				0.012	0.016	0.023
	EN → Y0	(HZ)	1.343	1.935	3.015						
		(LZ)	0.756	1.129	1.776						
		(ZH)	0.958	1.522	2.477				0.011	0.017	0.027
		(ZL)	1.169	1.755	2.722				0.012	0.016	0.023
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			

Function	Low-noise Schmitt I/O Buffer					TTL 5V
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA						
6mA						
9mA						
12mA	BZI1	BZD1			1	39
18mA	BZI5	BZD5			1	39
24mA	BZIF	BZDF			1	39

Logic Diagram



Truth Table

A	EN	Y0
0	1	0
1	1	1
X	0	Z

X:Irrelevant

Z:High Impedance

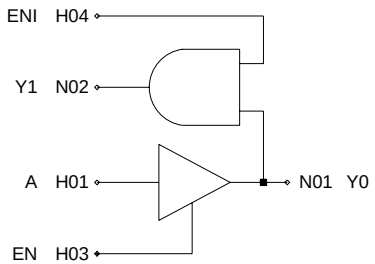
Y0	Y1
0	0
1	1

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
BZI1 to BZD1	A	18.2	Y1	227
	EN	8.7		
BZI5 to BZD5	A	18.2	Y1	227
	EN	8.7		
BZIF to BZDF	A	18.0	Y1	227
	EN	8.7		

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BZI1	A → Y0	(HH)	1.467	2.509	4.524				0.014	0.023	0.037
		(LL)	1.697	2.818	4.564				0.019	0.027	0.039
	EN → Y0	(HZ)	2.550	3.483	5.320						
		(LZ)	1.957	2.893	4.614						
		(ZH)	1.273	2.268	4.106				0.015	0.023	0.040
		(ZL)	1.725	2.913	4.682				0.019	0.028	0.040
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BZD1	A → Y0	(HH)	1.467	2.509	4.524				0.014	0.023	0.037
		(LL)	1.697	2.818	4.564				0.019	0.027	0.039
	EN → Y0	(HZ)	2.550	3.483	5.320						
		(LZ)	1.957	2.893	4.614						
		(ZH)	1.273	2.268	4.106				0.015	0.023	0.040
		(ZL)	1.725	2.913	4.682				0.019	0.028	0.040
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BZI5	A → Y0	(HH)	1.498	2.571	4.640				0.015	0.023	0.038
		(LL)	1.784	3.007	4.901				0.018	0.025	0.037
	EN → Y0	(HZ)	2.625	3.586	5.463						
		(LZ)	2.379	3.523	5.624						
		(ZH)	1.305	2.329	4.218				0.015	0.024	0.040
		(ZL)	1.810	3.088	5.009				0.018	0.025	0.037
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BZD5	A → Y0	(HH)	1.498	2.571	4.640				0.015	0.023	0.038
		(LL)	1.784	3.007	4.901				0.018	0.025	0.037
	EN → Y0	(HZ)	2.625	3.586	5.463						
		(LZ)	2.379	3.523	5.624						
		(ZH)	1.305	2.329	4.218				0.015	0.024	0.040
		(ZL)	1.810	3.088	5.009				0.018	0.025	0.037
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BZIF	A → Y0	(HH)	1.506	2.572	4.641				0.015	0.023	0.038
		(LL)	1.851	3.151	5.161				0.016	0.023	0.035
	EN → Y0	(HZ)	2.619	3.586	5.463						
		(LZ)	2.870	4.281	6.862						
		(ZH)	1.305	2.328	4.217				0.015	0.024	0.040
		(ZL)	1.858	3.213	5.246				0.016	0.023	0.035
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BZDF	A → Y0	(HH)	1.506	2.572	4.641				0.015	0.023	0.038
		(LL)	1.851	3.151	5.161				0.016	0.023	0.035
	EN → Y0	(HZ)	2.619	3.586	5.463						
		(LZ)	2.870	4.281	6.862						
		(ZH)	1.305	2.328	4.217				0.015	0.024	0.040
		(ZL)	1.858	3.213	5.246				0.016	0.023	0.035
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			

Function	I/O Buffer with EN(AND)					TTL 5V
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA	BNXV35	BNYV35			1	48
6mA	BNXD35	BNYD35			1	48
9mA	BNX435	BNY435			1	50
12mA	BNX235	BNY235			1	50
18mA	BNX635	BNY635			1	50
24mA	BNXG35	BNYG35			1	50

Logic Diagram



Truth Table

A	EN	Y0
0	1	0
1	1	1
X	0	Z

X:Irrelevant

Z:High Impedance

Y0	ENI	Y1
0	0	0
0	1	0
1	0	0
1	1	1

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
BNXV35 to BNYV35	A	30.7	Y1	354
	EN	1.2		
	ENI	3.6		
BNXD35 to BNYD35	A	30.6	Y1	354
	EN	1.2		
	ENI	3.6		
BNX435 to BNY435	A	35.7	Y1	354
	EN	1.2		
	ENI	3.6		
BNX235 to BNY235	A	35.7	Y1	354
	EN	1.2		
	ENI	3.6		
BNX635 to BNY635	A	35.6	Y1	354
	EN	1.2		
	ENI	3.6		
BNXG35 to BNYG35	A	35.6	Y1	354
	EN	1.2		
	ENI	3.6		

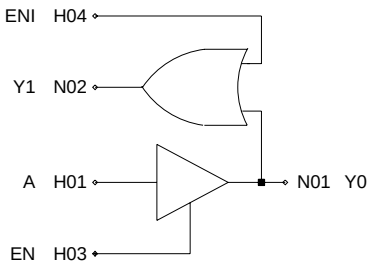
Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BNXV35	A → Y0	(HH)	1.484	2.413	3.982				0.077	0.121	0.189
		(LL)	1.688	2.430	3.560				0.093	0.132	0.189
	EN → Y0	(HZ)	0.562	0.869	1.374						
		(LZ)	0.349	0.529	0.820						
		(ZH)	1.493	2.427	3.895				0.073	0.117	0.187
		(ZL)	1.830	2.638	3.826				0.094	0.133	0.191
	ENI → Y1	(HH)	0.155	0.233	0.362	0.001	0.002	0.004			
		(LL)	0.215	0.324	0.492	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.192	0.292	0.473	0.001	0.002	0.004			
		(LL)	0.234	0.358	0.555	0.002	0.003	0.005			
BNYV35	A → Y0	(HH)	1.484	2.413	3.982				0.077	0.121	0.189
		(LL)	1.688	2.430	3.560				0.093	0.132	0.189
	EN → Y0	(HZ)	0.562	0.869	1.374						
		(LZ)	0.349	0.529	0.820						
		(ZH)	1.493	2.427	3.895				0.073	0.117	0.187
		(ZL)	1.830	2.638	3.826				0.094	0.133	0.191
	ENI → Y1	(HH)	0.155	0.233	0.362	0.001	0.002	0.004			
		(LL)	0.215	0.324	0.492	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.192	0.292	0.473	0.001	0.002	0.004			
		(LL)	0.234	0.358	0.555	0.002	0.003	0.005			
BNXD35	A → Y0	(HH)	0.727	1.179	1.993				0.028	0.043	0.067
		(LL)	0.897	1.378	2.143				0.033	0.046	0.066
	EN → Y0	(HZ)	1.016	1.466	2.292						
		(LZ)	0.537	0.811	1.268						
		(ZH)	1.092	1.733	2.798				0.026	0.042	0.066
		(ZL)	1.203	1.789	2.759				0.033	0.046	0.065
	ENI → Y1	(HH)	0.155	0.233	0.362	0.001	0.002	0.004			
		(LL)	0.215	0.324	0.492	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.192	0.292	0.473	0.001	0.002	0.004			
		(LL)	0.234	0.358	0.555	0.002	0.003	0.005			
BNYD35	A → Y0	(HH)	0.727	1.179	1.993				0.028	0.043	0.067
		(LL)	0.897	1.378	2.143				0.033	0.046	0.066
	EN → Y0	(HZ)	1.016	1.466	2.292						
		(LZ)	0.537	0.811	1.268						
		(ZH)	1.092	1.733	2.798				0.026	0.042	0.066
		(ZL)	1.203	1.789	2.759				0.033	0.046	0.065
	ENI → Y1	(HH)	0.155	0.233	0.362	0.001	0.002	0.004			
		(LL)	0.215	0.324	0.492	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.192	0.292	0.473	0.001	0.002	0.004			
		(LL)	0.234	0.358	0.555	0.002	0.003	0.005			
BNX435	A → Y0	(HH)	0.703	1.145	1.937				0.028	0.043	0.067
		(LL)	0.868	1.321	2.047				0.032	0.045	0.064
	EN → Y0	(HZ)	0.999	1.445	2.265						
		(LZ)	0.531	0.802	1.256						
		(ZH)	1.072	1.703	2.741				0.027	0.042	0.066
		(ZL)	1.207	1.786	2.746				0.032	0.045	0.064
	ENI → Y1	(HH)	0.155	0.233	0.362	0.001	0.002	0.004			
		(LL)	0.215	0.324	0.492	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.192	0.292	0.473	0.001	0.002	0.004			
		(LL)	0.234	0.358	0.555	0.002	0.003	0.005			
BNY435	A → Y0	(HH)	0.703	1.145	1.937				0.028	0.043	0.067
		(LL)	0.868	1.321	2.047				0.032	0.045	0.064
	EN → Y0	(HZ)	0.999	1.445	2.265						
		(LZ)	0.531	0.802	1.256						
		(ZH)	1.072	1.703	2.741				0.027	0.042	0.066
		(ZL)	1.207	1.786	2.746				0.032	0.045	0.064

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
	ENI → Y1	(HH)	0.155	0.233	0.362	0.001	0.002	0.004			
		(LL)	0.215	0.324	0.492	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.192	0.292	0.473	0.001	0.002	0.004			
		(LL)	0.234	0.358	0.555	0.002	0.003	0.005			
BNX235	A → Y0	(HH)	0.507	0.839	1.444				0.011	0.017	0.027
		(LL)	0.762	1.162	1.818				0.015	0.020	0.029
	EN → Y0	(HZ)	1.320	1.902	2.977						
		(LZ)	0.613	0.922	1.448						
		(ZH)	0.949	1.508	2.455				0.011	0.017	0.027
		(ZL)	1.162	1.740	2.702				0.015	0.020	0.029
	ENI → Y1	(HH)	0.155	0.233	0.362	0.001	0.002	0.004			
		(LL)	0.215	0.324	0.492	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.192	0.292	0.473	0.001	0.002	0.004			
		(LL)	0.234	0.358	0.555	0.002	0.003	0.005			
BNY235	A → Y0	(HH)	0.507	0.839	1.444				0.011	0.017	0.027
		(LL)	0.762	1.162	1.818				0.015	0.020	0.029
	EN → Y0	(HZ)	1.320	1.902	2.977						
		(LZ)	0.613	0.922	1.448						
		(ZH)	0.949	1.508	2.455				0.011	0.017	0.027
		(ZL)	1.162	1.740	2.702				0.015	0.020	0.029
	ENI → Y1	(HH)	0.155	0.233	0.362	0.001	0.002	0.004			
		(LL)	0.215	0.324	0.492	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.192	0.292	0.473	0.001	0.002	0.004			
		(LL)	0.234	0.358	0.555	0.002	0.003	0.005			
BNX635	A → Y0	(HH)	0.520	0.856	1.469				0.011	0.017	0.027
		(LL)	0.769	1.182	1.851				0.013	0.018	0.025
	EN → Y0	(HZ)	1.343	1.933	3.017						
		(LZ)	0.678	1.017	1.597						
		(ZH)	0.958	1.522	2.477				0.011	0.017	0.027
		(ZL)	1.166	1.748	2.721				0.013	0.018	0.025
	ENI → Y1	(HH)	0.155	0.233	0.362	0.001	0.002	0.004			
		(LL)	0.215	0.324	0.492	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.192	0.292	0.473	0.001	0.002	0.004			
		(LL)	0.234	0.358	0.555	0.002	0.003	0.005			
BNY635	A → Y0	(HH)	0.520	0.856	1.469				0.011	0.017	0.027
		(LL)	0.769	1.182	1.851				0.013	0.018	0.025
	EN → Y0	(HZ)	1.343	1.933	3.017						
		(LZ)	0.678	1.017	1.597						
		(ZH)	0.958	1.522	2.477				0.011	0.017	0.027
		(ZL)	1.166	1.748	2.721				0.013	0.018	0.025
	ENI → Y1	(HH)	0.155	0.233	0.362	0.001	0.002	0.004			
		(LL)	0.215	0.324	0.492	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.192	0.292	0.473	0.001	0.002	0.004			
		(LL)	0.234	0.358	0.555	0.002	0.003	0.005			
BNXG35	A → Y0	(HH)	0.542	0.874	1.487				0.011	0.017	0.027
		(LL)	0.772	1.194	1.885				0.012	0.016	0.023
	EN → Y0	(HZ)	1.343	1.935	3.015						
		(LZ)	0.756	1.129	1.776						
		(ZH)	0.958	1.522	2.477				0.011	0.017	0.027
		(ZL)	1.169	1.755	2.722				0.012	0.016	0.023
	ENI → Y1	(HH)	0.155	0.233	0.362	0.001	0.002	0.004			
		(LL)	0.215	0.324	0.492	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.192	0.292	0.473	0.001	0.002	0.004			
		(LL)	0.234	0.358	0.555	0.002	0.003	0.005			

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BNYG35	A → Y0	(HH)	0.542	0.874	1.487				0.011	0.017	0.027
		(LL)	0.772	1.194	1.885				0.012	0.016	0.023
	EN → Y0	(HZ)	1.343	1.935	3.015						
		(LZ)	0.756	1.129	1.776						
		(ZH)	0.958	1.522	2.477				0.011	0.017	0.027
		(ZL)	1.169	1.755	2.722				0.012	0.016	0.023
	ENI → Y1	(HH)	0.155	0.233	0.362	0.001	0.002	0.004			
		(LL)	0.215	0.324	0.492	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.192	0.292	0.473	0.001	0.002	0.004			
		(LL)	0.234	0.358	0.555	0.002	0.003	0.005			

Function	I/O Buffer with EN(OR)					**TTL 5V**
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA	BNMV35	BNVV35			1	48
6mA	BNMD35	BNVD35			1	48
9mA	BNM435	BNV435			1	50
12mA	BNM235	BNV235			1	50
18mA	BNM635	BNV635			1	50
24mA	BNMG35	BNVG35			1	50

Logic Diagram



Truth Table

A	EN	Y0
0	1	0
1	1	1
X	0	Z

X:Irrelevant

Z:High Impedance

Y0	ENI	Y1
0	0	0
0	1	1
1	0	1
1	1	1

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
BNMV35 to BNVV35	A	30.7	Y1	349
	EN	1.2		
	ENI	3.6		
BNMD35 to BNVD35	A	30.6	Y1	349
	EN	1.2		
	ENI	3.6		
BNM435 to BNV435	A	35.7	Y1	349
	EN	1.2		
	ENI	3.6		
BNM235 to BNV235	A	35.7	Y1	349
	EN	1.2		
	ENI	3.6		
BNM635 to BNV635	A	35.6	Y1	349
	EN	1.2		
	ENI	3.6		
BNMG35 to BNVG35	A	35.6	Y1	349
	EN	1.2		
	ENI	3.6		

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BNMV35	A → Y0	(HH)	1.484	2.413	3.982				0.077	0.121	0.189
		(LL)	1.688	2.430	3.560				0.093	0.132	0.189
	EN → Y0	(HZ)	0.562	0.869	1.374						
		(LZ)	0.349	0.529	0.820						
		(ZH)	1.493	2.427	3.895				0.073	0.117	0.187
		(ZL)	1.830	2.638	3.826				0.094	0.133	0.191
	ENI → Y1	(HH)	0.131	0.194	0.274	0.001	0.002	0.003			
		(LL)	0.314	0.490	0.774	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.160	0.245	0.385	0.001	0.002	0.003			
		(LL)	0.340	0.533	0.848	0.002	0.003	0.005			
BNVV35	A → Y0	(HH)	1.484	2.413	3.982				0.077	0.121	0.189
		(LL)	1.688	2.430	3.560				0.093	0.132	0.189
	EN → Y0	(HZ)	0.562	0.869	1.374						
		(LZ)	0.349	0.529	0.820						
		(ZH)	1.493	2.427	3.895				0.073	0.117	0.187
		(ZL)	1.830	2.638	3.826				0.094	0.133	0.191
	ENI → Y1	(HH)	0.131	0.194	0.274	0.001	0.002	0.003			
		(LL)	0.314	0.490	0.774	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.160	0.245	0.385	0.001	0.002	0.003			
		(LL)	0.340	0.533	0.848	0.002	0.003	0.005			
BNMD35	A → Y0	(HH)	0.727	1.179	1.993				0.028	0.043	0.067
		(LL)	0.897	1.378	2.143				0.033	0.046	0.066
	EN → Y0	(HZ)	1.016	1.466	2.292						
		(LZ)	0.537	0.811	1.268						
		(ZH)	1.092	1.733	2.798				0.026	0.042	0.066
		(ZL)	1.203	1.789	2.759				0.033	0.046	0.065
	ENI → Y1	(HH)	0.131	0.194	0.274	0.001	0.002	0.003			
		(LL)	0.314	0.490	0.774	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.160	0.245	0.385	0.001	0.002	0.003			
		(LL)	0.340	0.533	0.848	0.002	0.003	0.005			
BNVD35	A → Y0	(HH)	0.727	1.179	1.993				0.028	0.043	0.067
		(LL)	0.897	1.378	2.143				0.033	0.046	0.066
	EN → Y0	(HZ)	1.016	1.466	2.292						
		(LZ)	0.537	0.811	1.268						
		(ZH)	1.092	1.733	2.798				0.026	0.042	0.066
		(ZL)	1.203	1.789	2.759				0.033	0.046	0.065
	ENI → Y1	(HH)	0.131	0.194	0.274	0.001	0.002	0.003			
		(LL)	0.314	0.490	0.774	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.160	0.245	0.385	0.001	0.002	0.003			
		(LL)	0.340	0.533	0.848	0.002	0.003	0.005			
BNM435	A → Y0	(HH)	0.703	1.145	1.937				0.028	0.043	0.067
		(LL)	0.868	1.321	2.047				0.032	0.045	0.064
	EN → Y0	(HZ)	0.999	1.445	2.265						
		(LZ)	0.531	0.802	1.256						
		(ZH)	1.072	1.703	2.741				0.027	0.042	0.066
		(ZL)	1.207	1.786	2.746				0.032	0.045	0.064
	ENI → Y1	(HH)	0.131	0.194	0.274	0.001	0.002	0.003			
		(LL)	0.314	0.490	0.774	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.160	0.245	0.385	0.001	0.002	0.003			
		(LL)	0.340	0.533	0.848	0.002	0.003	0.005			
BNV435	A → Y0	(HH)	0.703	1.145	1.937				0.028	0.043	0.067
		(LL)	0.868	1.321	2.047				0.032	0.045	0.064
	EN → Y0	(HZ)	0.999	1.445	2.265						
		(LZ)	0.531	0.802	1.256						
		(ZH)	1.072	1.703	2.741				0.027	0.042	0.066
		(ZL)	1.207	1.786	2.746				0.032	0.045	0.064

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
	ENI → Y1	(HH)	0.131	0.194	0.274	0.001	0.002	0.003			
		(LL)	0.314	0.490	0.774	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.160	0.245	0.385	0.001	0.002	0.003			
		(LL)	0.340	0.533	0.848	0.002	0.003	0.005			
BNM235	A → Y0	(HH)	0.507	0.839	1.444				0.011	0.017	0.027
		(LL)	0.762	1.162	1.818				0.015	0.020	0.029
	EN → Y0	(HZ)	1.320	1.902	2.977						
		(LZ)	0.613	0.922	1.448						
		(ZH)	0.949	1.508	2.455				0.011	0.017	0.027
		(ZL)	1.162	1.740	2.702				0.015	0.020	0.029
	ENI → Y1	(HH)	0.131	0.194	0.274	0.001	0.002	0.003			
		(LL)	0.314	0.490	0.774	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.160	0.245	0.385	0.001	0.002	0.003			
		(LL)	0.340	0.533	0.848	0.002	0.003	0.005			
BNV235	A → Y0	(HH)	0.507	0.839	1.444				0.011	0.017	0.027
		(LL)	0.762	1.162	1.818				0.015	0.020	0.029
	EN → Y0	(HZ)	1.320	1.902	2.977						
		(LZ)	0.613	0.922	1.448						
		(ZH)	0.949	1.508	2.455				0.011	0.017	0.027
		(ZL)	1.162	1.740	2.702				0.015	0.020	0.029
	ENI → Y1	(HH)	0.131	0.194	0.274	0.001	0.002	0.003			
		(LL)	0.314	0.490	0.774	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.160	0.245	0.385	0.001	0.002	0.003			
		(LL)	0.340	0.533	0.848	0.002	0.003	0.005			
BNM635	A → Y0	(HH)	0.520	0.856	1.469				0.011	0.017	0.027
		(LL)	0.769	1.182	1.851				0.013	0.018	0.025
	EN → Y0	(HZ)	1.343	1.933	3.017						
		(LZ)	0.678	1.017	1.597						
		(ZH)	0.958	1.522	2.477				0.011	0.017	0.027
		(ZL)	1.166	1.748	2.721				0.013	0.018	0.025
	ENI → Y1	(HH)	0.131	0.194	0.274	0.001	0.002	0.003			
		(LL)	0.314	0.490	0.774	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.160	0.245	0.385	0.001	0.002	0.003			
		(LL)	0.340	0.533	0.848	0.002	0.003	0.005			
BNV635	A → Y0	(HH)	0.520	0.856	1.469				0.011	0.017	0.027
		(LL)	0.769	1.182	1.851				0.013	0.018	0.025
	EN → Y0	(HZ)	1.343	1.933	3.017						
		(LZ)	0.678	1.017	1.597						
		(ZH)	0.958	1.522	2.477				0.011	0.017	0.027
		(ZL)	1.166	1.748	2.721				0.013	0.018	0.025
	ENI → Y1	(HH)	0.131	0.194	0.274	0.001	0.002	0.003			
		(LL)	0.314	0.490	0.774	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.160	0.245	0.385	0.001	0.002	0.003			
		(LL)	0.340	0.533	0.848	0.002	0.003	0.005			
BNMG35	A → Y0	(HH)	0.542	0.874	1.487				0.011	0.017	0.027
		(LL)	0.772	1.194	1.885				0.012	0.016	0.023
	EN → Y0	(HZ)	1.343	1.935	3.015						
		(LZ)	0.756	1.129	1.776						
		(ZH)	0.958	1.522	2.477				0.011	0.017	0.027
		(ZL)	1.169	1.755	2.722				0.012	0.016	0.023
	ENI → Y1	(HH)	0.131	0.194	0.274	0.001	0.002	0.003			
		(LL)	0.314	0.490	0.774	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.160	0.245	0.385	0.001	0.002	0.003			
		(LL)	0.340	0.533	0.848	0.002	0.003	0.005			

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BNVG35	A → Y0	(HH)	0.542	0.874	1.487				0.011	0.017	0.027
		(LL)	0.772	1.194	1.885				0.012	0.016	0.023
	EN → Y0	(HZ)	1.343	1.935	3.015						
		(LZ)	0.756	1.129	1.776						
		(ZH)	0.958	1.522	2.477				0.011	0.017	0.027
		(ZL)	1.169	1.755	2.722				0.012	0.016	0.023
	ENI → Y1	(HH)	0.131	0.194	0.274	0.001	0.002	0.003			
		(LL)	0.314	0.490	0.774	0.002	0.003	0.005			
	Y0 → Y1	(HH)	0.160	0.245	0.385	0.001	0.002	0.003			
		(LL)	0.340	0.533	0.848	0.002	0.003	0.005			

[MEMO]

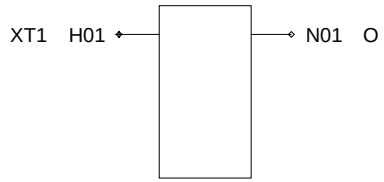
[MEMO]

1.3 Oscillator

[MEMO]

Function	Oscillator Input Buffer				
Block type					
Function				I/O cells	int. cells
Normal	OSI1			1	0
Oscillation stop function					
–					

Logic Diagram



Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
OSI1	XT1	-	O	29

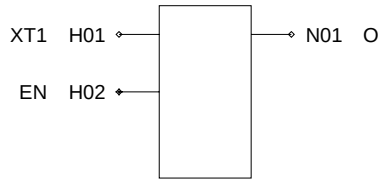
Truth Table

XT1	O
0	0
1	1

Block type	Switching speed								
	Path	t_{LD0} (ns)			t_1			T		
	IN → OUT	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
OSI1	XT1 → O (HH)	0.010	0.010	0.010	0.000	0.000	0.000			
	(LL)	0.010	0.010	0.010	0.001	0.001	0.001			

Function	Oscillator Input Buffer for Enable				
Block type					
Function				I/O cells	int. cells
Normal					
Oscillation stop function	OSI2			1	0
–					

Logic Diagram



Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
OSI2	XT1	-	O	29
	EN	1.0		

Truth Table

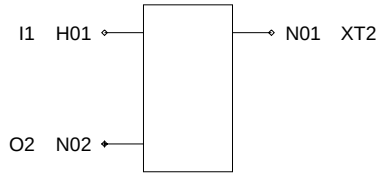
XT1	EN	O	
0	0	0	
1	0	1	
1	1	1	
0	1	X	← Prohibition

X:Irrelevant

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
OSI2	XT1 → O	(HH)	0.010	0.010	0.010	0.000	0.000	0.000			
		(LL)	0.010	0.010	0.010	0.001	0.001	0.001			

Function	Oscillator Output Buffer(Internal Feedback Resistor)				
Block type					
Function	MHz range	kHz range		I/O cells	int. cells
External feedback Resistor					
Internal feedback Resistor	OSO1			1	0
Internal feedback Resistor Oscillation stop function					

Logic Diagram



Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
OSO1	I1	1.0	XT2	-
			O2	358

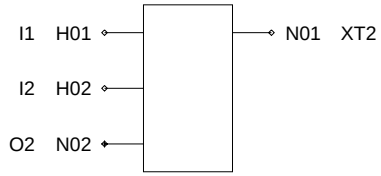
Truth Table

I1	XT2	O2
0	1	1
1	0	0

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
OSO1	I1 → XT2	(HL)	0.010	0.010	0.010				0.001	0.001	0.001
		(LH)	0.010	0.010	0.010				0.001	0.001	0.001
	I1 → O2	(HL)	9.631	19.858	19.858	0.001	0.004	0.004			
		(LH)	7.982	19.882	19.882	0.001	0.003	0.003			

Function	Oscillator Output Buffer(for OSF Type)				
Block type					
Function	MHz range	kHz range		I/O cells	int. cells
External feedback Resistor	OSO3			1	0
Internal feedback Resistor					
Internal feedback Resistor Oscillation stop function					

Logic Diagram



Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
OSO3	I1	1.0	XT2	-
	I2	1.0	O2	358

Truth Table

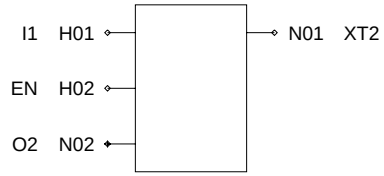
I1	I2	XT2	O2
0	0	1	1
1	0	0	0
X	1	0	0

X:Irrelevant

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
OSO3	I1 → XT2	(HL)	0.010	0.010	0.010				0.001	0.001	0.001
		(LH)	0.010	0.010	0.010				0.001	0.001	0.001
	I1 → O2	(HL)	9.631	19.858	19.858	0.001	0.004	0.004			
		(LH)	7.982	19.882	19.882	0.001	0.003	0.003			

Function	Oscillator Output Buffer(for Enable Type)				
Block type					
Function	MHz range	kHz range		I/O cells	int. cells
External feedback Resistor					
Internal feedback Resistor					
Internal feedback Resistor Oscillation stop function	OSO7			1	0

Logic Diagram



Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
OSO7	I1	1.0	XT2	-
	EN	1.0	O2	358

Truth Table

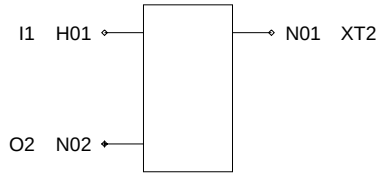
I1	EN	XT2	O2	
0	0	1	1	
1	0	0	0	
1	1	0	0	
0	1	X	X	← Prohibition

X:Irrelevant

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
OSO7	I1 → XT2	(HL)	0.010	0.010	0.010				0.001	0.001	0.001
		(LH)	0.010	0.010	0.010				0.001	0.001	0.001
	I1 → O2	(HL)	9.631	19.858	19.858	0.001	0.004	0.004			
		(LH)	7.982	19.882	19.882	0.001	0.003	0.003			

Function	Oscillator Output Buffer(External Feedback Resistor)				
Block type					
Function	MHz range	kHz range		I/O cells	int. cells
External feedback Resistor	OSO9			1	0
Internal feedback Resistor					
Internal feedback Resistor Oscillation stop function					

Logic Diagram



Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
OSO9	I1	1.0	XT2	-
			O2	358

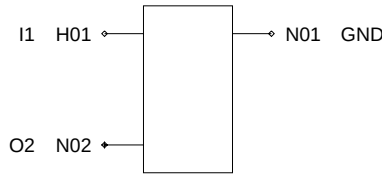
Truth Table

I1	XT2	O2
0	1	1
1	0	0

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
OSO9	I1 → XT2	(HL)	0.010	0.010	0.010				0.001	0.001	0.001
		(LH)	0.010	0.010	0.010				0.001	0.001	0.001
	I1 → O2	(HL)	9.631	19.858	19.858	0.001	0.004	0.004			
		(LH)	7.982	19.882	19.882	0.001	0.003	0.003			

Function	Feedback Resistor for Oscillator				
Block type					
Function	MHz range	kHz range		I/O cells	int. cells
External feedback Resistor					
Internal feedback Resistor	OSF1			1	0
Internal feedback Resistor Oscillation stop function					

Logic Diagram



Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
OSF1	I1	1.0	GND	-
			O2	29

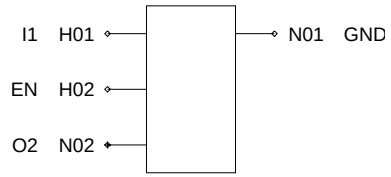
Truth Table

I1	O2
0	0
1	1

Block type	Switching speed								
	Path	t_{LD0} (ns)			t_1			T		
	IN → OUT	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
OSF1	I1 → O2 (HH)	0.010	0.010	0.010	0.000	0.000	0.000			
	(LL)	0.010	0.010	0.010	0.000	0.000	0.000			

Function	Feedback Resistor for Oscillator For Enable				
Block type					
Function	MHz range	kHz range		I/O cells	int. cells
External feedback Resistor					
Internal feedback Resistor					
Internal feedback Resistor Oscillation stop function	OSF3			1	0

Logic Diagram



Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
OSF3	I1	1.0	GND	-
	EN	1.0	O2	29

Truth Table

I1	EN	O2	
0	0	0	
1	0	1	
X	1	Z	← Prohibition

X:Irrelevant

Z:High impedance

Block type	Switching speed								
	Path	t_{LD0} (ns)			t_1			T		
	IN → OUT	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
OSF3	I1 → O2 (HH)	0.010	0.010	0.010	0.000	0.000	0.000			
	(LL)	0.010	0.010	0.010	0.000	0.000	0.000			

[MEMO]

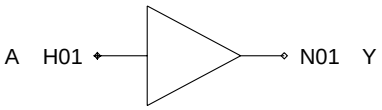
[MEMO]

1.4 PCI

[MEMO]

Function	3V PCI Input Buffer					
Block type						
Function	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
Normal	BP3I				1	7
Fail safe						
-						

Logic Diagram



Block type	Input		Output	
	Symbol	Fan-In	Symbol	Fan-Out
BP3I	A	-	Y	358

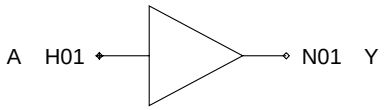
Truth Table

A	Y
1	1
0	0

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BP3I	A → Y	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			

Function	3V PCI Output Buffer					
Block type						
Function	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
Normal	BP3O				1	18
Fail safe						
-						

Logic Diagram



Block type	Input		Output	
	Symbol	Fan-In	Symbol	Fan-Out
BP3O	A	42.5	Y	-

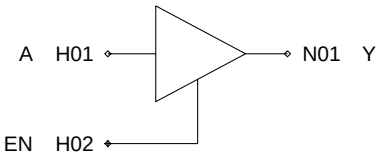
Truth Table

A	Y
1	1
0	0

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BP3O	A → Y	(HH)	0.397	0.593	0.936				0.015	0.023	0.037
		(LL)	0.277	0.436	0.671				0.013	0.019	0.028

Function	3V PCI 3-State Buffer					
Block type						
Function	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
Normal	BP3T				1	20
Fail safe						
-						

Logic Diagram



Block type	Input		Output	
	Symbol	Fan-In	Symbol	Fan-Out
BP3T	A	26.6	Y	-
	EN	11.2		

Truth Table

A	EN	Y
0	1	0
1	1	1
X	0	Z

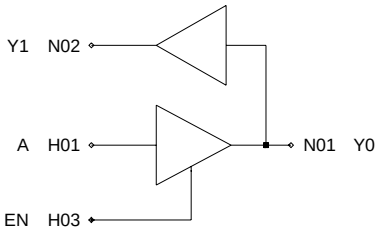
X:Irrelevant

Z:High Impedance

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BP3T	A → Y	(HH)	0.435	0.702	1.153				0.015	0.023	0.038
		(LL)	0.446	0.765	1.275				0.015	0.022	0.032
	EN → Y	(HZ)	0.571	0.777	1.173						
		(LZ)	0.522	0.779	1.215						
		(ZH)	0.401	0.615	0.992				0.015	0.023	0.037
		(ZL)	0.485	0.763	1.229				0.014	0.021	0.032

Function	3V PCI I/O Buffer					
Block type						
Function	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
Normal	BP3B				1	27
Fail safe						
-						

Logic Diagram



Block type	Input		Output	
	Symbol	Fan-In	Symbol	Fan-Out
BP3B	A	26.6	Y1	358
	EN	11.2		

Truth Table

A	EN	Y0
0	1	0
1	1	1
X	0	Z

Y0	Y1
0	0
1	1

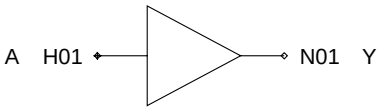
X:Irrelevant

Z:High Impedance

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BP3B	A → Y0	(HH)	0.435	0.702	1.153				0.015	0.023	0.038
		(LL)	0.446	0.765	1.275				0.015	0.022	0.032
	EN → Y0	(HZ)	0.571	0.777	1.173						
		(LZ)	0.522	0.779	1.215						
		(ZH)	0.401	0.615	0.992				0.015	0.023	0.037
		(ZL)	0.485	0.763	1.229				0.014	0.021	0.032
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			

Function	5V PCI Input Buffer					
Block type						
Function	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
Normal	BP5I				1	7
Fail safe						
-						

Logic Diagram



Block type	Input		Output	
	Symbol	Fan-In	Symbol	Fan-Out
BP5I	A	-	Y	367

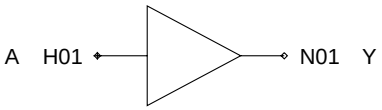
Truth Table

A	Y
1	1
0	0

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BP5I	A → Y	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			

Function	5V PCI Output Buffer					
Block type						
Function	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
Normal	BP5O				1	18
Fail safe						
-						

Logic Diagram



Block type	Input		Output	
	Symbol	Fan-In	Symbol	Fan-Out
BP5O	A	42.5	Y	-

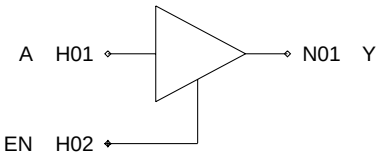
Truth Table

A	Y
1	1
0	0

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BP5O	A → Y	(HH)	0.644	0.980	1.577				0.010	0.016	0.026
		(LL)	0.374	0.584	0.916				0.007	0.010	0.015

Function	5V PCI 3-State Buffer					
Block type						
Function	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
Normal	BP5T				1	42
Fail safe						
-						

Logic Diagram



Block type	Input		Output	
	Symbol	Fan-In	Symbol	Fan-Out
BP5T	A	35.2	Y	-
	EN	1.2		

Truth Table

A	EN	Y0
0	1	0
1	1	1
X	0	Z

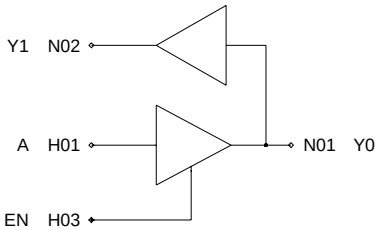
X:Irrelevant

Z:High Impedance

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BP5T	A → Y	(HH)	0.543	0.873	1.490				0.010	0.016	0.026
		(LL)	0.673	1.072	1.728				0.013	0.018	0.026
	EN → Y	(HZ)	1.323	1.913	2.995						
		(LZ)	0.743	1.116	1.759						
		(ZH)	0.962	1.533	2.499				0.010	0.016	0.026
		(ZL)	1.072	1.619	2.545				0.014	0.020	0.029

Function	5V PCI I/O Buffer					
Block type						
Function	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
Normal	BP5B				1	49
Fail safe						
-						

Logic Diagram



Block type	Input		Output	
	Symbol	Fan-In	Symbol	Fan-Out
BP5B	A	35.2	Y1	367
	EN	1.2		

Truth Table

A	EN	Y0
0	1	0
1	1	1
X	0	Z

Y0	Y1
0	0
1	1

X:Irrelevant

Z:High Impedance

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BP5B	A → Y0	(HH)	0.543	0.873	1.490				0.010	0.016	0.026
		(LL)	0.673	1.072	1.728				0.013	0.018	0.026
	EN → Y0	(HZ)	1.323	1.913	2.995						
		(LZ)	0.743	1.116	1.759						
		(ZH)	0.962	1.533	2.499				0.010	0.016	0.026
		(ZL)	1.072	1.619	2.545				0.014	0.020	0.029
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			

[MEMO]

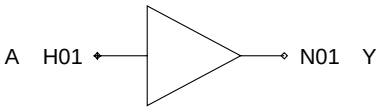
[MEMO]

1.5 High Speed Signal Transmission

[MEMO]

Function	3V GTL/GTL+/P-ECL Input Buffer for Enable Terminal					
Block type						
Function	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
Normal	FIXA		FUXA		1	56
Fail safe						
-						

Logic Diagram



Block type	Input		Output	
	Symbol	Fan-In	Symbol	Fan-Out
FIXA to FUXA	A	-	Y	1838

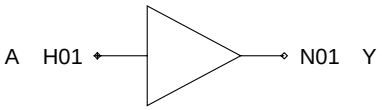
Truth Table

A	Y
0	0
1	1

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
FIXA	A → Y	(HH)	0.108	0.156	0.216	0.000	0.000	0.000			
		(LL)	0.170	0.250	0.376	0.000	0.001	0.001			
FUXA	A → Y	(HH)	0.108	0.156	0.216	0.000	0.000	0.000			
		(LL)	0.170	0.250	0.376	0.000	0.001	0.001			

Function	5V GTL/GTL+/P-ECL Input Buffer for Enable Terminal					
Block type						
Function	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
Normal	FIZA				1	56
Fail safe						
-						

Logic Diagram



Block type	Input		Output	
	Symbol	Fan-In	Symbol	Fan-Out
FIZA	A	-	Y	1826

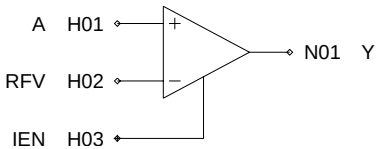
Truth Table

A	Y
0	0
1	1

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
FIZA	A → Y	(HH)	0.149	0.225	0.355	0.000	0.000	0.000			
		(LL)	0.206	0.313	0.486	0.000	0.001	0.001			

Function	GTL+ Input Buffer with EN					
Block type						
Function	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
Normal	FIR2				1	19
Fail safe						
-						

Logic Diagram



Block type	Input		Output	
	Symbol	Fan-In	Symbol	Fan-Out
FIR2	A	-	Y	167
	RFV	4.0		
	IEN	2.5		

Truth Table

A	IEN	Y
1	1	1
0	1	0
X	0	1

X:Irrelevant

RFV must be suppled referrence voltage for GTL+.

Note

H01 must be connected to external pin.

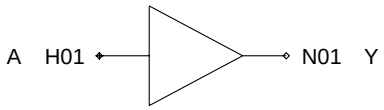
H02 must be connected to FIP2(N01).

H03 must be connected to FIXA or FUXA,FIZA(N01).

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
FIR2	A → Y	(HH)	0.486	0.862	1.502	0.002	0.004	0.006			
		(LL)	0.528	0.858	1.421	0.003	0.005	0.009			
	IEN → Y	(HL)	0.702	1.119	1.954	0.003	0.005	0.009			
		(LH)	0.324	0.542	0.890	0.002	0.004	0.006			

Function	GTL+ Input Buffer for Reference VOLTAGE					
Block type						
Function	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
Normal	FIP2				1	0
Fail safe						
-						

Logic Diagram



Block type	Input		Output	
	Symbol	Fan-In	Symbol	Fan-Out
FIP2	A	-	Y	500

Truth Table

A	Y
0	0
1	1

Note

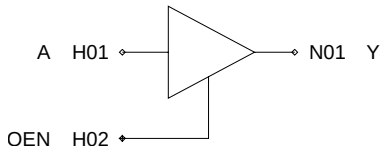
FIR2 is used with GTL+ Interface block(FIR2,BL0W).

H01 must be connected to external pin.

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
FIP2	A → Y	(HH)	0.020	0.020	0.020	0.000	0.000	0.000			
		(LL)	0.020	0.020	0.020	0.000	0.000	0.000			

Function	GTL+ Output Buffer with ENB					
Block type						
Function	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
Normal	ELTL				1	6
Fail safe						
-						

Logic Diagram



Block type	Input		Output	
	Symbol	Fan-In	Symbol	Fan-Out
ELTL	A	6.1	Y	-
	OEN	1.0		

Truth Table

A	OEN	Y
0	1	0
1	1	Z*
X	0	Z*

X:Irrelevant

Z:High Impedance

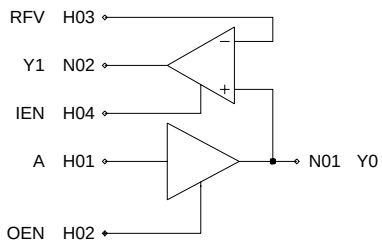
*:Open drain function connect a pull-up resistor to get a high level.

Note N01 must be connected to external pins.

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
ELTL	A → Y	(LZ)	1.525	1.754	1.592						
		(ZL)	0.529	0.956	1.854				0.007	0.011	0.018
	OEN → Y	(LZ)	1.652	2.004	2.032						
		(ZL)	0.664	1.150	2.145				0.007	0.011	0.018

Function	GTL+ I/O Buffer					
Block type						
Function	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
Normal	BL0W				1	25
Fail safe						
-						

Logic Diagram



Block type	Input		Output	
	Symbol	Fan-In	Symbol	Fan-Out
BL0W	A	6.1	Y1	167
	OEN	1.0		
	RFV	4.0		
	IEN	2.5		

Truth Table

A	OEN	Y0
0	1	0
1	1	Z*
X	0	Z*

Y0	IEN	Y1
0	1	0
1	1	1
X	0	1

X:Irrelevant

Z:High Impedance

*:Open drain function connect a pull-up resistor to get a high level.

RFV must be supplied referrence voltage GTL+

Note

N01 must be connected to external pin.

H03 must be connected to FIP2(N01).

H04 must be connected to FIXA or FUXA,FIZA(N01).

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BL0W	A → Y0	(LZ)	1.525	1.754	1.592						
		(ZL)	0.529	0.956	1.854				0.007	0.011	0.018
	OEN → Y0	(LZ)	1.652	2.004	2.032						
		(ZL)	0.664	1.150	2.145				0.007	0.011	0.018
	IEN → Y1	(HL)	0.702	1.119	1.954	0.003	0.005	0.009			
		(LH)	0.324	0.542	0.890	0.002	0.004	0.006			
	Y0 → Y1	(HH)	0.486	0.862	1.502	0.002	0.004	0.006			
		(LL)	0.528	0.858	1.421	0.003	0.005	0.009			

[MEMO]

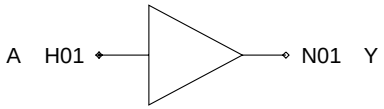
[MEMO]

1.6 PLL

[MEMO]

Function	3V Input Buffer Reference Clock					
Block type						
Function	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
Normal	FI0P				1	7
Fail safe						
-						

Logic Diagram



Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
FI0P	A	-	Y	358

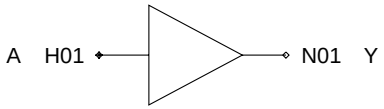
Truth Table

A	Y
1	1
0	0

Block type	Switching speed								
	Path	t_{LD0} (ns)			t_1			T		
	IN → OUT	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
FI0P	A → Y (HH)	0.113	0.162	0.227	0.001	0.002	0.003			
	(LL)	0.160	0.239	0.357	0.001	0.002	0.003			

Function	5V Input Buffer Reference Clock					
Block type						
Function	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
Normal	FI0Q				1	7
Fail safe						
-						

Logic Diagram



Truth Table

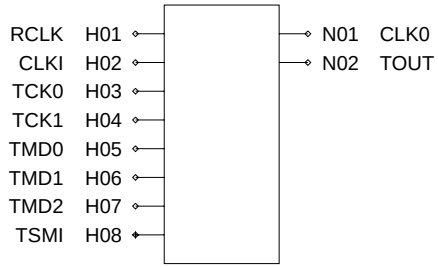
A	Y
1	1
0	0

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
FI0Q	A	-	Y	367

Block type	Switching speed								
	Path	t_{LD0} (ns)			t_1			T		
	IN → OUT	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
FI0Q	A → Y (HH)	0.141	0.211	0.325	0.001	0.002	0.003			
	(LL)	0.185	0.282	0.435	0.001	0.002	0.003			

Function	DPLL(Phase locked loop:25-80MHz)				
Block type					
Function	Phase Locked Loop	Multiple	-	-	Cells
-	F9E4				3770
-					
-					

Logic Diagram



Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
F9E4	RCLK	1.0	CLK0	53
	CLKI	1.0	TOUT	26
	TCK0	1.0		
	TCK1	1.0		
	TMD0	1.0		
	TMD1	1.0		
	TMD2	1.0		
	TSMI	1.0		

Truth Table

RCLK	CLKI	TCK0	TCK1	TMD0	TMD1	TMD2	TSM1	CLK0	TOUT	Function
A	A	X	X	0	0	0	X	A	Lock	*1
A	X	X	X	1	0	0	X	0	0	*2
A	X	X	X	0	1	0	X	A	0	*3
A	X	X	X	0	0	1	X	0	0	*4
X	X	X	1	0	1	1	X	X	X	*5

*1:PLL mode
*2:Reset mode
*3:Through Path mode
*4:Stop mode
*5:Prohibition
X:Irrelevant

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
F9E4	RCLK → CLK0	(HH)	0.010	0.010	0.010	0.003	0.008	0.008			
		(LL)	0.010	0.010	0.010	0.002	0.007	0.007			

[MEMO]

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Chapter 2

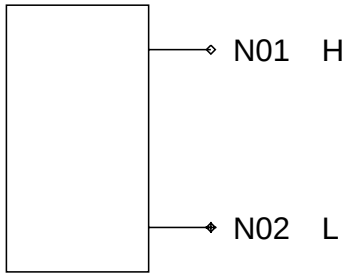
Function Block

2.1 Level Generator

[MEMO]

Function	H,L Level Generator										SSI Family	
Block type	Standard type											
	Normal		High speed									
Drivability	Name	cells	Name	cells								
-	F091	1										
-												
-												
-												

Logic Diagram



Truth Table

H	L
1	0

Block type	Switching speed							Input		Output	
	Path	t_{LD0} (ns)			t_1						
	IN → OUT	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F091										H	63
										L	63

[MEMO]

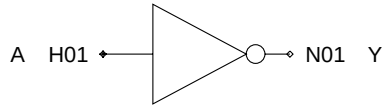
[MEMO]

2.2 Inverter, Buffer, CTS Driver, Delay Gate

[MEMO]

Function	Inverter							SSI Family					
Block type	Single output type						Multi output type						
Drivability	Name	cells					Name	cells					
Low Power	L101	1											
x1	F101	1											
x2	F102	2											
x3	F143K	3											
x4	F144K	4											
x5	F145K	5											
x6	F146K	6											
x8	F148K	12	F148P	8	F148BR	12							
x12	F14AK	21											

Logic Diagram for "Single output type"



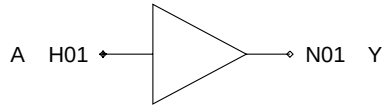
Logic Diagram for "Multi output type 1"

Logic Diagram for "Multi output type 2"

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L101	A → Y	(HL)	0.077	0.097	0.112	0.010	0.016	0.025	A	1.0	Y	35
		(LH)	0.050	0.074	0.101	0.013	0.021	0.034				
F101	A → Y	(HL)	0.069	0.086	0.100	0.005	0.008	0.013	A	2.5	Y	71
		(LH)	0.044	0.064	0.088	0.006	0.011	0.017				
F102	A → Y	(HL)	0.072	0.087	0.101	0.003	0.004	0.006	A	5.0	Y	142
		(LH)	0.046	0.069	0.091	0.003	0.005	0.008				
F143K	A → Y	(HL)	0.073	0.087	0.103	0.002	0.003	0.004	A	7.5	Y	143
		(LH)	0.045	0.066	0.091	0.002	0.003	0.006				
F144K	A → Y	(HL)	0.070	0.084	0.102	0.001	0.002	0.003	A	9.9	Y	143
		(LH)	0.045	0.068	0.090	0.002	0.003	0.004				
F145K	A → Y	(HL)	0.075	0.087	0.101	0.001	0.002	0.003	A	12.2	Y	143
		(LH)	0.046	0.065	0.091	0.001	0.002	0.003				
F146K	A → Y	(HL)	0.072	0.085	0.102	0.001	0.001	0.002	A	14.7	Y	143
		(LH)	0.046	0.065	0.091	0.001	0.002	0.003				
F148K	A → Y	(HL)	0.221	0.324	0.482	0.001	0.001	0.002	A	2.4	Y	143
		(LH)	0.200	0.309	0.477	0.001	0.001	0.002				
F148P	A → Y	(HL)	0.069	0.084	0.103	0.001	0.001	0.002	A	19.6	Y	569
		(LH)	0.046	0.068	0.090	0.001	0.001	0.002				
F148BR	A → Y	(HL)	0.223	0.328	0.487	0.001	0.001	0.002	A	2.4	Y	574
		(LH)	0.199	0.307	0.474	0.001	0.001	0.002				
F14AK	A → Y	(HL)	0.283	0.418	0.626	0.000	0.001	0.001	A	2.5	Y	143
		(LH)	0.237	0.368	0.570	0.000	0.001	0.001				

Function	Buffer												SSI Family	
Block type	Single output type						Multi output type							
Drivability	Name	cells					Name	cells						
Low Power	L111	1												
x1	F111	2												
x2	F112	3												
x3	F153K	4												
x4	F154K	5												
x5														
x6														
x8	F158K	11			F158BR	11								
x12	F15AK	20												

Logic Diagram for "Single output type"



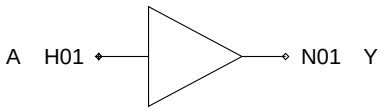
Logic Diagram for "Multi output type 1"

Logic Diagram for "Multi output type 2"

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L111	A → Y	(HH)	0.094	0.137	0.199	0.013	0.021	0.034	A	1.0	Y	36
		(LL)	0.096	0.148	0.218	0.010	0.016	0.025				
F111	A → Y	(HH)	0.091	0.132	0.189	0.006	0.010	0.017	A	2.4	Y	72
		(LL)	0.092	0.140	0.207	0.005	0.008	0.013				
F112	A → Y	(HH)	0.117	0.167	0.236	0.003	0.005	0.008	A	2.4	Y	143
		(LL)	0.120	0.182	0.268	0.003	0.004	0.006				
F153K	A → Y	(HH)	0.138	0.194	0.275	0.002	0.003	0.006	A	2.4	Y	143
		(LL)	0.146	0.219	0.327	0.002	0.003	0.004				
F154K	A → Y	(HH)	0.158	0.222	0.312	0.002	0.003	0.004	A	2.4	Y	143
		(LL)	0.167	0.251	0.379	0.001	0.002	0.003				
F158K	A → Y	(HH)	0.129	0.184	0.257	0.001	0.001	0.002	A	7.2	Y	143
		(LL)	0.135	0.203	0.301	0.001	0.001	0.002				
F158BR	A → Y	(HH)	0.128	0.182	0.255	0.001	0.001	0.002	A	7.4	Y	575
		(LL)	0.136	0.206	0.306	0.001	0.001	0.002				
F15AK	A → Y	(HH)	0.144	0.206	0.291	0.000	0.001	0.001	A	9.7	Y	143
		(LL)	0.200	0.299	0.454	0.000	0.001	0.001				

Function	CTS Driver (Inverter Type)								SSI Family			
Block type	Single type (Small scale circuit)				Standard type (Middle scale circuit)				Double type (Large scale circuit)			
Drivability	Name	cells			Name	cells			Name	cells		
x1	FC42	132							FC44	340		
x2	FC82	396							FC84	1020		
x3												
x4												
x5												
-												
-												
-												

Logic Diagram

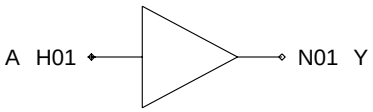


Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
FC42	A → Y	(HH)	0.426	1.046	1.068	0.000	0.000	0.000	A	9.9	Y	519
		(LL)	0.533	1.379	1.402	0.000	0.000	0.000				
FC82	A → Y	(HH)	0.349	0.604	0.897	0.000	0.000	0.000	A	2.4	Y	10120
		(LL)	0.362	0.643	0.937	0.000	0.000	0.000				
FC44	A → Y	(HH)	0.220	0.508	0.553	0.000	0.000	0.000	A	9.9	Y	14234
		(LL)	0.234	0.550	0.595	0.000	0.000	0.000				
FC84	A → Y	(HH)	0.617	1.009	1.596	0.000	0.000	0.000	A	2.4	Y	21730450
		(LL)	0.619	1.014	1.601	0.000	0.000	0.000				

Function	CTS Driver (Buffer Type)											
Block type	Single type (Small scale circuit)				Standard type (Middle scale circuit)				Double type (Large scale circuit)			
Drivability	Name	cells			Name	cells			Name	cells		
x1	FC52	100			FC53	1905			FC54	36200		
x2	FC92	143			FC93	1727			FC94	20735		
x3												
x4												
x5												
-												
-												
-												

SSI Family

Logic Diagram



Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
FC52	A → Y	(HH)	0.236	0.453	0.615	0.000	0.000	0.000	A	2.4	Y	1737
		(LL)	0.283	0.502	0.712	0.000	0.000	0.000				
FC53	A → Y	(HH)	0.384	0.768	1.010	0.000	0.000	0.000	A	2.4	Y	33012
		(LL)	0.450	0.821	1.134	0.000	0.000	0.000				
FC54	A → Y	(HH)	0.536	1.087	1.410	0.000	0.000	0.000	A	2.4	Y	627229
		(LL)	0.619	1.144	1.560	0.000	0.000	0.000				
FC92	A → Y	(HH)	0.198	0.390	0.514	0.000	0.000	0.000	A	7.4	Y	2189
		(LL)	0.243	0.442	0.605	0.000	0.000	0.000				
FC93	A → Y	(HH)	0.324	0.669	0.854	0.000	0.000	0.000	A	7.4	Y	26273
		(LL)	0.391	0.737	0.979	0.000	0.000	0.000				
FC94	A → Y	(HH)	0.455	0.954	1.201	0.000	0.000	0.000	A	7.4	Y	315280
		(LL)	0.542	1.036	1.359	0.000	0.000	0.000				

Function	Delay Gate										SSI Family	
Block type	Standard type											
	Normal		High speed									
Drivability	Name	cells	Name	cells								
-	F131	6										
-	F132	10										
-	F137	18										
-	F138	34										

Logic Diagram

Truth Table

A	Y
0	0
1	1

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F131	A → Y	(HH)	0.828	1.333	2.160	0.006	0.011	0.017	A	1.0	Y	71
		(LL)	0.749	1.203	1.990	0.005	0.009	0.014				
F132	A → Y	(HH)	1.628	2.654	4.373	0.006	0.011	0.017	A	1.0	Y	70
		(LL)	1.548	2.522	4.201	0.005	0.009	0.014				
F137	A → Y	(HH)	3.244	5.312	8.840	0.006	0.011	0.017	A	1.3	Y	70
		(LL)	3.162	5.185	8.675	0.005	0.009	0.014				
F138	A → Y	(HH)	6.460	10.613	17.741	0.006	0.011	0.017	A	1.3	Y	70
		(LL)	6.378	10.486	17.575	0.005	0.009	0.014				

[MEMO]

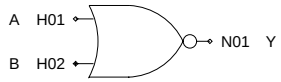
[MEMO]

2.3 OR(NOR), AND(NAND)

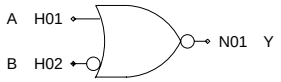
[MEMO]

Function	2-Input NOR										SSI Family	
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power	L202	1	L202N1	2								
x1	F202	2	F202N1	3								
x2	F222	4	F222N1	5								
x4	F282	6	F282N1	7								
x8	F2C2K	12										
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power												
x1												
x2												
x4												
x8												

Logic Diagram for "Normal"



Logic Diagram for "with 1 inverter"



Logic Diagram for "with 2 inverter"

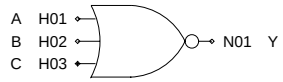
Logic Diagram for "with 3 inverter"

Logic Diagram for "with 4 inverter"

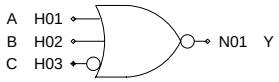
Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_{1}						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L202	A → Y	(HL)	0.075	0.098	0.115	0.010	0.016	0.025	A	1.0	Y	17
		(LH)	0.067	0.097	0.141	0.024	0.041	0.067	B	1.0		
	B → Y	(HL)	0.088	0.111	0.135	0.010	0.016	0.025				
		(LH)	0.054	0.097	0.161	0.024	0.041	0.067				
F202	A → Y	(HL)	0.077	0.103	0.133	0.005	0.008	0.013	A	2.5	Y	35
		(LH)	0.071	0.108	0.165	0.012	0.021	0.033	B	2.4		
	B → Y	(HL)	0.077	0.104	0.133	0.005	0.008	0.013				
		(LH)	0.071	0.108	0.165	0.012	0.021	0.033				
F222	A → Y	(HL)	0.075	0.101	0.130	0.003	0.004	0.006	A	5.2	Y	70
		(LH)	0.070	0.108	0.164	0.006	0.010	0.017	B	4.9		
	B → Y	(HL)	0.075	0.102	0.131	0.003	0.004	0.006				
		(LH)	0.071	0.108	0.163	0.006	0.010	0.017				
F282	A → Y	(HL)	0.228	0.348	0.528	0.001	0.002	0.003	A	1.0	Y	287
		(LH)	0.270	0.417	0.652	0.002	0.003	0.004	B	1.0		
	B → Y	(HL)	0.240	0.363	0.549	0.001	0.002	0.003				
		(LH)	0.257	0.416	0.673	0.002	0.003	0.004				
F2C2K	A → Y	(HL)	0.297	0.435	0.657	0.001	0.001	0.002	A	1.0	Y	144
		(LH)	0.386	0.615	0.976	0.001	0.001	0.002	B	1.0		
	B → Y	(HL)	0.306	0.448	0.676	0.001	0.001	0.002				
		(LH)	0.373	0.617	1.001	0.001	0.001	0.002				
L202N1	A → Y	(HL)	0.075	0.098	0.115	0.010	0.016	0.025	A	1.0	Y	17
		(LH)	0.067	0.097	0.140	0.024	0.041	0.067	B	1.0		
	B → Y	(HH)	0.114	0.181	0.279	0.024	0.041	0.067				
		(LL)	0.103	0.160	0.241	0.010	0.016	0.025				
F202N1	A → Y	(HL)	0.077	0.103	0.133	0.005	0.008	0.013	A	2.5	Y	35
		(LH)	0.071	0.108	0.167	0.012	0.021	0.033	B	1.0		
	B → Y	(HH)	0.142	0.213	0.316	0.012	0.021	0.033				
		(LL)	0.131	0.200	0.298	0.005	0.008	0.013				
F222N1	A → Y	(HL)	0.075	0.101	0.131	0.003	0.004	0.006	A	5.0	Y	70
		(LH)	0.071	0.107	0.166	0.006	0.010	0.017	B	1.0		
	B → Y	(HH)	0.178	0.262	0.383	0.006	0.010	0.017				
		(LL)	0.176	0.269	0.410	0.003	0.004	0.006				
F282N1	A → Y	(HL)	0.228	0.348	0.528	0.001	0.002	0.003	A	1.0	Y	288
		(LH)	0.270	0.418	0.653	0.002	0.003	0.004	B	1.0		
	B → Y	(HH)	0.313	0.500	0.797	0.002	0.003	0.004				
		(LL)	0.263	0.416	0.654	0.001	0.002	0.003				

Function	3-Input NOR								SSI Family	
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter	-
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power										
x1	F203	3	F203N1	4	F203N2	4				
x2	F223	6	F223N1	7	F223N2	7				
x4	F2C3	9	F2C3N1	10	F2C3N2	9				
x8										
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter	-
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power										
x1										
x2										
x4	F2C3NS	12	F2C3N1S	14	F2C3N2S	12				
x8										

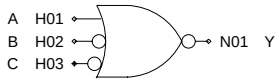
Logic Diagram for "Normal"



Logic Diagram for "with 1 inverter"



Logic Diagram for "with 2 inverter"



Logic Diagram for "with 3 inverter"

Logic Diagram for "with 4 inverter"

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F203	A → Y	(HL)	0.084	0.115	0.149	0.005	0.008	0.013	A	2.4	Y	22
		(LH)	0.105	0.175	0.281	0.018	0.031	0.050	B	2.5		
	B → Y	(HL)	0.088	0.120	0.156	0.005	0.008	0.013	C	2.5		
		(LH)	0.107	0.178	0.289	0.018	0.031	0.050				
	C → Y	(HL)	0.085	0.116	0.149	0.005	0.008	0.013				
		(LH)	0.105	0.176	0.283	0.018	0.031	0.050				
F223	A → Y	(HL)	0.077	0.110	0.146	0.003	0.004	0.006	A	5.0	Y	43
		(LH)	0.108	0.175	0.281	0.009	0.016	0.025	B	4.9		
	B → Y	(HL)	0.081	0.116	0.154	0.003	0.004	0.006	C	5.0		
		(LH)	0.108	0.176	0.288	0.009	0.016	0.025				
	C → Y	(HL)	0.077	0.111	0.146	0.003	0.004	0.006				
		(LH)	0.108	0.175	0.280	0.009	0.016	0.025				
F2C3	A → Y	(HL)	0.196	0.299	0.447	0.001	0.002	0.003	A	2.4	Y	286
		(LH)	0.313	0.486	0.770	0.002	0.003	0.004	B	2.5		
	B → Y	(HL)	0.210	0.317	0.472	0.001	0.002	0.003	C	2.5		
		(LH)	0.325	0.530	0.864	0.002	0.003	0.004				
	C → Y	(HL)	0.216	0.324	0.481	0.001	0.002	0.003				
		(LH)	0.320	0.543	0.899	0.002	0.003	0.004				
F2C3NS	A → Y	(HL)	0.064	0.094	0.126	0.001	0.002	0.003	A	9.9	Y	87
		(LH)	0.101	0.141	0.205	0.004	0.008	0.013	B	9.9		
	B → Y	(HL)	0.079	0.115	0.153	0.001	0.002	0.003	C	9.8		
		(LH)	0.109	0.180	0.295	0.005	0.008	0.013				
	C → Y	(HL)	0.083	0.119	0.158	0.001	0.002	0.003				
		(LH)	0.104	0.193	0.329	0.005	0.008	0.013				
F203N1	A → Y	(HL)	0.084	0.116	0.149	0.005	0.008	0.013	A	2.4	Y	22
		(LH)	0.105	0.176	0.282	0.018	0.031	0.050	B	2.5		
	B → Y	(HL)	0.088	0.120	0.155	0.005	0.008	0.013	C	1.0		
		(LH)	0.107	0.178	0.289	0.018	0.031	0.050				
	C → Y	(HH)	0.181	0.284	0.434	0.018	0.031	0.050				
		(LL)	0.137	0.209	0.313	0.005	0.008	0.013				
F223N1	A → Y	(HL)	0.076	0.109	0.144	0.003	0.004	0.006	A	5.2	Y	43
		(LH)	0.107	0.173	0.277	0.009	0.016	0.025	B	4.9		
	B → Y	(HL)	0.080	0.114	0.152	0.003	0.004	0.006	C	1.0		
		(LH)	0.107	0.174	0.284	0.009	0.016	0.025				
	C → Y	(HH)	0.219	0.334	0.500	0.009	0.016	0.025				
		(LL)	0.182	0.279	0.427	0.003	0.004	0.007				
F2C3N1	A → Y	(HL)	0.196	0.299	0.445	0.001	0.002	0.003	A	2.4	Y	286
		(LH)	0.312	0.484	0.765	0.002	0.003	0.004	B	2.5		
	B → Y	(HL)	0.210	0.316	0.470	0.001	0.002	0.003	C	1.3		
		(LH)	0.323	0.527	0.860	0.002	0.003	0.004				
	C → Y	(HH)	0.416	0.669	1.060	0.002	0.003	0.004				
		(LL)	0.263	0.414	0.651	0.001	0.002	0.003				
F2C3N1S	A → Y	(HL)	0.064	0.093	0.126	0.001	0.002	0.003	A	9.9	Y	87
		(LH)	0.101	0.141	0.204	0.004	0.008	0.013	B	9.9		
	B → Y	(HL)	0.079	0.114	0.153	0.001	0.002	0.003	C	4.8		
		(LH)	0.109	0.180	0.296	0.005	0.008	0.013				
	C → Y	(HH)	0.202	0.321	0.493	0.005	0.008	0.013				
		(LL)	0.139	0.216	0.323	0.001	0.002	0.003				
F203N2	A → Y	(HL)	0.085	0.116	0.149	0.005	0.008	0.013	A	2.4	Y	22
		(LH)	0.106	0.178	0.287	0.018	0.031	0.050	B	1.0		
	B → Y	(HH)	0.188	0.299	0.456	0.018	0.031	0.050	C	1.0		
		(LL)	0.143	0.217	0.328	0.005	0.008	0.013				
	C → Y	(HH)	0.183	0.288	0.440	0.018	0.031	0.050				
		(LL)	0.137	0.209	0.313	0.005	0.008	0.013				

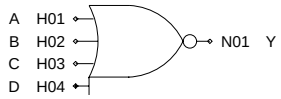
Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F223N2	A → Y	(HL)	0.076	0.109	0.144	0.003	0.004	0.006	A	5.2	Y	44
		(LH)	0.108	0.175	0.281	0.009	0.016	0.025	B	1.0		
	B → Y	(HH)	0.221	0.337	0.509	0.009	0.016	0.025	C	1.0		
		(LL)	0.185	0.284	0.435	0.003	0.004	0.007				
	C → Y	(HH)	0.221	0.336	0.503	0.009	0.016	0.025				
		(LL)	0.182	0.279	0.427	0.003	0.004	0.007				
F2C3N2	A → Y	(HL)	0.191	0.291	0.434	0.001	0.002	0.003	A	2.4	Y	287
		(LH)	0.244	0.377	0.588	0.002	0.003	0.004	B	1.2		
	B → Y	(HH)	0.353	0.545	0.859	0.002	0.003	0.004	C	1.2		
		(LL)	0.254	0.407	0.638	0.001	0.002	0.003				
	C → Y	(HH)	0.333	0.528	0.856	0.002	0.003	0.004				
		(LL)	0.271	0.432	0.674	0.001	0.002	0.003				
F2C3N2S	A → Y	(HL)	0.058	0.085	0.116	0.001	0.002	0.003	A	9.7	Y	141
		(LH)	0.077	0.107	0.151	0.003	0.005	0.008	B	5.0		
	B → Y	(HH)	0.185	0.272	0.410	0.003	0.005	0.009	C	4.9		
		(LL)	0.131	0.208	0.316	0.001	0.002	0.003				
	C → Y	(HH)	0.166	0.256	0.408	0.003	0.005	0.008				
		(LL)	0.148	0.232	0.351	0.001	0.002	0.003				

[MEMO]

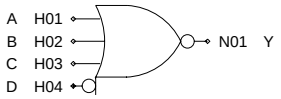
Function	4-Input NOR								SSI Family			
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power	L204	4	L204N1	4	L204N2	5						
x1	F204	4	F204N1	5	F204N2	5						
x2	F224	8	F224N1	9	F224N2	9						
x4												
x8												

Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power												
x1												
x2												
x4												
x8												

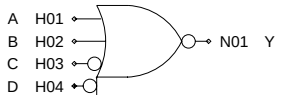
Logic Diagram for "Normal"



Logic Diagram for "with 1 inverter"



Logic Diagram for "with 2 inverter"



Logic Diagram for "with 3 inverter"

Logic Diagram for "with 4 inverter"

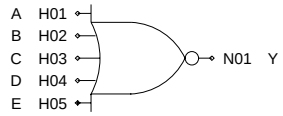
Block type	Switching speed Path		t LD0 (ns)			t 1			Input		Output	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L204	A → Y	(HL)	0.145	0.226	0.342	0.010	0.016	0.025	A	1.0	Y	35
		(LH)	0.208	0.323	0.509	0.013	0.021	0.034	B	1.0		
	B → Y	(HL)	0.160	0.243	0.364	0.010	0.016	0.025	C	1.0		
		(LH)	0.197	0.320	0.528	0.013	0.021	0.034	D	1.0		
	C → Y	(HL)	0.159	0.248	0.376	0.010	0.016	0.025				
		(LH)	0.203	0.317	0.508	0.013	0.021	0.034				
	D → Y	(HL)	0.174	0.265	0.399	0.010	0.016	0.025				
		(LH)	0.192	0.316	0.525	0.013	0.021	0.034				
F204	A → Y	(HL)	0.169	0.263	0.401	0.005	0.008	0.013	A	1.0	Y	71
		(LH)	0.235	0.367	0.583	0.006	0.010	0.017	B	1.0		
	B → Y	(HL)	0.183	0.280	0.424	0.005	0.008	0.013	C	1.0		
		(LH)	0.223	0.364	0.603	0.006	0.010	0.017	D	1.0		
	C → Y	(HL)	0.182	0.284	0.434	0.005	0.008	0.013				
		(LH)	0.226	0.357	0.576	0.006	0.011	0.017				
	D → Y	(HL)	0.196	0.301	0.457	0.005	0.008	0.013				
		(LH)	0.215	0.356	0.594	0.006	0.011	0.017				
F224	A → Y	(HL)	0.084	0.120	0.158	0.003	0.004	0.006	A	5.0	Y	29
		(LH)	0.156	0.262	0.427	0.012	0.021	0.034	B	5.0		
	B → Y	(HL)	0.091	0.129	0.170	0.003	0.004	0.006	C	4.9		
		(LH)	0.164	0.282	0.469	0.012	0.021	0.034	D	5.1		
	C → Y	(HL)	0.091	0.129	0.170	0.003	0.004	0.006				
		(LH)	0.164	0.282	0.470	0.012	0.021	0.034				
	D → Y	(HL)	0.085	0.119	0.157	0.003	0.004	0.006				
		(LH)	0.156	0.262	0.426	0.012	0.021	0.034				
L204N1	A → Y	(HL)	0.145	0.226	0.342	0.010	0.016	0.025	A	1.0	Y	35
		(LH)	0.208	0.323	0.509	0.013	0.021	0.034	B	1.0		
	B → Y	(HL)	0.160	0.243	0.364	0.010	0.016	0.025	C	1.0		
		(LH)	0.196	0.320	0.528	0.013	0.021	0.034	D	1.0		
	C → Y	(HL)	0.160	0.249	0.378	0.010	0.016	0.025				
		(LH)	0.205	0.319	0.511	0.013	0.021	0.034				
	D → Y	(HH)	0.250	0.403	0.653	0.013	0.021	0.034				
		(LL)	0.205	0.325	0.508	0.010	0.016	0.025				
F204N1	A → Y	(HL)	0.169	0.263	0.399	0.005	0.008	0.013	A	1.0	Y	71
		(LH)	0.235	0.366	0.581	0.006	0.010	0.017	B	1.0		
	B → Y	(HL)	0.183	0.280	0.423	0.005	0.008	0.013	C	1.0		
		(LH)	0.223	0.364	0.602	0.006	0.010	0.017	D	1.0		
	C → Y	(HL)	0.181	0.283	0.433	0.005	0.008	0.013				
		(LH)	0.226	0.356	0.575	0.006	0.011	0.017				
	D → Y	(HH)	0.270	0.438	0.715	0.006	0.010	0.017				
		(LL)	0.224	0.357	0.559	0.005	0.008	0.013				
F224N1	A → Y	(HL)	0.083	0.118	0.156	0.003	0.004	0.006	A	5.4	Y	29
		(LH)	0.154	0.259	0.421	0.012	0.021	0.034	B	5.1		
	B → Y	(HL)	0.089	0.127	0.169	0.003	0.004	0.006	C	5.1		
		(LH)	0.162	0.279	0.465	0.012	0.021	0.034	D	1.0		
	C → Y	(HL)	0.089	0.127	0.169	0.003	0.004	0.006				
		(LH)	0.161	0.279	0.464	0.012	0.021	0.034				
	D → Y	(HH)	0.273	0.422	0.649	0.012	0.021	0.034				
		(LL)	0.189	0.291	0.446	0.003	0.004	0.007				
L204N2	A → Y	(HL)	0.145	0.226	0.342	0.010	0.016	0.025	A	1.0	Y	35
		(LH)	0.208	0.323	0.509	0.013	0.021	0.034	B	1.0		
	B → Y	(HL)	0.160	0.243	0.364	0.010	0.016	0.025	C	1.0		
		(LH)	0.196	0.320	0.528	0.013	0.021	0.034	D	1.0		
	C → Y	(HH)	0.237	0.376	0.608	0.013	0.021	0.034				
		(LL)	0.192	0.305	0.477	0.010	0.016	0.025				
	D → Y	(HH)	0.251	0.405	0.656	0.013	0.021	0.034				
		(LL)	0.205	0.325	0.508	0.010	0.016	0.025				

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F204N2	A → Y	(HL)	0.169	0.263	0.399	0.005	0.008	0.013	A	1.0	Y	71
		(LH)	0.235	0.366	0.581	0.006	0.010	0.017	B	1.0		
	B → Y	(HL)	0.183	0.280	0.423	0.005	0.008	0.013	C	1.0		
		(LH)	0.223	0.364	0.602	0.006	0.010	0.017	D	1.0		
	C → Y	(HH)	0.264	0.420	0.685	0.006	0.011	0.017				
		(LL)	0.219	0.347	0.545	0.005	0.008	0.013				
	D → Y	(HH)	0.275	0.444	0.723	0.006	0.011	0.017				
		(LL)	0.226	0.359	0.562	0.005	0.008	0.013				
F224N2	A → Y	(HL)	0.083	0.118	0.156	0.003	0.004	0.006	A	5.4	Y	29
		(LH)	0.154	0.260	0.422	0.012	0.021	0.034	B	5.1		
	B → Y	(HL)	0.089	0.127	0.169	0.003	0.004	0.006	C	1.0		
		(LH)	0.162	0.279	0.467	0.012	0.021	0.034	D	1.0		
	C → Y	(HH)	0.285	0.447	0.691	0.012	0.021	0.034				
		(LL)	0.193	0.299	0.462	0.003	0.004	0.007				
	D → Y	(HH)	0.274	0.425	0.651	0.012	0.021	0.034				
		(LL)	0.190	0.293	0.450	0.003	0.004	0.007				

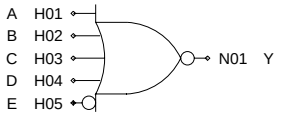
[MEMO]

Function	5-Input NOR										SSI Family	
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power	L205	4	L205N1	5	L205N2	5	L205N3	6				
x1	F205	5	F205N1	6	F205N2	6	F205N3	7				
x2	F225	6	F225N1	6	F225N2	7	F225N3	7				
x4												
x8												
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power												
x1												
x2												
x4												
x8												

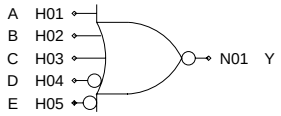
Logic Diagram for "Normal"



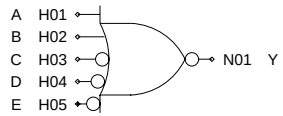
Logic Diagram for "with 1 inverter"



Logic Diagram for "with 2 inverter"



Logic Diagram for "with 3 inverter"



Logic Diagram for "with 4 inverter"

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L205	A → Y	(HL)	0.136	0.213	0.326	0.010	0.016	0.025	A	1.0	Y	35
		(LH)	0.193	0.300	0.471	0.013	0.021	0.034	B	1.0		
	B → Y	(HL)	0.151	0.231	0.348	0.010	0.016	0.025	C	1.0		
		(LH)	0.182	0.298	0.490	0.013	0.021	0.034	D	1.0		
	C → Y	(HL)	0.161	0.252	0.383	0.010	0.016	0.025	E	1.0		
		(LH)	0.248	0.382	0.608	0.013	0.021	0.034				
	D → Y	(HL)	0.174	0.269	0.406	0.010	0.016	0.025				
		(LH)	0.253	0.411	0.672	0.013	0.021	0.034				
	E → Y	(HL)	0.180	0.280	0.417	0.010	0.016	0.025				
		(LH)	0.252	0.427	0.722	0.013	0.021	0.034				
F205	A → Y	(HL)	0.184	0.286	0.437	0.005	0.008	0.013	A	1.0	Y	71
		(LH)	0.231	0.362	0.584	0.006	0.010	0.017	B	1.0		
	B → Y	(HL)	0.198	0.304	0.459	0.005	0.008	0.013	C	1.0		
		(LH)	0.218	0.360	0.604	0.006	0.010	0.017	D	1.0		
	C → Y	(HL)	0.172	0.271	0.412	0.005	0.008	0.013	E	1.0		
		(LH)	0.294	0.456	0.731	0.006	0.010	0.017				
	D → Y	(HL)	0.186	0.289	0.434	0.005	0.008	0.013				
		(LH)	0.300	0.484	0.795	0.006	0.010	0.017				
	E → Y	(HL)	0.192	0.299	0.449	0.005	0.008	0.013				
		(LH)	0.300	0.506	0.851	0.006	0.010	0.017				
F225	A → Y	(HL)	0.206	0.323	0.498	0.003	0.004	0.006	A	1.0	Y	141
		(LH)	0.272	0.426	0.686	0.003	0.005	0.009	B	1.0		
	B → Y	(HL)	0.221	0.340	0.522	0.003	0.004	0.006	C	1.0		
		(LH)	0.262	0.425	0.704	0.003	0.005	0.009	D	1.0		
	C → Y	(HL)	0.226	0.357	0.549	0.003	0.004	0.006	E	1.0		
		(LH)	0.322	0.506	0.823	0.003	0.005	0.009				
	D → Y	(HL)	0.240	0.374	0.574	0.003	0.004	0.006				
		(LH)	0.327	0.533	0.885	0.003	0.005	0.009				
	E → Y	(HL)	0.247	0.386	0.588	0.003	0.004	0.006				
		(LH)	0.326	0.551	0.935	0.003	0.005	0.009				
L205N1	A → Y	(HL)	0.136	0.213	0.326	0.010	0.016	0.025	A	1.0	Y	35
		(LH)	0.193	0.300	0.471	0.013	0.021	0.034	B	1.0		
	B → Y	(HL)	0.151	0.231	0.348	0.010	0.016	0.025	C	1.0		
		(LH)	0.182	0.298	0.490	0.013	0.021	0.034	D	1.0		
	C → Y	(HL)	0.161	0.252	0.383	0.010	0.016	0.025	E	1.0		
		(LH)	0.248	0.382	0.608	0.013	0.021	0.034				
	D → Y	(HL)	0.173	0.269	0.406	0.010	0.016	0.025				
		(LH)	0.253	0.411	0.672	0.013	0.021	0.034				
	E → Y	(HH)	0.324	0.526	0.851	0.013	0.021	0.034				
		(LL)	0.209	0.333	0.521	0.010	0.016	0.025				
F205N1	A → Y	(HL)	0.183	0.285	0.435	0.005	0.008	0.013	A	1.0	Y	71
		(LH)	0.229	0.360	0.581	0.006	0.011	0.017	B	1.0		
	B → Y	(HL)	0.197	0.302	0.458	0.005	0.008	0.013	C	1.0		
		(LH)	0.217	0.359	0.602	0.006	0.010	0.017	D	1.0		
	C → Y	(HL)	0.171	0.271	0.411	0.005	0.008	0.013	E	1.0		
		(LH)	0.294	0.455	0.730	0.006	0.010	0.017				
	D → Y	(HL)	0.185	0.288	0.435	0.005	0.008	0.013				
		(LH)	0.300	0.483	0.793	0.006	0.010	0.017				
	E → Y	(HH)	0.376	0.608	0.984	0.006	0.010	0.017				
		(LL)	0.225	0.357	0.562	0.005	0.008	0.013				
F225N1	A → Y	(HL)	0.206	0.323	0.498	0.003	0.004	0.006	A	1.0	Y	141
		(LH)	0.272	0.426	0.686	0.003	0.005	0.009	B	1.0		
	B → Y	(HL)	0.221	0.340	0.522	0.003	0.004	0.006	C	1.0		
		(LH)	0.262	0.425	0.704	0.003	0.005	0.009	D	1.0		
	C → Y	(HL)	0.226	0.357	0.549	0.003	0.004	0.006	E	1.0		
		(LH)	0.322	0.506	0.823	0.003	0.005	0.009				

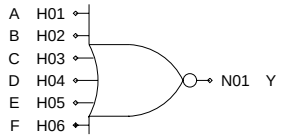
Block type	Path		Switching speed t_{LD0} (ns) MIN.	TYP.	MAX.	Switching speed t_1 MIN.	TYP.	MAX.	Input Symbol	Fanin	Output Symbol	Fanout
	D → Y	(HL)	0.240	0.374	0.574	0.003	0.004	0.006				
		(LH)	0.327	0.533	0.885	0.003	0.005	0.009				
	E → Y	(HH)	0.395	0.646	1.060	0.003	0.005	0.009				
		(LL)	0.272	0.434	0.686	0.003	0.004	0.006				
L205N2	A → Y	(HL)	0.137	0.214	0.327	0.010	0.016	0.025	A	1.0	Y	35
		(LH)	0.195	0.301	0.473	0.013	0.021	0.034	B	1.0		
	B → Y	(HL)	0.152	0.232	0.351	0.010	0.016	0.025	C	1.0		
		(LH)	0.184	0.299	0.493	0.013	0.021	0.034	D	1.0		
	C → Y	(HL)	0.165	0.258	0.392	0.010	0.016	0.025	E	1.0		
		(LH)	0.257	0.397	0.632	0.013	0.021	0.034				
	D → Y	(HH)	0.312	0.508	0.823	0.013	0.021	0.034				
		(LL)	0.206	0.328	0.515	0.010	0.016	0.025				
	E → Y	(HH)	0.335	0.545	0.881	0.013	0.021	0.034				
		(LL)	0.213	0.339	0.531	0.010	0.016	0.025				
F205N2	A → Y	(HL)	0.184	0.287	0.437	0.005	0.008	0.013	A	1.0	Y	70
		(LH)	0.230	0.360	0.581	0.006	0.011	0.017	B	1.0		
	B → Y	(HL)	0.199	0.304	0.460	0.005	0.008	0.013	C	1.0		
		(LH)	0.217	0.359	0.603	0.006	0.011	0.017	D	1.0		
	C → Y	(HL)	0.171	0.271	0.412	0.005	0.008	0.013	E	1.0		
		(LH)	0.294	0.455	0.730	0.006	0.011	0.017				
	D → Y	(HH)	0.352	0.571	0.924	0.006	0.011	0.017				
		(LL)	0.219	0.347	0.544	0.005	0.008	0.013				
	E → Y	(HH)	0.378	0.612	0.991	0.006	0.011	0.017				
		(LL)	0.228	0.360	0.567	0.005	0.008	0.013				
F225N2	A → Y	(HL)	0.206	0.323	0.498	0.003	0.004	0.006	A	1.0	Y	141
		(LH)	0.272	0.426	0.686	0.003	0.005	0.009	B	1.0		
	B → Y	(HL)	0.221	0.340	0.522	0.003	0.004	0.006	C	1.0		
		(LH)	0.262	0.425	0.704	0.003	0.005	0.009	D	1.0		
	C → Y	(HL)	0.226	0.357	0.549	0.003	0.004	0.006	E	1.0		
		(LH)	0.322	0.506	0.823	0.003	0.005	0.009				
	D → Y	(HH)	0.378	0.618	1.012	0.003	0.005	0.009				
		(LL)	0.272	0.431	0.678	0.003	0.004	0.006				
	E → Y	(HH)	0.396	0.647	1.062	0.003	0.005	0.009				
		(LL)	0.272	0.434	0.686	0.003	0.004	0.006				
L205N3	A → Y	(HL)	0.137	0.214	0.327	0.010	0.016	0.025	A	1.0	Y	35
		(LH)	0.195	0.301	0.473	0.013	0.021	0.034	B	1.0		
	B → Y	(HL)	0.152	0.232	0.351	0.010	0.016	0.025	C	1.0		
		(LH)	0.184	0.299	0.493	0.013	0.021	0.034	D	1.0		
	C → Y	(HH)	0.277	0.443	0.715	0.013	0.021	0.034	E	1.0		
		(LL)	0.200	0.315	0.492	0.010	0.016	0.025				
	D → Y	(HH)	0.304	0.495	0.802	0.013	0.021	0.034				
		(LL)	0.206	0.325	0.510	0.010	0.016	0.025				
	E → Y	(HH)	0.328	0.532	0.860	0.013	0.021	0.034				
		(LL)	0.212	0.337	0.529	0.010	0.016	0.025				
F205N3	A → Y	(HL)	0.184	0.287	0.437	0.005	0.008	0.013	A	1.0	Y	70
		(LH)	0.230	0.360	0.581	0.006	0.011	0.017	B	1.0		
	B → Y	(HL)	0.199	0.304	0.460	0.005	0.008	0.013	C	1.0		
		(LH)	0.217	0.359	0.603	0.006	0.011	0.017	D	1.0		
	C → Y	(HH)	0.324	0.516	0.837	0.006	0.011	0.017	E	1.0		
		(LL)	0.212	0.333	0.522	0.005	0.008	0.013				
	D → Y	(HH)	0.353	0.572	0.926	0.006	0.011	0.017				
		(LL)	0.219	0.347	0.545	0.005	0.008	0.013				
	E → Y	(HH)	0.379	0.613	0.993	0.006	0.011	0.017				
		(LL)	0.228	0.361	0.566	0.005	0.008	0.013				

Block type	Path		Switching speed t_{LD0} (ns) MIN.	TYP.	MAX.	Switching speed t_1 MIN.	TYP.	MAX.	Input Symbol	Fanin	Output Symbol	Fanout
F225N3	A → Y	(HL)	0.206	0.323	0.498	0.003	0.004	0.006	A	1.0	Y	141
		(LH)	0.272	0.426	0.686	0.003	0.005	0.009	B	1.0		
	B → Y	(HL)	0.221	0.340	0.522	0.003	0.004	0.006	C	1.0		
		(LH)	0.262	0.425	0.704	0.003	0.005	0.009	D	1.0		
	C → Y	(HH)	0.353	0.569	0.934	0.003	0.005	0.009	E	1.0		
		(LL)	0.265	0.420	0.660	0.003	0.004	0.006				
	D → Y	(HH)	0.382	0.624	1.024	0.003	0.005	0.009				
		(LL)	0.274	0.434	0.680	0.003	0.004	0.006				
	E → Y	(HH)	0.400	0.654	1.069	0.003	0.005	0.009				
		(LL)	0.272	0.435	0.690	0.003	0.004	0.006				

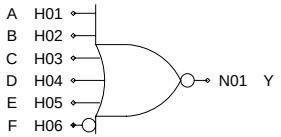
Function	6-Input NOR										SSI Family	
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power			L206N1	5			L206N3	6				
x1	F206	5	F206N1	6	F206N2	6	F206N3	7				
x2	F226	6	F226N1	7	F226N2	7	F226N3	8				
x4												
x8												

Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power												
x1												
x2												
x4												
x8												

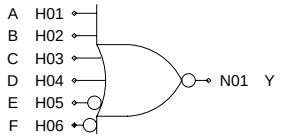
Logic Diagram for "Normal"



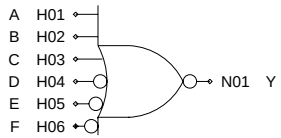
Logic Diagram for "with 1 inverter"



Logic Diagram for "with 2 inverter"



Logic Diagram for "with 3 inverter"



Logic Diagram for "with 4 inverter"

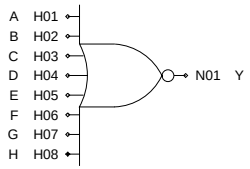
Block type	Path		Switching speed t_{LD0} (ns)			Switching speed t_1			Input		Output	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F206	A → Y	(HL)	0.178	0.276	0.420	0.005	0.008	0.013	A	1.0	Y	71
		(LH)	0.305	0.473	0.759	0.006	0.010	0.017	B	1.0		
	B → Y	(HL)	0.190	0.294	0.442	0.005	0.008	0.013	C	1.0		
		(LH)	0.310	0.502	0.825	0.006	0.010	0.017	D	1.0		
	C → Y	(HL)	0.197	0.304	0.455	0.005	0.008	0.013	E	1.0		
		(LH)	0.309	0.520	0.876	0.006	0.010	0.017	F	1.0		
	D → Y	(HL)	0.184	0.290	0.443	0.005	0.008	0.013				
		(LH)	0.279	0.433	0.697	0.006	0.010	0.017				
	E → Y	(HL)	0.198	0.307	0.467	0.005	0.008	0.013				
		(LH)	0.284	0.462	0.760	0.006	0.010	0.017				
	F → Y	(HL)	0.207	0.318	0.481	0.005	0.008	0.013				
		(LH)	0.284	0.483	0.817	0.006	0.010	0.017				
F226	A → Y	(HL)	0.213	0.335	0.515	0.003	0.004	0.006	A	1.0	Y	141
		(LH)	0.340	0.526	0.850	0.003	0.005	0.009	B	1.0		
	B → Y	(HL)	0.226	0.352	0.539	0.003	0.004	0.006	C	1.0		
		(LH)	0.344	0.554	0.913	0.003	0.005	0.009	D	1.0		
	C → Y	(HL)	0.233	0.363	0.555	0.003	0.004	0.006	E	1.0		
		(LH)	0.343	0.573	0.963	0.003	0.005	0.009	F	1.0		
	D → Y	(HL)	0.226	0.357	0.549	0.003	0.004	0.006				
		(LH)	0.323	0.507	0.824	0.003	0.005	0.009				
	E → Y	(HL)	0.241	0.374	0.574	0.003	0.004	0.006				
		(LH)	0.327	0.534	0.887	0.003	0.005	0.009				
	F → Y	(HL)	0.247	0.386	0.588	0.003	0.004	0.006				
		(LH)	0.326	0.552	0.938	0.003	0.005	0.009				
L206N1	A → Y	(HL)	0.153	0.239	0.360	0.010	0.016	0.025	A	1.0	Y	35
		(LH)	0.272	0.420	0.669	0.013	0.021	0.034	B	1.0		
	B → Y	(HL)	0.166	0.256	0.381	0.010	0.016	0.025	C	1.0		
		(LH)	0.278	0.449	0.734	0.013	0.021	0.034	D	1.0		
	C → Y	(HL)	0.172	0.265	0.393	0.010	0.016	0.025	E	1.0		
		(LH)	0.276	0.467	0.785	0.013	0.021	0.034	F	1.0		
	D → Y	(HL)	0.162	0.255	0.386	0.010	0.016	0.025				
		(LH)	0.253	0.391	0.624	0.013	0.021	0.034				
	E → Y	(HL)	0.176	0.272	0.410	0.010	0.016	0.025				
		(LH)	0.259	0.421	0.686	0.013	0.021	0.034				
	F → Y	(HH)	0.332	0.540	0.873	0.013	0.021	0.034				
		(LL)	0.211	0.336	0.528	0.010	0.016	0.025				
F206N1	A → Y	(HL)	0.178	0.277	0.420	0.005	0.008	0.013	A	1.0	Y	71
		(LH)	0.305	0.473	0.760	0.006	0.010	0.017	B	1.0		
	B → Y	(HL)	0.191	0.294	0.443	0.005	0.008	0.013	C	1.0		
		(LH)	0.311	0.502	0.826	0.006	0.010	0.017	D	1.0		
	C → Y	(HL)	0.197	0.304	0.456	0.005	0.008	0.013	E	1.0		
		(LH)	0.309	0.520	0.876	0.006	0.010	0.017	F	1.0		
	D → Y	(HL)	0.184	0.291	0.444	0.005	0.008	0.013				
		(LH)	0.279	0.433	0.697	0.006	0.010	0.017				
	E → Y	(HL)	0.198	0.308	0.467	0.005	0.008	0.013				
		(LH)	0.285	0.463	0.761	0.006	0.010	0.017				
	F → Y	(HH)	0.360	0.586	0.953	0.006	0.010	0.017				
		(LL)	0.238	0.379	0.595	0.005	0.008	0.013				
F226N1	A → Y	(HL)	0.213	0.335	0.515	0.003	0.004	0.006	A	1.0	Y	141
		(LH)	0.340	0.526	0.850	0.003	0.005	0.009	B	1.0		
	B → Y	(HL)	0.226	0.352	0.539	0.003	0.004	0.006	C	1.0		
		(LH)	0.344	0.554	0.913	0.003	0.005	0.009	D	1.0		
	C → Y	(HL)	0.233	0.363	0.555	0.003	0.004	0.006	E	1.0		
		(LH)	0.343	0.573	0.963	0.003	0.005	0.009	F	1.0		
	D → Y	(HL)	0.226	0.357	0.549	0.003	0.004	0.006				
		(LH)	0.323	0.507	0.824	0.003	0.005	0.009				

Block type	Path		Switching speed t_{LD0} (ns) MIN.	TYP.	MAX.	t_1 MIN.	TYP.	MAX.	Input Symbol	Fanin	Output Symbol	Fanout
	IN → OUT											
	E → Y	(HL)	0.240	0.374	0.574	0.003	0.004	0.006				
		(LH)	0.327	0.534	0.887	0.003	0.005	0.009				
	F → Y	(HH)	0.398	0.652	1.067	0.003	0.005	0.009				
		(LL)	0.275	0.440	0.691	0.003	0.004	0.006				
F206N2	A → Y	(HL)	0.178	0.277	0.421	0.005	0.008	0.013	A	1.0	Y	71
		(LH)	0.306	0.474	0.760	0.006	0.011	0.017	B	1.0		
	B → Y	(HL)	0.191	0.294	0.443	0.005	0.008	0.013	C	1.0		
		(LH)	0.311	0.503	0.827	0.006	0.011	0.017	D	1.0		
	C → Y	(HL)	0.198	0.304	0.456	0.005	0.008	0.013	E	1.0		
		(LH)	0.309	0.521	0.877	0.006	0.010	0.017	F	1.0		
	D → Y	(HL)	0.185	0.292	0.446	0.005	0.008	0.013				
		(LH)	0.279	0.433	0.699	0.006	0.011	0.017				
	E → Y	(HH)	0.337	0.550	0.893	0.006	0.011	0.017				
		(LL)	0.233	0.369	0.579	0.005	0.008	0.013				
	F → Y	(HH)	0.363	0.591	0.960	0.006	0.011	0.017				
		(LL)	0.241	0.384	0.604	0.005	0.008	0.013				
F226N2	A → Y	(HL)	0.213	0.335	0.515	0.003	0.004	0.006	A	1.0	Y	141
		(LH)	0.340	0.526	0.850	0.003	0.005	0.009	B	1.0		
	B → Y	(HL)	0.226	0.352	0.540	0.003	0.004	0.006	C	1.0		
		(LH)	0.344	0.554	0.913	0.003	0.005	0.009	D	1.0		
	C → Y	(HL)	0.233	0.363	0.555	0.003	0.004	0.006	E	1.0		
		(LH)	0.343	0.573	0.963	0.003	0.005	0.009	F	1.0		
	D → Y	(HL)	0.226	0.357	0.549	0.003	0.004	0.006				
		(LH)	0.322	0.506	0.822	0.003	0.005	0.009				
	E → Y	(HH)	0.378	0.618	1.011	0.003	0.005	0.009				
		(LL)	0.270	0.431	0.677	0.003	0.004	0.006				
	F → Y	(HH)	0.399	0.651	1.068	0.003	0.005	0.009				
		(LL)	0.275	0.439	0.691	0.003	0.004	0.006				
L206N3	A → Y	(HL)	0.149	0.234	0.354	0.010	0.016	0.025	A	1.0	Y	35
		(LH)	0.264	0.407	0.648	0.013	0.021	0.034	B	1.0		
	B → Y	(HL)	0.163	0.251	0.376	0.010	0.016	0.025	C	1.0		
		(LH)	0.270	0.435	0.712	0.013	0.021	0.034	D	1.0		
	C → Y	(HL)	0.170	0.261	0.387	0.010	0.016	0.025	E	1.0		
		(LH)	0.270	0.457	0.768	0.013	0.021	0.034	F	1.0		
	D → Y	(HH)	0.279	0.448	0.725	0.013	0.021	0.034				
		(LL)	0.196	0.312	0.489	0.010	0.016	0.025				
	E → Y	(HH)	0.312	0.507	0.818	0.013	0.021	0.034				
		(LL)	0.208	0.329	0.518	0.010	0.016	0.025				
	F → Y	(HH)	0.333	0.541	0.876	0.013	0.021	0.034				
		(LL)	0.209	0.334	0.523	0.010	0.016	0.025				
F206N3	A → Y	(HL)	0.178	0.277	0.421	0.005	0.008	0.013	A	1.0	Y	71
		(LH)	0.306	0.474	0.760	0.006	0.011	0.017	B	1.0		
	B → Y	(HL)	0.191	0.294	0.443	0.005	0.008	0.013	C	1.0		
		(LH)	0.311	0.503	0.827	0.006	0.011	0.017	D	1.0		
	C → Y	(HL)	0.198	0.304	0.456	0.005	0.008	0.013	E	1.0		
		(LH)	0.309	0.521	0.877	0.006	0.010	0.017	F	1.0		
	D → Y	(HH)	0.308	0.494	0.805	0.006	0.011	0.017				
		(LL)	0.223	0.353	0.555	0.005	0.008	0.013				
	E → Y	(HH)	0.338	0.552	0.895	0.006	0.011	0.017				
		(LL)	0.233	0.370	0.579	0.005	0.008	0.013				
	F → Y	(HH)	0.364	0.592	0.962	0.006	0.011	0.017				
		(LL)	0.241	0.384	0.603	0.005	0.008	0.013				
F226N3	A → Y	(HL)	0.214	0.335	0.516	0.003	0.004	0.006	A	1.0	Y	141
		(LH)	0.341	0.529	0.853	0.003	0.005	0.009	B	1.0		
	B → Y	(HL)	0.227	0.353	0.540	0.003	0.004	0.006	C	1.0		
		(LH)	0.346	0.557	0.916	0.003	0.005	0.009	D	1.0		

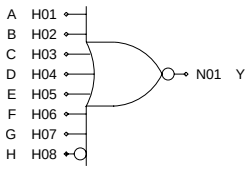
Block type	Path		Switching speed t_{LD0} (ns) MIN.	TYP.	MAX.	t_1 MIN.	TYP.	MAX.	Input Symbol	Fanin	Output Symbol	Fanout
	IN → OUT											
	C → Y	(HL)	0.234	0.365	0.554	0.003	0.004	0.006	E	1.0		
		(LH)	0.344	0.576	0.967	0.003	0.005	0.009	F	1.0		
	D → Y	(HH)	0.354	0.572	0.939	0.003	0.005	0.009				
		(LL)	0.265	0.419	0.659	0.003	0.004	0.006				
	E → Y	(HH)	0.407	0.664	1.086	0.003	0.005	0.009				
		(LL)	0.279	0.445	0.702	0.003	0.004	0.006				
	F → Y	(HH)	0.382	0.626	1.027	0.003	0.005	0.009				
		(LL)	0.270	0.429	0.676	0.003	0.004	0.006				

Function	8-Input NOR										SSI Family	
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power	L208	7	L208N1	8	L208N2	8	L208N3	9	L208N4	9		
x1	F208	7	F208N1	8	F208N2	8	F208N3	9	F208N4	9		
x2	F228	8	F228N1	9	F228N2	9	F228N3	10	F228N4	10		
x4												
x8												
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power												
x1												
x2												
x4												
x8												

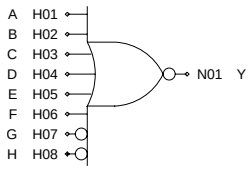
Logic Diagram for "Normal"



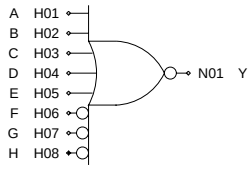
Logic Diagram for "with 1 inverter"



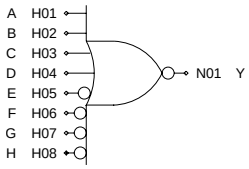
Logic Diagram for "with 2 inverter"



Logic Diagram for "with 3 inverter"



Logic Diagram for "with 4 inverter"



Block type	Switching speed									Input		Output	
	Path		t_{LD0} (ns)			t_1							
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		Symbol	Fanin	Symbol	Fanout
L208	A → Y	(HL)	0.152	0.238	0.360	0.010	0.016	0.025		A	1.0	Y	35
		(LH)	0.256	0.400	0.647	0.013	0.021	0.034		B	1.0		
	B → Y	(HL)	0.165	0.254	0.385	0.010	0.016	0.025		C	1.0		
		(LH)	0.245	0.398	0.667	0.013	0.021	0.034		D	1.0		
	C → Y	(HL)	0.167	0.264	0.401	0.010	0.016	0.025		E	1.0		
		(LH)	0.269	0.423	0.697	0.013	0.021	0.034		F	1.0		
	D → Y	(HL)	0.182	0.281	0.425	0.010	0.016	0.025		G	1.0		
		(LH)	0.257	0.422	0.718	0.013	0.021	0.034		H	1.0		
	E → Y	(HL)	0.182	0.286	0.437	0.010	0.016	0.025					
		(LH)	0.278	0.446	0.750	0.013	0.021	0.034					
	F → Y	(HL)	0.197	0.303	0.461	0.010	0.016	0.025					
		(LH)	0.266	0.445	0.769	0.013	0.021	0.034					
	G → Y	(HL)	0.188	0.294	0.447	0.010	0.016	0.025					
		(LH)	0.274	0.448	0.757	0.013	0.021	0.034					
	H → Y	(HL)	0.201	0.312	0.472	0.010	0.016	0.025					
		(LH)	0.264	0.444	0.776	0.013	0.021	0.034					
F208	A → Y	(HL)	0.179	0.280	0.426	0.005	0.008	0.013		A	1.0	Y	70
		(LH)	0.307	0.481	0.788	0.006	0.011	0.017		B	1.0		
	B → Y	(HL)	0.193	0.296	0.449	0.005	0.008	0.013		C	1.0		
		(LH)	0.296	0.480	0.808	0.006	0.011	0.017		D	1.0		
	C → Y	(HL)	0.195	0.304	0.465	0.005	0.008	0.013		E	1.0		
		(LH)	0.317	0.501	0.836	0.006	0.011	0.017		F	1.0		
	D → Y	(HL)	0.208	0.321	0.486	0.005	0.008	0.013		G	1.0		
		(LH)	0.305	0.500	0.856	0.006	0.011	0.017		H	1.0		
	E → Y	(HL)	0.212	0.329	0.503	0.005	0.008	0.013					
		(LH)	0.329	0.527	0.892	0.006	0.011	0.017					
	F → Y	(HL)	0.224	0.345	0.524	0.005	0.008	0.013					
		(LH)	0.316	0.527	0.911	0.006	0.011	0.017					
	G → Y	(HL)	0.218	0.343	0.522	0.005	0.008	0.013					
		(LH)	0.327	0.532	0.905	0.006	0.011	0.017					
	H → Y	(HL)	0.232	0.358	0.543	0.005	0.008	0.013					
		(LH)	0.316	0.530	0.925	0.006	0.011	0.017					
F228	A → Y	(HL)	0.219	0.344	0.529	0.003	0.004	0.006		A	1.0	Y	139
		(LH)	0.381	0.600	1.000	0.003	0.005	0.009		B	1.0		
	B → Y	(HL)	0.234	0.361	0.554	0.003	0.004	0.006		C	1.0		
		(LH)	0.370	0.598	1.019	0.003	0.005	0.009		D	1.0		
	C → Y	(HL)	0.231	0.365	0.565	0.003	0.004	0.006		E	1.0		
		(LH)	0.385	0.616	1.042	0.003	0.005	0.009		F	1.0		
	D → Y	(HL)	0.246	0.383	0.590	0.003	0.004	0.006		G	1.0		
		(LH)	0.375	0.613	1.062	0.003	0.005	0.009		H	1.0		
	E → Y	(HL)	0.246	0.389	0.602	0.003	0.004	0.006					
		(LH)	0.397	0.642	1.098	0.003	0.005	0.009					
	F → Y	(HL)	0.261	0.407	0.627	0.003	0.004	0.006					
		(LH)	0.387	0.640	1.116	0.003	0.005	0.009					
	G → Y	(HL)	0.258	0.407	0.628	0.003	0.004	0.007					
		(LH)	0.403	0.654	1.125	0.003	0.005	0.009					
	H → Y	(HL)	0.272	0.425	0.653	0.003	0.004	0.007					
		(LH)	0.392	0.653	1.143	0.003	0.005	0.009					
L208N1	A → Y	(HL)	0.152	0.238	0.360	0.010	0.016	0.025		A	1.0	Y	35
		(LH)	0.256	0.400	0.647	0.013	0.021	0.034		B	1.0		
	B → Y	(HL)	0.165	0.254	0.385	0.010	0.016	0.025		C	1.0		
		(LH)	0.245	0.398	0.667	0.013	0.021	0.034		D	1.0		
	C → Y	(HL)	0.167	0.264	0.401	0.010	0.016	0.025		E	1.0		
		(LH)	0.269	0.423	0.697	0.013	0.021	0.034		F	1.0		
	D → Y	(HL)	0.182	0.281	0.425	0.010	0.016	0.025		G	1.0		
		(LH)	0.257	0.422	0.718	0.013	0.021	0.034		H	1.0		

Block type	Path		Switching speed t_{LD0} (ns)			Switching speed t_1			Input		Output	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	E → Y	(HL)	0.182	0.286	0.437	0.010	0.016	0.025				
		(LH)	0.278	0.446	0.750	0.013	0.021	0.034				
	F → Y	(HL)	0.197	0.303	0.461	0.010	0.016	0.025				
		(LH)	0.266	0.445	0.769	0.013	0.021	0.034				
	G → Y	(HL)	0.188	0.294	0.447	0.010	0.016	0.025				
		(LH)	0.274	0.448	0.757	0.013	0.021	0.034				
	H → Y	(HH)	0.322	0.530	0.898	0.013	0.021	0.034				
		(LL)	0.236	0.373	0.579	0.010	0.016	0.025				
F208N1	A → Y	(HL)	0.178	0.279	0.427	0.005	0.008	0.013	A	1.0	Y	70
		(LH)	0.307	0.481	0.790	0.006	0.011	0.017	B	1.0		
	B → Y	(HL)	0.193	0.297	0.450	0.005	0.008	0.013	C	1.0		
		(LH)	0.297	0.481	0.810	0.006	0.011	0.017	D	1.0		
	C → Y	(HL)	0.195	0.304	0.466	0.005	0.008	0.013	E	1.0		
		(LH)	0.317	0.502	0.838	0.006	0.011	0.017	F	1.0		
	D → Y	(HL)	0.209	0.322	0.487	0.005	0.008	0.013	G	1.0		
		(LH)	0.306	0.501	0.858	0.006	0.011	0.017	H	1.0		
	E → Y	(HL)	0.209	0.328	0.502	0.005	0.008	0.013				
		(LH)	0.327	0.526	0.888	0.006	0.011	0.017				
	F → Y	(HL)	0.223	0.344	0.523	0.005	0.008	0.013				
		(LH)	0.315	0.525	0.908	0.006	0.011	0.017				
	G → Y	(HL)	0.220	0.344	0.525	0.005	0.008	0.013				
		(LH)	0.331	0.535	0.913	0.006	0.011	0.017				
	H → Y	(HH)	0.375	0.617	1.052	0.006	0.011	0.017				
		(LL)	0.262	0.418	0.651	0.005	0.008	0.013				
F228N1	A → Y	(HL)	0.219	0.344	0.529	0.003	0.004	0.006	A	1.0	Y	139
		(LH)	0.381	0.600	1.000	0.003	0.005	0.009	B	1.0		
	B → Y	(HL)	0.234	0.361	0.554	0.003	0.004	0.006	C	1.0		
		(LH)	0.370	0.598	1.019	0.003	0.005	0.009	D	1.0		
	C → Y	(HL)	0.231	0.365	0.565	0.003	0.004	0.006	E	1.0		
		(LH)	0.385	0.616	1.042	0.003	0.005	0.009	F	1.0		
	D → Y	(HL)	0.246	0.383	0.590	0.003	0.004	0.006	G	1.0		
		(LH)	0.375	0.613	1.062	0.003	0.005	0.009	H	1.0		
	E → Y	(HL)	0.246	0.389	0.602	0.003	0.004	0.006				
		(LH)	0.397	0.642	1.098	0.003	0.005	0.009				
	F → Y	(HL)	0.261	0.407	0.627	0.003	0.004	0.006				
		(LH)	0.387	0.640	1.116	0.003	0.005	0.009				
	G → Y	(HL)	0.258	0.406	0.628	0.003	0.004	0.007				
		(LH)	0.403	0.654	1.125	0.003	0.005	0.009				
	H → Y	(HH)	0.449	0.736	1.263	0.003	0.005	0.009				
		(LL)	0.305	0.483	0.757	0.003	0.004	0.007				
L208N2	A → Y	(HL)	0.152	0.238	0.360	0.010	0.016	0.025	A	1.0	Y	35
		(LH)	0.256	0.400	0.647	0.013	0.021	0.034	B	1.0		
	B → Y	(HL)	0.165	0.254	0.385	0.010	0.016	0.025	C	1.0		
		(LH)	0.245	0.398	0.667	0.013	0.021	0.034	D	1.0		
	C → Y	(HL)	0.167	0.264	0.401	0.010	0.016	0.025	E	1.0		
		(LH)	0.269	0.423	0.697	0.013	0.021	0.034	F	1.0		
	D → Y	(HL)	0.182	0.281	0.425	0.010	0.016	0.025	G	1.0		
		(LH)	0.257	0.422	0.718	0.013	0.021	0.034	H	1.0		
	E → Y	(HL)	0.182	0.286	0.437	0.010	0.016	0.025				
		(LH)	0.278	0.446	0.750	0.013	0.021	0.034				
	F → Y	(HL)	0.197	0.303	0.461	0.010	0.016	0.025				
		(LH)	0.266	0.445	0.769	0.013	0.021	0.034				
	G → Y	(HH)	0.314	0.509	0.861	0.013	0.021	0.034				
		(LL)	0.228	0.361	0.560	0.010	0.016	0.025				
	H → Y	(HH)	0.324	0.532	0.901	0.013	0.021	0.034				
		(LL)	0.235	0.373	0.579	0.010	0.016	0.025				

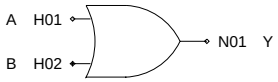
Block type	Path		Switching speed t_{LD0} (ns)			Switching speed t_1			Input		Output	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F208N2	A → Y	(HL)	0.178	0.279	0.427	0.005	0.008	0.013	A	1.0	Y	70
		(LH)	0.307	0.481	0.790	0.006	0.011	0.017	B	1.0		
	B → Y	(HL)	0.193	0.297	0.450	0.005	0.008	0.013	C	1.0		
		(LH)	0.297	0.481	0.810	0.006	0.011	0.017	D	1.0		
	C → Y	(HL)	0.195	0.304	0.466	0.005	0.008	0.013	E	1.0		
		(LH)	0.317	0.502	0.838	0.006	0.011	0.017	F	1.0		
	D → Y	(HL)	0.209	0.322	0.487	0.005	0.008	0.013	G	1.0		
		(LH)	0.306	0.501	0.858	0.006	0.011	0.017	H	1.0		
	E → Y	(HL)	0.209	0.328	0.502	0.005	0.008	0.013				
		(LH)	0.327	0.526	0.888	0.006	0.011	0.017				
	F → Y	(HL)	0.223	0.344	0.523	0.005	0.008	0.013				
		(LH)	0.315	0.525	0.908	0.006	0.011	0.017				
	G → Y	(HH)	0.366	0.597	1.016	0.006	0.011	0.017				
		(LL)	0.256	0.406	0.632	0.005	0.008	0.013				
	H → Y	(HH)	0.377	0.620	1.057	0.006	0.011	0.017				
		(LL)	0.263	0.417	0.654	0.005	0.008	0.013				
F228N2	A → Y	(HL)	0.219	0.344	0.529	0.003	0.004	0.006	A	1.0	Y	139
		(LH)	0.381	0.600	1.000	0.003	0.005	0.009	B	1.0		
	B → Y	(HL)	0.234	0.361	0.554	0.003	0.004	0.006	C	1.0		
		(LH)	0.370	0.598	1.019	0.003	0.005	0.009	D	1.0		
	C → Y	(HL)	0.231	0.365	0.565	0.003	0.004	0.006	E	1.0		
		(LH)	0.385	0.616	1.042	0.003	0.005	0.009	F	1.0		
	D → Y	(HL)	0.246	0.383	0.590	0.003	0.004	0.006	G	1.0		
		(LH)	0.375	0.613	1.062	0.003	0.005	0.009	H	1.0		
	E → Y	(HL)	0.246	0.389	0.602	0.003	0.004	0.006				
		(LH)	0.397	0.642	1.098	0.003	0.005	0.009				
	F → Y	(HL)	0.261	0.407	0.627	0.003	0.004	0.006				
		(LH)	0.387	0.640	1.116	0.003	0.005	0.009				
	G → Y	(HH)	0.440	0.714	1.226	0.003	0.005	0.009				
		(LL)	0.297	0.470	0.736	0.003	0.004	0.007				
	H → Y	(HH)	0.449	0.737	1.266	0.003	0.005	0.009				
		(LL)	0.304	0.482	0.755	0.003	0.004	0.007				
L208N3	A → Y	(HL)	0.152	0.238	0.360	0.010	0.016	0.025	A	1.0	Y	35
		(LH)	0.256	0.400	0.647	0.013	0.021	0.034	B	1.0		
	B → Y	(HL)	0.165	0.254	0.385	0.010	0.016	0.025	C	1.0		
		(LH)	0.245	0.398	0.667	0.013	0.021	0.034	D	1.0		
	C → Y	(HL)	0.167	0.264	0.401	0.010	0.016	0.025	E	1.0		
		(LH)	0.269	0.423	0.697	0.013	0.021	0.034	F	1.0		
	D → Y	(HL)	0.182	0.281	0.425	0.010	0.016	0.025	G	1.0		
		(LH)	0.257	0.422	0.718	0.013	0.021	0.034	H	1.0		
	E → Y	(HL)	0.182	0.286	0.437	0.010	0.016	0.025				
		(LH)	0.277	0.446	0.749	0.013	0.021	0.034				
	F → Y	(HH)	0.324	0.530	0.890	0.013	0.021	0.034				
		(LL)	0.229	0.364	0.568	0.010	0.016	0.025				
	G → Y	(HH)	0.314	0.509	0.861	0.013	0.021	0.034				
		(LL)	0.228	0.361	0.560	0.010	0.016	0.025				
	H → Y	(HH)	0.324	0.532	0.901	0.013	0.021	0.034				
		(LL)	0.235	0.373	0.579	0.010	0.016	0.025				
F208N3	A → Y	(HL)	0.178	0.278	0.425	0.005	0.008	0.013	A	1.0	Y	70
		(LH)	0.306	0.480	0.785	0.006	0.011	0.017	B	1.0		
	B → Y	(HL)	0.192	0.296	0.448	0.005	0.008	0.013	C	1.0		
		(LH)	0.295	0.478	0.805	0.006	0.011	0.017	D	1.0		
	C → Y	(HL)	0.190	0.299	0.459	0.005	0.008	0.013	E	1.0		
		(LH)	0.310	0.492	0.820	0.006	0.011	0.017	F	1.0		
	D → Y	(HL)	0.205	0.316	0.481	0.005	0.008	0.013	G	1.0		
		(LH)	0.299	0.491	0.841	0.006	0.011	0.017	H	1.0		

Block type	Path IN → OUT		Switching speed: t_{LD0} (ns) MIN.	TYP.	MAX.	t_1 MIN.	TYP.	MAX.	Input Symbol	Fanin	Output Symbol	Fanout
	E → Y	(HL)	0.207	0.325	0.499	0.005	0.008	0.013				
		(LH)	0.323	0.521	0.879	0.006	0.011	0.017				
	F → Y	(HH)	0.371	0.605	1.024	0.006	0.011	0.017				
		(LL)	0.254	0.403	0.630	0.005	0.008	0.013				
	G → Y	(HH)	0.367	0.598	1.018	0.006	0.011	0.017				
		(LL)	0.256	0.406	0.631	0.005	0.008	0.013				
	H → Y	(HH)	0.377	0.620	1.057	0.006	0.011	0.017				
		(LL)	0.263	0.418	0.654	0.005	0.008	0.013				
F228N3	A → Y	(HL)	0.219	0.344	0.529	0.003	0.004	0.006	A	1.0	Y	139
		(LH)	0.381	0.600	1.000	0.003	0.005	0.009	B	1.0		
	B → Y	(HL)	0.234	0.361	0.554	0.003	0.004	0.006	C	1.0		
		(LH)	0.370	0.598	1.019	0.003	0.005	0.009	D	1.0		
	C → Y	(HL)	0.231	0.365	0.565	0.003	0.004	0.006	E	1.0		
		(LH)	0.385	0.616	1.042	0.003	0.005	0.009	F	1.0		
	D → Y	(HL)	0.246	0.383	0.590	0.003	0.004	0.006	G	1.0		
		(LH)	0.375	0.613	1.062	0.003	0.005	0.009	H	1.0		
	E → Y	(HL)	0.246	0.388	0.601	0.003	0.004	0.006				
		(LH)	0.396	0.641	1.096	0.003	0.005	0.009				
	F → Y	(HH)	0.444	0.723	1.239	0.003	0.005	0.009				
		(LL)	0.295	0.469	0.734	0.003	0.004	0.006				
	G → Y	(HH)	0.439	0.713	1.225	0.003	0.005	0.009				
		(LL)	0.296	0.470	0.735	0.003	0.004	0.007				
	H → Y	(HH)	0.450	0.738	1.267	0.003	0.005	0.009				
		(LL)	0.305	0.485	0.759	0.003	0.004	0.007				
L208N4	A → Y	(HL)	0.152	0.238	0.360	0.010	0.016	0.025	A	1.0	Y	35
		(LH)	0.256	0.400	0.647	0.013	0.021	0.034	B	1.0		
	B → Y	(HL)	0.165	0.254	0.385	0.010	0.016	0.025	C	1.0		
		(LH)	0.245	0.398	0.667	0.013	0.021	0.034	D	1.0		
	C → Y	(HL)	0.167	0.264	0.401	0.010	0.016	0.025	E	1.0		
		(LH)	0.269	0.423	0.697	0.013	0.021	0.034	F	1.0		
	D → Y	(HL)	0.182	0.281	0.425	0.010	0.016	0.025	G	1.0		
		(LH)	0.257	0.422	0.718	0.013	0.021	0.034	H	1.0		
	E → Y	(HH)	0.311	0.505	0.848	0.013	0.021	0.034				
		(LL)	0.219	0.347	0.542	0.010	0.016	0.025				
	F → Y	(HH)	0.325	0.532	0.895	0.013	0.021	0.034				
		(LL)	0.229	0.365	0.568	0.010	0.016	0.025				
	G → Y	(HH)	0.316	0.511	0.863	0.013	0.021	0.034				
		(LL)	0.230	0.363	0.561	0.010	0.016	0.025				
	H → Y	(HH)	0.324	0.531	0.901	0.013	0.021	0.034				
		(LL)	0.236	0.373	0.579	0.010	0.016	0.025				
F208N4	A → Y	(HL)	0.178	0.279	0.425	0.005	0.008	0.013	A	1.0	Y	70
		(LH)	0.306	0.480	0.786	0.006	0.011	0.017	B	1.0		
	B → Y	(HL)	0.192	0.296	0.448	0.005	0.008	0.013	C	1.0		
		(LH)	0.295	0.479	0.807	0.006	0.011	0.017	D	1.0		
	C → Y	(HL)	0.190	0.299	0.459	0.005	0.008	0.013	E	1.0		
		(LH)	0.310	0.492	0.820	0.006	0.011	0.017	F	1.0		
	D → Y	(HL)	0.205	0.316	0.481	0.005	0.008	0.013	G	1.0		
		(LH)	0.299	0.491	0.841	0.006	0.011	0.017	H	1.0		
	E → Y	(HH)	0.356	0.578	0.978	0.006	0.011	0.017				
		(LL)	0.241	0.383	0.600	0.005	0.008	0.013				
	F → Y	(HH)	0.371	0.606	1.024	0.006	0.011	0.017				
		(LL)	0.253	0.401	0.630	0.005	0.008	0.013				
	G → Y	(HH)	0.366	0.597	1.015	0.006	0.011	0.017				
		(LL)	0.255	0.405	0.630	0.005	0.008	0.013				
	H → Y	(HH)	0.376	0.619	1.056	0.006	0.011	0.017				
		(LL)	0.262	0.417	0.651	0.005	0.008	0.013				

Block type	Path IN → OUT		Switching speed: t_{LD0} (ns) MIN.	TYP.	MAX.	t_1 MIN.	TYP.	MAX.	Input Symbol	Fanin	Output Symbol	Fanout
F228N4	A → Y	(HL)	0.219	0.344	0.529	0.003	0.004	0.006	A	1.0	Y	139
		(LH)	0.381	0.600	1.000	0.003	0.005	0.009	B	1.0		
	B → Y	(HL)	0.234	0.361	0.554	0.003	0.004	0.006	C	1.0		
		(LH)	0.370	0.598	1.019	0.003	0.005	0.009	D	1.0		
	C → Y	(HL)	0.231	0.365	0.565	0.003	0.004	0.006	E	1.0		
		(LH)	0.385	0.616	1.042	0.003	0.005	0.009	F	1.0		
	D → Y	(HL)	0.246	0.383	0.590	0.003	0.004	0.006	G	1.0		
		(LH)	0.375	0.613	1.062	0.003	0.005	0.009	H	1.0		
	E → Y	(HH)	0.438	0.707	1.205	0.003	0.005	0.009				
		(LL)	0.289	0.458	0.718	0.003	0.004	0.006				
	F → Y	(HH)	0.446	0.727	1.243	0.003	0.005	0.009				
		(LL)	0.295	0.469	0.735	0.003	0.004	0.006				
	G → Y	(HH)	0.439	0.713	1.225	0.003	0.005	0.009				
		(LL)	0.296	0.469	0.735	0.003	0.004	0.007				
	H → Y	(HH)	0.451	0.740	1.268	0.003	0.005	0.009				
		(LL)	0.306	0.487	0.762	0.003	0.004	0.007				

Function	2-Input OR								SSI Family			
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power	L212	2										
x1	F212	2										
x2	F232	3										
x4	F252	6										
x8												
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power												
x1												
x2	F232NS	4										
x4	F2D2	7										
x8												

Logic Diagram for "Normal"



Logic Diagram for "with 1 inverter"

Logic Diagram for "with 2 inverter"

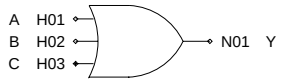
Logic Diagram for "with 3 inverter"

Logic Diagram for "with 4 inverter"

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_{1}						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L212	A → Y	(HH)	0.090	0.138	0.206	0.013	0.021	0.034	A	1.0	Y	35
		(LL)	0.149	0.222	0.332	0.010	0.016	0.025	B	1.0		
	B → Y	(HH)	0.104	0.158	0.233	0.013	0.021	0.034				
		(LL)	0.138	0.220	0.351	0.010	0.016	0.025				
F212	A → Y	(HH)	0.120	0.178	0.253	0.006	0.010	0.017	A	1.0	Y	71
		(LL)	0.197	0.302	0.459	0.005	0.008	0.013	B	1.0		
	B → Y	(HH)	0.132	0.192	0.277	0.006	0.010	0.017				
		(LL)	0.184	0.300	0.480	0.005	0.008	0.013				
F232	A → Y	(HH)	0.161	0.232	0.330	0.003	0.005	0.008	A	1.0	Y	142
		(LL)	0.273	0.425	0.660	0.003	0.004	0.007	B	1.0		
	B → Y	(HH)	0.170	0.242	0.350	0.003	0.005	0.008				
		(LL)	0.260	0.425	0.682	0.003	0.004	0.007				
F252	A → Y	(HH)	0.167	0.238	0.341	0.002	0.003	0.004	A	2.5	Y	286
		(LL)	0.270	0.429	0.677	0.001	0.002	0.003	B	2.4		
	B → Y	(HH)	0.167	0.238	0.342	0.002	0.003	0.004				
		(LL)	0.271	0.428	0.677	0.001	0.002	0.003				
F232NS	A → Y	(HH)	0.122	0.181	0.258	0.003	0.005	0.008	A	2.4	Y	142
		(LL)	0.200	0.304	0.465	0.003	0.004	0.007	B	2.4		
	B → Y	(HH)	0.133	0.194	0.280	0.003	0.005	0.008				
		(LL)	0.186	0.303	0.484	0.003	0.004	0.007				
F2D2	A → Y	(HH)	0.136	0.199	0.282	0.002	0.003	0.004	A	3.7	Y	285
		(LL)	0.226	0.345	0.528	0.001	0.002	0.003	B	3.6		
	B → Y	(HH)	0.146	0.212	0.303	0.002	0.003	0.004				
		(LL)	0.210	0.344	0.550	0.001	0.002	0.003				

Function	3-Input OR										SSI Family	
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power	L213	2										
x1	F213	3										
x2	F233	4										
x4												
x8												
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power												
x1												
x2	F233NS	5										
x4	F2D3	9										
x8												

Logic Diagram for "Normal"



Logic Diagram for "with 1 inverter"

Logic Diagram for "with 2 inverter"

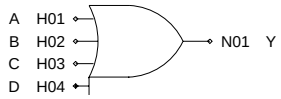
Logic Diagram for "with 3 inverter"

Logic Diagram for "with 4 inverter"

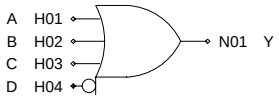
Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_{1}						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L213	A → Y	(HH)	0.097	0.152	0.225	0.013	0.021	0.034	A	1.0	Y	35
		(LL)	0.211	0.319	0.490	0.010	0.016	0.026	B	1.0		
	B → Y	(HH)	0.111	0.171	0.250	0.013	0.021	0.034	C	1.0		
		(LL)	0.216	0.346	0.553	0.010	0.016	0.026				
	C → Y	(HH)	0.117	0.180	0.261	0.013	0.021	0.034				
		(LL)	0.215	0.363	0.604	0.010	0.016	0.026				
F213	A → Y	(HH)	0.126	0.189	0.269	0.006	0.010	0.017	A	1.0	Y	71
		(LL)	0.273	0.422	0.661	0.005	0.008	0.013	B	1.0		
	B → Y	(HH)	0.137	0.203	0.292	0.006	0.010	0.017	C	1.0		
		(LL)	0.280	0.453	0.726	0.005	0.008	0.013				
	C → Y	(HH)	0.145	0.213	0.308	0.006	0.010	0.017				
		(LL)	0.278	0.470	0.775	0.005	0.008	0.013				
F233	A → Y	(HH)	0.165	0.238	0.343	0.003	0.005	0.008	A	1.0	Y	142
		(LL)	0.380	0.600	0.943	0.003	0.004	0.007	B	1.0		
	B → Y	(HH)	0.175	0.251	0.364	0.003	0.005	0.008	C	1.0		
		(LL)	0.388	0.636	1.015	0.003	0.004	0.007				
	C → Y	(HH)	0.183	0.262	0.379	0.003	0.005	0.008				
		(LL)	0.389	0.652	1.062	0.003	0.004	0.007				
F233NS	A → Y	(HH)	0.127	0.191	0.272	0.003	0.005	0.008	A	2.5	Y	142
		(LL)	0.277	0.424	0.664	0.003	0.004	0.007	B	2.5		
	B → Y	(HH)	0.139	0.205	0.296	0.003	0.005	0.008	C	2.4		
		(LL)	0.284	0.459	0.734	0.003	0.004	0.007				
	C → Y	(HH)	0.148	0.217	0.311	0.003	0.005	0.008				
		(LL)	0.281	0.480	0.785	0.003	0.004	0.007				
F2D3	A → Y	(HH)	0.141	0.206	0.295	0.002	0.003	0.004	A	3.7	Y	284
		(LL)	0.308	0.476	0.750	0.001	0.002	0.003	B	3.7		
	B → Y	(HH)	0.152	0.222	0.320	0.002	0.003	0.004	C	3.7		
		(LL)	0.318	0.516	0.837	0.001	0.002	0.003				
	C → Y	(HH)	0.158	0.231	0.331	0.002	0.003	0.004				
		(LL)	0.315	0.534	0.875	0.001	0.002	0.003				

Function	4-Input OR								SSI Family	
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power	L214	3	L214N1	3								
x1	F214	3	F214N1	4								
x2	F234	4	F234N1	5								
x4												
x8												
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power												
x1												
x2												
x4												
x8												

Logic Diagram for "Normal"



Logic Diagram for "with 1 inverter"



Logic Diagram for "with 2 inverter"

Logic Diagram for "with 3 inverter"

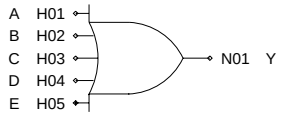
Logic Diagram for "with 4 inverter"

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L214	A → Y	(HH)	0.101	0.158	0.233	0.013	0.021	0.034	A	1.0	Y	35
		(LL)	0.256	0.387	0.602	0.010	0.016	0.026	B	1.0		
	B → Y	(HH)	0.114	0.177	0.259	0.013	0.021	0.034	C	1.0		
		(LL)	0.277	0.442	0.710	0.010	0.016	0.026	D	1.0		
	C → Y	(HH)	0.122	0.187	0.271	0.013	0.021	0.034				
		(LL)	0.296	0.502	0.823	0.010	0.016	0.026				
	D → Y	(HH)	0.123	0.189	0.276	0.013	0.021	0.034				
		(LL)	0.297	0.519	0.858	0.010	0.016	0.026				
F214	A → Y	(HH)	0.131	0.197	0.280	0.006	0.010	0.017	A	1.0	Y	71
		(LL)	0.346	0.538	0.860	0.006	0.009	0.014	B	1.0		
	B → Y	(HH)	0.143	0.211	0.304	0.006	0.010	0.017	C	1.0		
		(LL)	0.370	0.601	0.971	0.006	0.009	0.014	D	1.0		
	C → Y	(HH)	0.150	0.222	0.319	0.006	0.010	0.017				
		(LL)	0.392	0.664	1.088	0.006	0.009	0.014				
	D → Y	(HH)	0.152	0.224	0.323	0.006	0.010	0.017				
		(LL)	0.393	0.680	1.119	0.006	0.009	0.014				
F234	A → Y	(HH)	0.167	0.242	0.347	0.003	0.005	0.008	A	1.0	Y	142
		(LL)	0.472	0.748	1.194	0.003	0.005	0.007	B	1.0		
	B → Y	(HH)	0.177	0.254	0.369	0.003	0.005	0.008	C	1.0		
		(LL)	0.500	0.812	1.311	0.003	0.005	0.007	D	1.0		
	C → Y	(HH)	0.185	0.266	0.386	0.003	0.005	0.008				
		(LL)	0.523	0.874	1.416	0.003	0.005	0.007				
	D → Y	(HH)	0.187	0.268	0.393	0.003	0.005	0.008				
		(LL)	0.524	0.894	1.459	0.003	0.005	0.007				
L214N1	A → Y	(HH)	0.103	0.161	0.236	0.013	0.021	0.034	A	1.0	Y	35
		(LL)	0.262	0.395	0.617	0.010	0.017	0.026	B	1.0		
	B → Y	(HH)	0.116	0.179	0.261	0.013	0.021	0.034	C	1.0		
		(LL)	0.282	0.451	0.725	0.010	0.016	0.026	D	1.0		
	C → Y	(HH)	0.124	0.189	0.275	0.013	0.021	0.034				
		(LL)	0.302	0.511	0.840	0.010	0.017	0.026				
	D → Y	(HL)	0.390	0.632	1.004	0.010	0.017	0.026				
		(LH)	0.152	0.242	0.379	0.013	0.021	0.034				
F214N1	A → Y	(HH)	0.131	0.197	0.280	0.006	0.010	0.017	A	1.0	Y	71
		(LL)	0.346	0.538	0.860	0.006	0.009	0.014	B	1.0		
	B → Y	(HH)	0.143	0.211	0.304	0.006	0.010	0.017	C	1.0		
		(LL)	0.370	0.601	0.970	0.006	0.009	0.014	D	1.0		
	C → Y	(HH)	0.150	0.222	0.319	0.006	0.010	0.017				
		(LL)	0.392	0.664	1.086	0.006	0.009	0.014				
	D → Y	(HL)	0.485	0.785	1.256	0.006	0.009	0.014				
		(LH)	0.172	0.273	0.432	0.006	0.010	0.017				
F234N1	A → Y	(HH)	0.167	0.242	0.347	0.003	0.005	0.008	A	1.0	Y	142
		(LL)	0.472	0.748	1.194	0.003	0.005	0.007	B	1.0		
	B → Y	(HH)	0.177	0.254	0.370	0.003	0.005	0.008	C	1.0		
		(LL)	0.500	0.812	1.311	0.003	0.005	0.007	D	1.0		
	C → Y	(HH)	0.185	0.266	0.386	0.003	0.005	0.008				
		(LL)	0.524	0.875	1.414	0.003	0.005	0.007				
	D → Y	(HL)	0.618	1.001	1.596	0.003	0.005	0.007				
		(LH)	0.201	0.320	0.506	0.003	0.005	0.008				

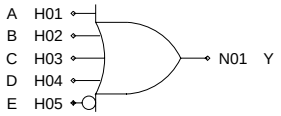
Function	5-Input OR								SSI Family	
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter	-
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	L215	4	L215N1	4						
x1	F215	5	F215N1	5						
x2	F235	7	F235N1	8						
x4										
x8										

Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter	-
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power										
x1										
x2										
x4										
x8										

Logic Diagram for "Normal"



Logic Diagram for "with 1 inverter"



Logic Diagram for "with 2 inverter"

Logic Diagram for "with 3 inverter"

Logic Diagram for "with 4 inverter"

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L215	A → Y	(HH)	0.094	0.146	0.214	0.013	0.021	0.034	A	1.0	Y	31
		(LL)	0.159	0.242	0.364	0.016	0.026	0.044	B	1.0		
	B → Y	(HH)	0.108	0.163	0.238	0.013	0.021	0.034	C	1.0		
		(LL)	0.148	0.240	0.384	0.016	0.026	0.044	D	1.0		
	C → Y	(HH)	0.110	0.175	0.258	0.013	0.021	0.034	E	1.0		
		(LL)	0.208	0.319	0.496	0.016	0.026	0.044				
	D → Y	(HH)	0.124	0.192	0.283	0.013	0.021	0.034				
		(LL)	0.212	0.346	0.558	0.016	0.026	0.044				
	E → Y	(HH)	0.131	0.203	0.297	0.013	0.021	0.034				
		(LL)	0.211	0.364	0.611	0.016	0.026	0.044				
F215	A → Y	(HH)	0.131	0.197	0.284	0.006	0.010	0.017	A	1.0	Y	62
		(LL)	0.207	0.321	0.499	0.008	0.013	0.022	B	1.0		
	B → Y	(HH)	0.143	0.211	0.306	0.006	0.010	0.017	C	1.0		
		(LL)	0.196	0.321	0.520	0.008	0.013	0.022	D	1.0		
	C → Y	(HH)	0.133	0.201	0.293	0.006	0.010	0.017	E	1.0		
		(LL)	0.279	0.430	0.675	0.008	0.013	0.022				
	D → Y	(HH)	0.145	0.217	0.315	0.006	0.010	0.017				
		(LL)	0.285	0.461	0.743	0.008	0.013	0.022				
	E → Y	(HH)	0.153	0.227	0.330	0.006	0.010	0.017				
		(LL)	0.284	0.484	0.800	0.008	0.013	0.022				
F235	A → Y	(HH)	0.210	0.330	0.516	0.003	0.005	0.008	A	1.0	Y	143
		(LL)	0.299	0.463	0.735	0.003	0.004	0.006	B	1.0		
	B → Y	(HH)	0.224	0.348	0.539	0.003	0.005	0.008	C	1.0		
		(LL)	0.286	0.462	0.753	0.003	0.004	0.006	D	1.0		
	C → Y	(HH)	0.226	0.360	0.561	0.003	0.005	0.008	E	1.0		
		(LL)	0.342	0.529	0.848	0.003	0.004	0.006				
	D → Y	(HH)	0.240	0.377	0.585	0.003	0.005	0.008				
		(LL)	0.346	0.560	0.913	0.003	0.004	0.006				
	E → Y	(HH)	0.247	0.389	0.598	0.003	0.005	0.008				
		(LL)	0.344	0.576	0.963	0.003	0.004	0.006				
L215N1	A → Y	(HH)	0.094	0.146	0.214	0.013	0.021	0.034	A	1.0	Y	32
		(LL)	0.158	0.241	0.363	0.016	0.026	0.044	B	1.0		
	B → Y	(HH)	0.107	0.162	0.239	0.013	0.021	0.034	C	1.0		
		(LL)	0.148	0.240	0.383	0.016	0.026	0.044	D	1.0		
	C → Y	(HH)	0.112	0.177	0.260	0.013	0.021	0.034	E	1.0		
		(LL)	0.211	0.324	0.507	0.016	0.026	0.044				
	D → Y	(HH)	0.125	0.194	0.285	0.013	0.021	0.034				
		(LL)	0.216	0.353	0.568	0.016	0.026	0.044				
	E → Y	(HL)	0.284	0.464	0.745	0.016	0.026	0.044				
		(LH)	0.156	0.252	0.400	0.013	0.021	0.034				
F215N1	A → Y	(HH)	0.131	0.197	0.285	0.006	0.010	0.017	A	1.0	Y	62
		(LL)	0.208	0.321	0.500	0.008	0.013	0.022	B	1.0		
	B → Y	(HH)	0.143	0.212	0.306	0.006	0.010	0.017	C	1.0		
		(LL)	0.196	0.322	0.521	0.008	0.013	0.022	D	1.0		
	C → Y	(HH)	0.133	0.202	0.293	0.006	0.010	0.017	E	1.0		
		(LL)	0.279	0.431	0.676	0.008	0.013	0.022				
	D → Y	(HH)	0.145	0.217	0.316	0.006	0.010	0.017				
		(LL)	0.285	0.463	0.744	0.008	0.013	0.022				
	E → Y	(HL)	0.360	0.580	0.925	0.008	0.013	0.022				
		(LH)	0.170	0.273	0.432	0.006	0.010	0.017				
F235N1	A → Y	(HH)	0.210	0.330	0.515	0.003	0.005	0.008	A	1.0	Y	143
		(LL)	0.298	0.462	0.731	0.003	0.004	0.006	B	1.0		
	B → Y	(HH)	0.224	0.347	0.538	0.003	0.005	0.008	C	1.0		
		(LL)	0.285	0.461	0.752	0.003	0.004	0.006	D	1.0		
	C → Y	(HH)	0.226	0.359	0.559	0.003	0.005	0.008	E	1.0		
		(LL)	0.340	0.529	0.847	0.003	0.004	0.006				

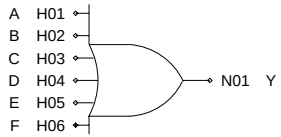
Block type	Switching speed										
	Path		t LD0 (ns)			t 1			Input		Output	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	D → Y	(HH)	0.239	0.376	0.583	0.003	0.005	0.008				
		(LL)	0.345	0.557	0.909	0.003	0.004	0.006				
	E → Y	(HL)	0.418	0.673	1.091	0.003	0.004	0.006				
		(LH)	0.277	0.443	0.705	0.003	0.005	0.008				

[MEMO]

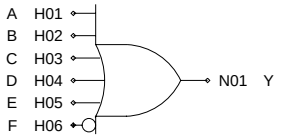
Function	6-Input OR										SSI Family	
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power	L216	4	L216N1	5	L216N2	5						
x1	F216	5	F216N1	6	F216N2	6						
x2	F236	7	F236N1	8	F236N2	8						
x4												
x8												

Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power												
x1												
x2												
x4												
x8												

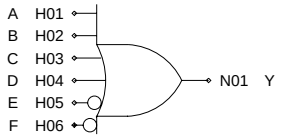
Logic Diagram for "Normal"



Logic Diagram for "with 1 inverter"



Logic Diagram for "with 2 inverter"



Logic Diagram for "with 3 inverter"

Logic Diagram for "with 4 inverter"

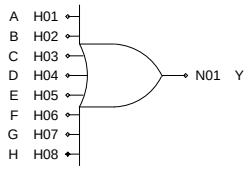
Block type	Switching speed									Input		Output	
	Path		t_{LD0} (ns)			t_1							
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		Symbol	Fanin	Symbol	Fanout
L216	A → Y	(HH)	0.107	0.168	0.244	0.013	0.021	0.034		A	1.0	Y	31
		(LL)	0.242	0.369	0.572	0.016	0.026	0.044		B	1.0		
	B → Y	(HH)	0.120	0.183	0.267	0.013	0.021	0.034		C	1.0		
		(LL)	0.248	0.398	0.637	0.016	0.026	0.044		D	1.0		
	C → Y	(HH)	0.127	0.194	0.281	0.013	0.021	0.034		E	1.0		
		(LL)	0.246	0.416	0.687	0.016	0.026	0.044		F	1.0		
	D → Y	(HH)	0.112	0.176	0.261	0.013	0.021	0.034					
		(LL)	0.211	0.325	0.509	0.016	0.026	0.044					
	E → Y	(HH)	0.125	0.194	0.285	0.013	0.021	0.034					
		(LL)	0.216	0.352	0.569	0.016	0.026	0.044					
	F → Y	(HH)	0.133	0.204	0.300	0.013	0.021	0.034					
		(LL)	0.216	0.374	0.626	0.016	0.026	0.044					
F216	A → Y	(HH)	0.136	0.206	0.299	0.006	0.010	0.017		A	1.0	Y	63
		(LL)	0.288	0.445	0.701	0.008	0.013	0.022		B	1.0		
	B → Y	(HH)	0.148	0.221	0.321	0.006	0.010	0.017		C	1.0		
		(LL)	0.293	0.477	0.767	0.008	0.013	0.022		D	1.0		
	C → Y	(HH)	0.155	0.231	0.335	0.006	0.010	0.017		E	1.0		
		(LL)	0.293	0.495	0.818	0.008	0.013	0.022		F	1.0		
	D → Y	(HH)	0.133	0.201	0.292	0.006	0.010	0.017					
		(LL)	0.279	0.430	0.676	0.008	0.013	0.022					
	E → Y	(HH)	0.145	0.217	0.315	0.006	0.010	0.017					
		(LL)	0.285	0.462	0.743	0.008	0.013	0.022					
	F → Y	(HH)	0.152	0.227	0.330	0.006	0.010	0.017					
		(LL)	0.287	0.484	0.801	0.008	0.013	0.022					
F236	A → Y	(HH)	0.213	0.338	0.527	0.003	0.005	0.008		A	1.0	Y	143
		(LL)	0.353	0.546	0.874	0.003	0.004	0.006		B	1.0		
	B → Y	(HH)	0.226	0.355	0.551	0.003	0.005	0.008		C	1.0		
		(LL)	0.357	0.574	0.935	0.003	0.004	0.006		D	1.0		
	C → Y	(HH)	0.233	0.367	0.563	0.003	0.005	0.008		E	1.0		
		(LL)	0.356	0.592	0.985	0.003	0.004	0.006		F	1.0		
	D → Y	(HH)	0.227	0.362	0.563	0.003	0.005	0.008					
		(LL)	0.345	0.537	0.860	0.003	0.004	0.006					
	E → Y	(HH)	0.241	0.379	0.587	0.003	0.005	0.008					
		(LL)	0.350	0.564	0.923	0.003	0.004	0.006					
	F → Y	(HH)	0.248	0.391	0.601	0.003	0.005	0.008					
		(LL)	0.349	0.581	0.975	0.003	0.004	0.006					
L216N1	A → Y	(HH)	0.104	0.163	0.237	0.013	0.021	0.034		A	1.0	Y	32
		(LL)	0.233	0.354	0.549	0.016	0.026	0.044		B	1.0		
	B → Y	(HH)	0.117	0.179	0.262	0.013	0.021	0.034		C	1.0		
		(LL)	0.239	0.383	0.613	0.016	0.026	0.044		D	1.0		
	C → Y	(HH)	0.124	0.190	0.276	0.013	0.021	0.034		E	1.0		
		(LL)	0.238	0.405	0.668	0.016	0.026	0.044		F	1.0		
	D → Y	(HH)	0.117	0.183	0.272	0.013	0.021	0.034					
		(LL)	0.222	0.345	0.541	0.016	0.026	0.044					
	E → Y	(HH)	0.130	0.200	0.295	0.013	0.021	0.034					
		(LL)	0.227	0.373	0.606	0.016	0.026	0.044					
	F → Y	(HL)	0.299	0.489	0.784	0.016	0.026	0.044					
		(LH)	0.164	0.262	0.413	0.013	0.021	0.034					
F216N1	A → Y	(HH)	0.136	0.206	0.299	0.006	0.010	0.017		A	1.0	Y	63
		(LL)	0.288	0.445	0.701	0.008	0.013	0.022		B	1.0		
	B → Y	(HH)	0.148	0.221	0.321	0.006	0.010	0.017		C	1.0		
		(LL)	0.293	0.477	0.768	0.008	0.013	0.022		D	1.0		
	C → Y	(HH)	0.156	0.231	0.335	0.006	0.010	0.017		E	1.0		
		(LL)	0.294	0.495	0.819	0.008	0.013	0.022		F	1.0		
	D → Y	(HH)	0.131	0.200	0.290	0.006	0.010	0.017					
		(LL)	0.273	0.424	0.669	0.008	0.013	0.022					

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			Input		Output	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	E → Y	(HH)	0.143	0.215	0.312	0.006	0.010	0.017				
		(LL)	0.282	0.456	0.732	0.008	0.013	0.022				
	F → Y	(HL)	0.361	0.581	0.925	0.008	0.013	0.022				
		(LH)	0.177	0.282	0.444	0.006	0.010	0.017				
F236N1	A → Y	(HH)	0.213	0.338	0.527	0.003	0.005	0.008	A	1.0	Y	143
		(LL)	0.355	0.548	0.876	0.003	0.004	0.006	B	1.0		
	B → Y	(HH)	0.226	0.356	0.551	0.003	0.005	0.008	C	1.0		
		(LL)	0.358	0.576	0.938	0.003	0.004	0.006	D	1.0		
	C → Y	(HH)	0.233	0.367	0.564	0.003	0.005	0.008	E	1.0		
		(LL)	0.359	0.594	0.989	0.003	0.004	0.006	F	1.0		
	D → Y	(HH)	0.227	0.362	0.563	0.003	0.005	0.008				
		(LL)	0.345	0.537	0.860	0.003	0.004	0.006				
	E → Y	(HH)	0.241	0.379	0.587	0.003	0.005	0.008				
		(LL)	0.349	0.564	0.923	0.003	0.004	0.006				
	F → Y	(HL)	0.420	0.680	1.104	0.003	0.004	0.006				
		(LH)	0.276	0.442	0.704	0.003	0.005	0.008				
L216N2	A → Y	(HH)	0.104	0.163	0.237	0.013	0.021	0.034	A	1.0	Y	32
		(LL)	0.233	0.354	0.549	0.016	0.026	0.044	B	1.0		
	B → Y	(HH)	0.117	0.179	0.262	0.013	0.021	0.034	C	1.0		
		(LL)	0.239	0.383	0.613	0.016	0.026	0.044	D	1.0		
	C → Y	(HH)	0.124	0.190	0.276	0.013	0.021	0.034	E	1.0		
		(LL)	0.238	0.405	0.668	0.016	0.026	0.044	F	1.0		
	D → Y	(HH)	0.117	0.183	0.272	0.013	0.021	0.034				
		(LL)	0.222	0.345	0.542	0.016	0.026	0.044				
	E → Y	(HL)	0.280	0.459	0.732	0.016	0.026	0.044				
		(LH)	0.161	0.257	0.399	0.013	0.021	0.034				
	F → Y	(HL)	0.300	0.492	0.789	0.016	0.026	0.044				
		(LH)	0.164	0.262	0.413	0.013	0.021	0.034				
F216N2	A → Y	(HH)	0.137	0.206	0.300	0.006	0.010	0.017	A	1.0	Y	63
		(LL)	0.288	0.446	0.702	0.008	0.013	0.022	B	1.0		
	B → Y	(HH)	0.148	0.222	0.322	0.006	0.010	0.017	C	1.0		
		(LL)	0.293	0.477	0.769	0.008	0.013	0.022	D	1.0		
	C → Y	(HH)	0.156	0.232	0.336	0.006	0.010	0.017	E	1.0		
		(LL)	0.294	0.496	0.820	0.008	0.013	0.022	F	1.0		
	D → Y	(HH)	0.132	0.200	0.290	0.006	0.010	0.017				
		(LL)	0.273	0.424	0.667	0.008	0.013	0.022				
	E → Y	(HL)	0.337	0.545	0.864	0.008	0.013	0.022				
		(LH)	0.171	0.272	0.426	0.006	0.010	0.017				
	F → Y	(HL)	0.363	0.586	0.932	0.008	0.013	0.022				
		(LH)	0.179	0.286	0.450	0.006	0.010	0.017				
F236N2	A → Y	(HH)	0.213	0.338	0.527	0.003	0.005	0.008	A	1.0	Y	143
		(LL)	0.355	0.548	0.876	0.003	0.004	0.006	B	1.0		
	B → Y	(HH)	0.226	0.356	0.551	0.003	0.005	0.008	C	1.0		
		(LL)	0.358	0.576	0.938	0.003	0.004	0.006	D	1.0		
	C → Y	(HH)	0.233	0.367	0.564	0.003	0.005	0.008	E	1.0		
		(LL)	0.359	0.594	0.989	0.003	0.004	0.006	F	1.0		
	D → Y	(HH)	0.231	0.367	0.571	0.003	0.005	0.008				
		(LL)	0.353	0.550	0.881	0.003	0.004	0.006				
	E → Y	(HL)	0.407	0.662	1.072	0.003	0.004	0.006				
		(LH)	0.271	0.436	0.693	0.003	0.005	0.008				
	F → Y	(HL)	0.431	0.698	1.130	0.002	0.004	0.006				
		(LH)	0.279	0.449	0.711	0.003	0.005	0.008				

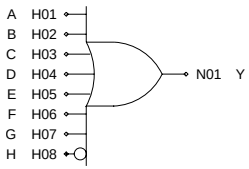
[MEMO]

Function	8-Input OR										SSI Family	
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power	L218	6	L218N1	7	L218N2	7	L218N3	8				
x1	F218	8	F218N1	9	F218N2	9	F218N3	10				
x2	F238	9	F238N1	10	F238N2	10	F238N3	11				
x4												
x8												
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power												
x1												
x2												
x4												
x8												

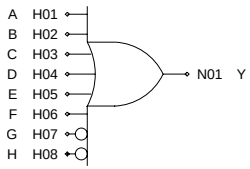
Logic Diagram for "Normal"



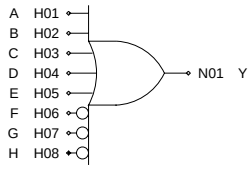
Logic Diagram for "with 1 inverter"



Logic Diagram for "with 2 inverter"



Logic Diagram for "with 3 inverter"



Logic Diagram for "with 4 inverter"

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L218	A → Y	(HH)	0.098	0.154	0.227	0.013	0.021	0.034	A	1.0	Y	15
		(LL)	0.177	0.268	0.407	0.029	0.047	0.084	B	1.0		
	B → Y	(HH)	0.112	0.171	0.253	0.013	0.021	0.034	C	1.0		
		(LL)	0.168	0.265	0.427	0.029	0.047	0.084	D	1.0		
	C → Y	(HH)	0.112	0.176	0.262	0.013	0.021	0.034	E	1.0		
		(LL)	0.194	0.298	0.469	0.029	0.047	0.084	F	1.0		
	D → Y	(HH)	0.126	0.194	0.287	0.013	0.021	0.034	G	1.0		
		(LL)	0.182	0.297	0.486	0.029	0.047	0.084	H	1.0		
	E → Y	(HH)	0.123	0.194	0.291	0.013	0.021	0.034				
		(LL)	0.206	0.324	0.527	0.029	0.047	0.084				
	F → Y	(HH)	0.137	0.212	0.316	0.013	0.021	0.034				
		(LL)	0.194	0.324	0.545	0.029	0.047	0.084				
	G → Y	(HH)	0.124	0.199	0.300	0.013	0.021	0.034				
		(LL)	0.202	0.328	0.533	0.029	0.047	0.084				
	H → Y	(HH)	0.140	0.217	0.325	0.013	0.021	0.034				
		(LL)	0.192	0.323	0.553	0.029	0.047	0.084				
F218	A → Y	(HH)	0.205	0.324	0.504	0.006	0.010	0.017	A	1.0	Y	71
		(LL)	0.350	0.543	0.880	0.005	0.008	0.013	B	1.0		
	B → Y	(HH)	0.219	0.341	0.527	0.006	0.010	0.017	C	1.0		
		(LL)	0.338	0.541	0.900	0.005	0.008	0.013	D	1.0		
	C → Y	(HH)	0.220	0.348	0.543	0.006	0.010	0.017	E	1.0		
		(LL)	0.359	0.562	0.929	0.005	0.008	0.013	F	1.0		
	D → Y	(HH)	0.234	0.365	0.564	0.006	0.010	0.017	G	1.0		
		(LL)	0.348	0.561	0.948	0.005	0.008	0.013	H	1.0		
	E → Y	(HH)	0.235	0.373	0.578	0.006	0.010	0.017				
		(LL)	0.371	0.589	0.985	0.005	0.008	0.013				
	F → Y	(HH)	0.248	0.389	0.600	0.006	0.010	0.017				
		(LL)	0.359	0.588	1.005	0.005	0.008	0.013				
	G → Y	(HH)	0.242	0.384	0.594	0.006	0.010	0.017				
		(LL)	0.370	0.593	1.000	0.005	0.008	0.013				
	H → Y	(HH)	0.256	0.401	0.616	0.006	0.010	0.017				
		(LL)	0.357	0.592	1.018	0.005	0.008	0.013				
F238	A → Y	(HH)	0.223	0.351	0.548	0.003	0.005	0.008	A	1.0	Y	143
		(LL)	0.376	0.588	0.958	0.003	0.004	0.006	B	1.0		
	B → Y	(HH)	0.236	0.368	0.572	0.003	0.005	0.008	C	1.0		
		(LL)	0.365	0.587	0.977	0.003	0.004	0.006	D	1.0		
	C → Y	(HH)	0.238	0.376	0.587	0.003	0.005	0.008	E	1.0		
		(LL)	0.387	0.609	1.006	0.003	0.004	0.006	F	1.0		
	D → Y	(HH)	0.253	0.393	0.609	0.003	0.005	0.008	G	1.0		
		(LL)	0.375	0.608	1.026	0.003	0.004	0.006	H	1.0		
	E → Y	(HH)	0.254	0.402	0.625	0.003	0.005	0.008				
		(LL)	0.398	0.635	1.063	0.003	0.004	0.006				
	F → Y	(HH)	0.267	0.418	0.646	0.003	0.005	0.008				
		(LL)	0.385	0.635	1.081	0.003	0.004	0.006				
	G → Y	(HH)	0.261	0.413	0.642	0.003	0.005	0.008				
		(LL)	0.397	0.639	1.076	0.003	0.004	0.006				
	H → Y	(HH)	0.274	0.430	0.663	0.003	0.005	0.008				
		(LL)	0.385	0.638	1.096	0.003	0.004	0.006				
L218N1	A → Y	(HH)	0.098	0.154	0.227	0.013	0.021	0.034	A	1.0	Y	15
		(LL)	0.177	0.268	0.407	0.029	0.047	0.084	B	1.0		
	B → Y	(HH)	0.112	0.171	0.253	0.013	0.021	0.034	C	1.0		
		(LL)	0.168	0.265	0.427	0.029	0.047	0.084	D	1.0		
	C → Y	(HH)	0.112	0.176	0.262	0.013	0.021	0.034	E	1.0		
		(LL)	0.194	0.298	0.469	0.029	0.047	0.084	F	1.0		
	D → Y	(HH)	0.126	0.194	0.287	0.013	0.021	0.034	G	1.0		
		(LL)	0.182	0.297	0.486	0.029	0.047	0.084	H	1.0		

Block type	Path		Switching speed t LD0 (ns) MIN.	TYP.	MAX.	t 1 MIN.	TYP.	MAX.	Input Symbol	Fanin	Output Symbol	Fanout
	E → Y	(HH)	0.123	0.194	0.291	0.013	0.021	0.034				
		(LL)	0.206	0.324	0.527	0.029	0.047	0.084				
	F → Y	(HH)	0.137	0.212	0.316	0.013	0.021	0.034				
		(LL)	0.194	0.324	0.545	0.029	0.047	0.084				
	G → Y	(HH)	0.124	0.199	0.300	0.013	0.021	0.034				
		(LL)	0.202	0.327	0.533	0.029	0.047	0.084				
	H → Y	(HL)	0.251	0.406	0.676	0.029	0.047	0.084				
		(LH)	0.173	0.278	0.433	0.013	0.021	0.034				
F218N1	A → Y	(HH)	0.206	0.325	0.506	0.006	0.010	0.017	A	1.0	Y	71
		(LL)	0.351	0.544	0.884	0.005	0.008	0.013	B	1.0		
	B → Y	(HH)	0.221	0.342	0.529	0.006	0.010	0.017	C	1.0		
		(LL)	0.340	0.543	0.904	0.005	0.008	0.013	D	1.0		
	C → Y	(HH)	0.221	0.350	0.545	0.006	0.010	0.017	E	1.0		
		(LL)	0.361	0.565	0.934	0.005	0.008	0.013	F	1.0		
	D → Y	(HH)	0.236	0.366	0.566	0.006	0.010	0.017	G	1.0		
		(LL)	0.349	0.564	0.953	0.005	0.008	0.013	H	1.0		
	E → Y	(HH)	0.236	0.374	0.581	0.006	0.010	0.017				
		(LL)	0.373	0.591	0.989	0.005	0.008	0.013				
	F → Y	(HH)	0.249	0.390	0.602	0.006	0.010	0.017				
		(LL)	0.361	0.590	1.009	0.005	0.008	0.013				
	G → Y	(HH)	0.242	0.384	0.596	0.006	0.010	0.017				
		(LL)	0.371	0.595	1.003	0.005	0.008	0.013				
	H → Y	(HL)	0.419	0.679	1.146	0.005	0.008	0.013				
		(LH)	0.288	0.461	0.728	0.006	0.010	0.017				
F238N1	A → Y	(HH)	0.223	0.351	0.548	0.003	0.005	0.008	A	1.0	Y	143
		(LL)	0.376	0.588	0.958	0.003	0.004	0.006	B	1.0		
	B → Y	(HH)	0.236	0.368	0.572	0.003	0.005	0.008	C	1.0		
		(LL)	0.365	0.587	0.977	0.003	0.004	0.006	D	1.0		
	C → Y	(HH)	0.238	0.376	0.588	0.003	0.005	0.008	E	1.0		
		(LL)	0.387	0.609	1.007	0.003	0.004	0.006	F	1.0		
	D → Y	(HH)	0.252	0.393	0.609	0.003	0.005	0.008	G	1.0		
		(LL)	0.375	0.609	1.026	0.003	0.004	0.006	H	1.0		
	E → Y	(HH)	0.254	0.402	0.625	0.003	0.005	0.008				
		(LL)	0.398	0.635	1.063	0.003	0.004	0.006				
	F → Y	(HH)	0.267	0.418	0.646	0.003	0.005	0.008				
		(LL)	0.385	0.635	1.081	0.003	0.004	0.006				
	G → Y	(HH)	0.261	0.413	0.641	0.003	0.005	0.008				
		(LL)	0.398	0.639	1.076	0.003	0.004	0.006				
	H → Y	(HL)	0.444	0.723	1.219	0.003	0.004	0.006				
		(LH)	0.306	0.490	0.772	0.003	0.005	0.008				
L218N2	A → Y	(HH)	0.098	0.154	0.227	0.013	0.021	0.034	A	1.0	Y	15
		(LL)	0.177	0.268	0.407	0.029	0.047	0.084	B	1.0		
	B → Y	(HH)	0.112	0.171	0.253	0.013	0.021	0.034	C	1.0		
		(LL)	0.168	0.265	0.427	0.029	0.047	0.084	D	1.0		
	C → Y	(HH)	0.112	0.176	0.262	0.013	0.021	0.034	E	1.0		
		(LL)	0.194	0.298	0.469	0.029	0.047	0.084	F	1.0		
	D → Y	(HH)	0.126	0.194	0.287	0.013	0.021	0.034	G	1.0		
		(LL)	0.182	0.297	0.486	0.029	0.047	0.084	H	1.0		
	E → Y	(HH)	0.123	0.194	0.291	0.013	0.021	0.034				
		(LL)	0.206	0.324	0.527	0.029	0.047	0.084				
	F → Y	(HH)	0.137	0.212	0.316	0.013	0.021	0.034				
		(LL)	0.194	0.324	0.545	0.029	0.047	0.084				
	G → Y	(HL)	0.243	0.386	0.637	0.029	0.047	0.084				
		(LH)	0.166	0.264	0.411	0.013	0.021	0.034				
	H → Y	(HL)	0.253	0.410	0.677	0.029	0.047	0.084				
		(LH)	0.174	0.278	0.432	0.013	0.021	0.034				

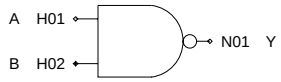
Block type	Path		Switching speed t LD0 (ns) MIN.	TYP.	MAX.	t 1 MIN.	TYP.	MAX.	Input Symbol	Fanin	Output Symbol	Fanout
F218N2	A → Y	(HH)	0.206	0.325	0.506	0.006	0.010	0.017	A	1.0	Y	71
		(LL)	0.351	0.544	0.884	0.005	0.008	0.013	B	1.0		
	B → Y	(HH)	0.221	0.342	0.529	0.006	0.010	0.017	C	1.0		
		(LL)	0.340	0.543	0.904	0.005	0.008	0.013	D	1.0		
	C → Y	(HH)	0.221	0.350	0.545	0.006	0.010	0.017	E	1.0		
		(LL)	0.361	0.565	0.934	0.005	0.008	0.013	F	1.0		
	D → Y	(HH)	0.236	0.366	0.566	0.006	0.010	0.017	G	1.0		
		(LL)	0.349	0.564	0.953	0.005	0.008	0.013	H	1.0		
	E → Y	(HH)	0.236	0.374	0.581	0.006	0.010	0.017				
		(LL)	0.373	0.591	0.989	0.005	0.008	0.013				
	F → Y	(HH)	0.249	0.390	0.602	0.006	0.010	0.017				
		(LL)	0.361	0.590	1.009	0.005	0.008	0.013				
	G → Y	(HL)	0.408	0.658	1.106	0.005	0.008	0.013				
		(LH)	0.281	0.448	0.707	0.006	0.010	0.017				
	H → Y	(HL)	0.420	0.681	1.149	0.005	0.008	0.013				
		(LH)	0.288	0.460	0.725	0.006	0.010	0.017				
F238N2	A → Y	(HH)	0.223	0.351	0.548	0.003	0.005	0.008	A	1.0	Y	143
		(LL)	0.376	0.588	0.958	0.003	0.004	0.006	B	1.0		
	B → Y	(HH)	0.236	0.368	0.572	0.003	0.005	0.008	C	1.0		
		(LL)	0.365	0.587	0.977	0.003	0.004	0.006	D	1.0		
	C → Y	(HH)	0.238	0.376	0.588	0.003	0.005	0.008	E	1.0		
		(LL)	0.387	0.609	1.007	0.003	0.004	0.006	F	1.0		
	D → Y	(HH)	0.252	0.393	0.609	0.003	0.005	0.008	G	1.0		
		(LL)	0.375	0.609	1.026	0.003	0.004	0.006	H	1.0		
	E → Y	(HH)	0.254	0.402	0.625	0.003	0.005	0.008				
		(LL)	0.398	0.635	1.063	0.003	0.004	0.006				
	F → Y	(HH)	0.267	0.418	0.646	0.003	0.005	0.008				
		(LL)	0.385	0.635	1.081	0.003	0.004	0.006				
	G → Y	(HL)	0.434	0.702	1.180	0.003	0.004	0.006				
		(LH)	0.299	0.478	0.753	0.003	0.005	0.008				
	H → Y	(HL)	0.446	0.725	1.222	0.003	0.004	0.006				
		(LH)	0.306	0.490	0.774	0.003	0.005	0.008				
L218N3	A → Y	(HH)	0.098	0.154	0.227	0.013	0.021	0.034	A	1.0	Y	15
		(LL)	0.177	0.268	0.407	0.029	0.047	0.084	B	1.0		
	B → Y	(HH)	0.112	0.171	0.253	0.013	0.021	0.034	C	1.0		
		(LL)	0.168	0.265	0.427	0.029	0.047	0.084	D	1.0		
	C → Y	(HH)	0.112	0.176	0.262	0.013	0.021	0.034	E	1.0		
		(LL)	0.194	0.298	0.469	0.029	0.047	0.084	F	1.0		
	D → Y	(HH)	0.126	0.194	0.287	0.013	0.021	0.034	G	1.0		
		(LL)	0.182	0.297	0.486	0.029	0.047	0.084	H	1.0		
	E → Y	(HH)	0.123	0.194	0.291	0.013	0.021	0.034				
		(LL)	0.206	0.324	0.527	0.029	0.047	0.084				
	F → Y	(HL)	0.252	0.408	0.665	0.029	0.047	0.084				
		(LH)	0.171	0.273	0.425	0.013	0.021	0.034				
	G → Y	(HL)	0.243	0.386	0.637	0.029	0.047	0.084				
		(LH)	0.166	0.264	0.411	0.013	0.021	0.034				
	H → Y	(HL)	0.253	0.410	0.677	0.029	0.047	0.084				
		(LH)	0.174	0.278	0.432	0.013	0.021	0.034				
F218N3	A → Y	(HH)	0.205	0.323	0.503	0.006	0.010	0.017	A	1.0	Y	71
		(LL)	0.349	0.541	0.878	0.005	0.008	0.013	B	1.0		
	B → Y	(HH)	0.219	0.340	0.526	0.006	0.010	0.017	C	1.0		
		(LL)	0.337	0.540	0.898	0.005	0.008	0.013	D	1.0		
	C → Y	(HH)	0.220	0.348	0.542	0.006	0.010	0.017	E	1.0		
		(LL)	0.359	0.562	0.927	0.005	0.008	0.013	F	1.0		
	D → Y	(HH)	0.233	0.365	0.563	0.006	0.010	0.017	G	1.0		
		(LL)	0.347	0.561	0.947	0.005	0.008	0.013	H	1.0		

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			Input		Output	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	E → Y	(HH)	0.235	0.372	0.578	0.006	0.010	0.017				
		(LL)	0.370	0.587	0.983	0.005	0.008	0.013				
	F → Y	(HL)	0.416	0.673	1.125	0.005	0.008	0.013				
		(LH)	0.278	0.446	0.709	0.006	0.010	0.017				
	G → Y	(HL)	0.406	0.654	1.103	0.005	0.008	0.013				
		(LH)	0.279	0.444	0.704	0.006	0.010	0.017				
	H → Y	(HL)	0.417	0.678	1.142	0.005	0.008	0.013				
		(LH)	0.287	0.458	0.725	0.006	0.010	0.017				
F238N3	A → Y	(HH)	0.223	0.351	0.548	0.003	0.005	0.008	A	1.0	Y	143
		(LL)	0.376	0.588	0.958	0.003	0.004	0.006	B	1.0		
	B → Y	(HH)	0.236	0.368	0.572	0.003	0.005	0.008	C	1.0		
		(LL)	0.365	0.587	0.977	0.003	0.004	0.006	D	1.0		
	C → Y	(HH)	0.238	0.376	0.588	0.003	0.005	0.008	E	1.0		
		(LL)	0.387	0.609	1.007	0.003	0.004	0.006	F	1.0		
	D → Y	(HH)	0.252	0.393	0.609	0.003	0.005	0.008	G	1.0		
		(LL)	0.375	0.609	1.026	0.003	0.004	0.006	H	1.0		
	E → Y	(HH)	0.254	0.402	0.625	0.003	0.005	0.008				
		(LL)	0.398	0.635	1.063	0.003	0.004	0.006				
	F → Y	(HL)	0.444	0.719	1.205	0.003	0.004	0.006				
		(LH)	0.297	0.478	0.756	0.003	0.005	0.008				
	G → Y	(HL)	0.433	0.701	1.181	0.003	0.004	0.006				
		(LH)	0.298	0.475	0.750	0.003	0.005	0.008				
	H → Y	(HL)	0.446	0.726	1.222	0.003	0.004	0.006				
		(LH)	0.306	0.490	0.773	0.003	0.005	0.008				

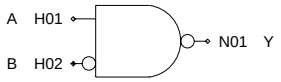
[MEMO]

Function	2-Input NAND										SSI Family	
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power	L302	1	L302N1	2								
x1	F302	2	F302N1	3								
x2	F322	4	F322N1	5								
x4	F382	6	F382N1	7								
x8	F3C2K	12										
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power												
x1												
x2												
x4	F382NS	8	F382N1S	10								
x8												

Logic Diagram for "Normal"



Logic Diagram for "with 1 inverter"



Logic Diagram for "with 2 inverter"

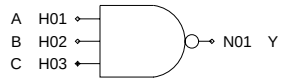
Logic Diagram for "with 3 inverter"

Logic Diagram for "with 4 inverter"

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L302	A → Y	(HL)	0.095	0.110	0.136	0.016	0.026	0.044	A	1.0	Y	32
		(LH)	0.046	0.075	0.103	0.013	0.021	0.034	B	1.0		
	B → Y	(HL)	0.073	0.095	0.133	0.016	0.026	0.044				
		(LH)	0.060	0.095	0.130	0.013	0.021	0.034				
F302	A → Y	(HL)	0.082	0.103	0.133	0.008	0.013	0.022	A	2.5	Y	64
		(LH)	0.053	0.085	0.121	0.006	0.010	0.017	B	2.4		
	B → Y	(HL)	0.082	0.103	0.133	0.008	0.013	0.022				
		(LH)	0.053	0.085	0.121	0.006	0.010	0.017				
F322	A → Y	(HL)	0.081	0.101	0.132	0.004	0.006	0.011	A	4.8	Y	129
		(LH)	0.052	0.083	0.118	0.003	0.005	0.008	B	5.0		
	B → Y	(HL)	0.081	0.102	0.133	0.004	0.006	0.011				
		(LH)	0.052	0.083	0.119	0.003	0.005	0.008				
F382	A → Y	(HL)	0.275	0.407	0.622	0.001	0.002	0.003	A	1.0	Y	288
		(LH)	0.197	0.313	0.487	0.002	0.003	0.004	B	1.0		
	B → Y	(HL)	0.257	0.391	0.619	0.001	0.002	0.003				
		(LH)	0.216	0.337	0.523	0.002	0.003	0.004				
F3C2K	A → Y	(HL)	0.350	0.510	0.805	0.001	0.001	0.002	A	1.0	Y	144
		(LH)	0.263	0.414	0.647	0.001	0.001	0.002	B	1.0		
	B → Y	(HL)	0.323	0.494	0.801	0.001	0.001	0.002				
		(LH)	0.277	0.435	0.678	0.001	0.001	0.002				
F382NS	A → Y	(HL)	0.097	0.114	0.141	0.002	0.003	0.006	A	9.6	Y	256
		(LH)	0.047	0.077	0.110	0.002	0.003	0.004	B	9.7		
	B → Y	(HL)	0.074	0.101	0.142	0.002	0.003	0.006				
		(LH)	0.061	0.097	0.139	0.002	0.003	0.004				
L302N1	A → Y	(HL)	0.096	0.110	0.135	0.016	0.026	0.044	A	1.0	Y	32
		(LH)	0.046	0.075	0.103	0.013	0.021	0.034	B	1.0		
	B → Y	(HH)	0.108	0.161	0.237	0.013	0.021	0.034				
		(LL)	0.105	0.164	0.255	0.016	0.026	0.044				
F302N1	A → Y	(HL)	0.083	0.103	0.137	0.008	0.013	0.022	A	2.4	Y	64
		(LH)	0.053	0.085	0.120	0.006	0.010	0.017	B	1.0		
	B → Y	(HH)	0.129	0.187	0.269	0.006	0.010	0.017				
		(LL)	0.131	0.202	0.309	0.008	0.013	0.022				
F322N1	A → Y	(HL)	0.082	0.103	0.140	0.004	0.006	0.011	A	4.8	Y	127
		(LH)	0.052	0.084	0.119	0.003	0.005	0.008	B	1.0		
	B → Y	(HH)	0.168	0.241	0.346	0.003	0.005	0.008				
		(LL)	0.175	0.270	0.414	0.004	0.007	0.011				
F382N1	A → Y	(HL)	0.276	0.407	0.622	0.001	0.002	0.003	A	1.0	Y	287
		(LH)	0.197	0.314	0.487	0.002	0.003	0.004	B	1.0		
	B → Y	(HH)	0.255	0.396	0.620	0.002	0.003	0.004				
		(LL)	0.278	0.448	0.729	0.001	0.002	0.003				
F382N1S	A → Y	(HL)	0.097	0.113	0.142	0.002	0.003	0.006	A	9.6	Y	256
		(LH)	0.047	0.077	0.110	0.002	0.003	0.004	B	4.8		
	B → Y	(HH)	0.133	0.194	0.282	0.002	0.003	0.004				
		(LL)	0.128	0.201	0.310	0.002	0.003	0.006				

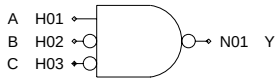
Function	3-Input NAND										SSI Family	
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power	L303	2	L303N1	2	L303N2	3						
x1	F303	3	F303N1	4	F303N2	4						
x2	F323	6	F323N1	7	F323N2	7						
x4	F3C3	9	F3C3N1	10	F3C3N2	10						
x8												
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power												
x1												
x2												
x4	F3C3NS	12	F3C3N1S	14	F3C3N2S	16						
x8												

Logic Diagram for "Normal"



Logic Diagram for "with 1 inverter"

Logic Diagram for "with 2 inverter"



Logic Diagram for "with 3 inverter"

Logic Diagram for "with 4 inverter"

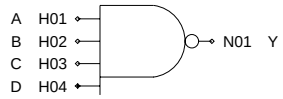
Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L303	A → Y	(HL)	0.117	0.136	0.176	0.022	0.037	0.064	A	1.0	Y	21
		(LH)	0.050	0.086	0.121	0.013	0.021	0.034	B	1.0		
	B → Y	(HL)	0.102	0.137	0.200	0.023	0.037	0.064	C	1.0		
		(LH)	0.064	0.105	0.150	0.013	0.021	0.033				
	C → Y	(HL)	0.090	0.139	0.223	0.023	0.037	0.064				
		(LH)	0.076	0.123	0.177	0.013	0.021	0.034				
F303	A → Y	(HL)	0.095	0.124	0.179	0.011	0.018	0.032	A	2.4	Y	43
		(LH)	0.058	0.097	0.139	0.006	0.010	0.017	B	2.4		
	B → Y	(HL)	0.099	0.129	0.193	0.011	0.018	0.032	C	2.5		
		(LH)	0.062	0.102	0.148	0.006	0.010	0.017				
	C → Y	(HL)	0.095	0.124	0.180	0.011	0.018	0.032				
		(LH)	0.059	0.096	0.140	0.006	0.010	0.017				
F323	A → Y	(HL)	0.095	0.124	0.182	0.006	0.009	0.016	A	4.9	Y	86
		(LH)	0.059	0.097	0.140	0.003	0.005	0.008	B	5.0		
	B → Y	(HL)	0.100	0.130	0.193	0.006	0.009	0.016	C	4.9		
		(LH)	0.062	0.103	0.149	0.003	0.005	0.008				
	C → Y	(HL)	0.095	0.124	0.182	0.006	0.009	0.016				
		(LH)	0.059	0.097	0.140	0.003	0.005	0.008				
F3C3	A → Y	(HL)	0.278	0.400	0.621	0.001	0.002	0.003	A	2.4	Y	285
		(LH)	0.172	0.278	0.432	0.002	0.003	0.004	B	2.5		
	B → Y	(HL)	0.271	0.407	0.658	0.001	0.002	0.003	C	2.4		
		(LH)	0.192	0.305	0.474	0.002	0.003	0.004				
	C → Y	(HL)	0.254	0.400	0.667	0.001	0.002	0.003				
		(LH)	0.204	0.323	0.500	0.002	0.003	0.004				
F3C3NS	A → Y	(HL)	0.113	0.134	0.176	0.003	0.005	0.008	A	9.8	Y	171
		(LH)	0.047	0.082	0.121	0.002	0.003	0.004	B	9.9		
	B → Y	(HL)	0.105	0.143	0.213	0.003	0.005	0.008	C	9.8		
		(LH)	0.065	0.108	0.158	0.002	0.003	0.004				
	C → Y	(HL)	0.091	0.137	0.225	0.003	0.005	0.008				
		(LH)	0.074	0.122	0.177	0.002	0.003	0.004				
L303N1	A → Y	(HL)	0.116	0.135	0.176	0.022	0.037	0.064	A	1.0	Y	21
		(LH)	0.050	0.086	0.121	0.013	0.021	0.034	B	1.0		
	B → Y	(HL)	0.102	0.137	0.203	0.023	0.037	0.064	C	1.0		
		(LH)	0.064	0.105	0.151	0.013	0.021	0.033				
	C → Y	(HH)	0.121	0.184	0.275	0.013	0.021	0.034				
		(LL)	0.125	0.206	0.339	0.023	0.037	0.064				
F303N1	A → Y	(HL)	0.095	0.124	0.183	0.011	0.018	0.032	A	2.4	Y	43
		(LH)	0.058	0.097	0.139	0.006	0.010	0.017	B	2.4		
	B → Y	(HL)	0.098	0.130	0.197	0.011	0.018	0.032	C	1.0		
		(LH)	0.062	0.102	0.148	0.006	0.010	0.017				
	C → Y	(HH)	0.136	0.199	0.289	0.006	0.010	0.017				
		(LL)	0.146	0.226	0.353	0.011	0.018	0.032				
F323N1	A → Y	(HL)	0.096	0.128	0.189	0.006	0.009	0.016	A	4.9	Y	86
		(LH)	0.059	0.097	0.141	0.003	0.005	0.008	B	5.0		
	B → Y	(HL)	0.101	0.133	0.199	0.006	0.009	0.016	C	1.0		
		(LH)	0.062	0.103	0.149	0.003	0.005	0.008				
	C → Y	(HH)	0.179	0.258	0.373	0.003	0.005	0.008				
		(LL)	0.194	0.299	0.466	0.006	0.009	0.016				
F3C3N1	A → Y	(HL)	0.278	0.401	0.622	0.001	0.002	0.003	A	2.4	Y	283
		(LH)	0.172	0.278	0.432	0.002	0.003	0.004	B	2.5		
	B → Y	(HL)	0.271	0.407	0.659	0.001	0.002	0.003	C	1.3		
		(LH)	0.192	0.305	0.474	0.002	0.003	0.004				
	C → Y	(HH)	0.274	0.421	0.648	0.002	0.003	0.004				
		(LL)	0.314	0.508	0.841	0.001	0.002	0.003				

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F3C3N1S	A → Y	(HL)	0.113	0.134	0.176	0.003	0.005	0.008	A	9.8	Y	171
		(LH)	0.047	0.082	0.121	0.002	0.003	0.004	B	9.9		
	B → Y	(HL)	0.105	0.143	0.212	0.003	0.005	0.008	C	4.8		
		(LH)	0.065	0.108	0.158	0.002	0.003	0.004				
	C → Y	(HH)	0.149	0.221	0.323	0.002	0.003	0.004				
		(LL)	0.154	0.247	0.395	0.003	0.005	0.008				
L303N2	A → Y	(HL)	0.116	0.135	0.174	0.022	0.037	0.064	A	1.0	Y	21
		(LH)	0.050	0.086	0.120	0.013	0.021	0.034	B	1.0		
	B → Y	(HH)	0.113	0.169	0.250	0.013	0.021	0.034	C	1.0		
		(LL)	0.121	0.195	0.315	0.023	0.037	0.064				
	C → Y	(HH)	0.121	0.183	0.273	0.013	0.021	0.034				
		(LL)	0.124	0.207	0.341	0.023	0.037	0.064				
F303N2	A → Y	(HL)	0.096	0.126	0.185	0.011	0.018	0.032	A	2.4	Y	43
		(LH)	0.058	0.097	0.139	0.006	0.010	0.017	B	1.0		
	B → Y	(HH)	0.138	0.203	0.296	0.006	0.010	0.017	C	1.0		
		(LL)	0.147	0.232	0.365	0.011	0.018	0.032				
	C → Y	(HH)	0.136	0.199	0.288	0.006	0.010	0.017				
		(LL)	0.145	0.227	0.354	0.011	0.018	0.032				
F323N2	A → Y	(HL)	0.096	0.128	0.191	0.006	0.009	0.016	A	4.9	Y	86
		(LH)	0.058	0.097	0.140	0.003	0.005	0.008	B	1.0		
	B → Y	(HH)	0.179	0.259	0.375	0.003	0.005	0.008	C	1.0		
		(LL)	0.193	0.301	0.469	0.006	0.009	0.016				
	C → Y	(HH)	0.179	0.257	0.373	0.003	0.005	0.008				
		(LL)	0.194	0.300	0.469	0.006	0.009	0.016				
F3C3N2	A → Y	(HL)	0.278	0.401	0.621	0.001	0.002	0.003	A	2.4	Y	285
		(LH)	0.172	0.278	0.432	0.002	0.003	0.004	B	1.3		
	B → Y	(HH)	0.265	0.406	0.624	0.002	0.003	0.004	C	1.2		
		(LL)	0.316	0.505	0.829	0.001	0.002	0.003				
	C → Y	(HH)	0.273	0.420	0.647	0.002	0.003	0.004				
		(LL)	0.315	0.510	0.844	0.001	0.002	0.003				
F3C3N2S	A → Y	(HL)	0.112	0.134	0.176	0.003	0.005	0.008	A	9.8	Y	172
		(LH)	0.048	0.082	0.121	0.002	0.003	0.004	B	4.8		
	B → Y	(HH)	0.142	0.208	0.303	0.002	0.003	0.004	C	4.8		
		(LL)	0.154	0.240	0.381	0.003	0.005	0.008				
	C → Y	(HH)	0.148	0.220	0.322	0.002	0.003	0.004				
		(LL)	0.155	0.249	0.400	0.003	0.005	0.008				

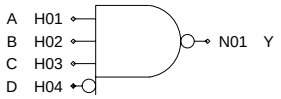
[MEMO]

Function	4-Input NAND										SSI Family	
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power	L304	2	L304N1	3	L304N2	3						
x1	F304	4	F304N1	5	F304N2	5						
x2	F324	8	F324N1	9	F324N2	9						
x4	F3C4	10	F3C4N1	11	F3C4N2	11						
x8												
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power												
x1												
x2												
x4	F3C4NS	16	F3C4N1S	18	F3C4N2S	20						
x8												

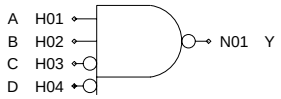
Logic Diagram for "Normal"



Logic Diagram for "with 1 inverter"



Logic Diagram for "with 2 inverter"



Logic Diagram for "with 3 inverter"

Logic Diagram for "with 4 inverter"

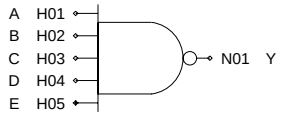
Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L304	A → Y	(HL)	0.125	0.146	0.194	0.029	0.047	0.084	A	1.0	Y	15
		(LH)	0.051	0.088	0.125	0.013	0.021	0.034	B	1.0		
	B → Y	(HL)	0.123	0.163	0.245	0.029	0.047	0.084	C	1.0		
		(LH)	0.063	0.106	0.154	0.013	0.021	0.034	D	1.0		
	C → Y	(HL)	0.122	0.179	0.297	0.029	0.047	0.084				
		(LH)	0.077	0.126	0.181	0.013	0.021	0.034				
	D → Y	(HL)	0.112	0.180	0.313	0.029	0.047	0.084				
		(LH)	0.084	0.135	0.195	0.013	0.021	0.034				
F304	A → Y	(HL)	0.118	0.163	0.250	0.014	0.024	0.042	A	2.5	Y	30
		(LH)	0.065	0.109	0.157	0.006	0.010	0.017	B	2.4		
	B → Y	(HL)	0.123	0.168	0.267	0.014	0.024	0.042	C	2.4		
		(LH)	0.068	0.115	0.167	0.006	0.010	0.017	D	2.6		
	C → Y	(HL)	0.123	0.169	0.268	0.015	0.024	0.042				
		(LH)	0.068	0.115	0.167	0.006	0.010	0.017				
	D → Y	(HL)	0.118	0.163	0.250	0.014	0.024	0.042				
		(LH)	0.064	0.109	0.157	0.006	0.010	0.017				
F324	A → Y	(HL)	0.119	0.163	0.256	0.007	0.012	0.021	A	5.1	Y	61
		(LH)	0.065	0.110	0.158	0.003	0.005	0.008	B	5.0		
	B → Y	(HL)	0.124	0.172	0.270	0.007	0.012	0.021	C	5.1		
		(LH)	0.068	0.116	0.169	0.003	0.005	0.008	D	5.2		
	C → Y	(HL)	0.125	0.170	0.269	0.007	0.012	0.021				
		(LH)	0.068	0.116	0.169	0.003	0.005	0.008				
	D → Y	(HL)	0.119	0.164	0.255	0.007	0.012	0.021				
		(LH)	0.064	0.110	0.157	0.003	0.005	0.008				
F3C4	A → Y	(HL)	0.325	0.470	0.745	0.001	0.002	0.003	A	2.5	Y	285
		(LH)	0.178	0.290	0.453	0.002	0.003	0.004	B	2.5		
	B → Y	(HL)	0.322	0.482	0.792	0.001	0.002	0.003	C	2.5		
		(LH)	0.195	0.312	0.487	0.002	0.003	0.004	D	2.4		
	C → Y	(HL)	0.319	0.499	0.846	0.001	0.002	0.003				
		(LH)	0.211	0.336	0.522	0.002	0.003	0.004				
	D → Y	(HL)	0.309	0.499	0.859	0.001	0.002	0.003				
		(LH)	0.221	0.350	0.540	0.002	0.003	0.004				
F3C4NS	A → Y	(HL)	0.135	0.165	0.222	0.004	0.006	0.011	A	10.0	Y	121
		(LH)	0.050	0.092	0.136	0.002	0.003	0.004	B	10.0		
	B → Y	(HL)	0.135	0.177	0.271	0.004	0.006	0.011	C	10.1		
		(LH)	0.065	0.112	0.165	0.002	0.003	0.004	D	10.0		
	C → Y	(HL)	0.132	0.194	0.323	0.004	0.006	0.011				
		(LH)	0.079	0.132	0.191	0.002	0.003	0.004				
	D → Y	(HL)	0.125	0.198	0.339	0.004	0.006	0.011				
		(LH)	0.086	0.140	0.202	0.002	0.003	0.004				
L304N1	A → Y	(HL)	0.125	0.146	0.194	0.029	0.047	0.084	A	1.0	Y	15
		(LH)	0.051	0.088	0.125	0.013	0.021	0.034	B	1.0		
	B → Y	(HL)	0.123	0.163	0.245	0.029	0.047	0.084	C	1.0		
		(LH)	0.063	0.106	0.154	0.013	0.021	0.034	D	1.0		
	C → Y	(HL)	0.122	0.179	0.296	0.029	0.047	0.084				
		(LH)	0.077	0.126	0.181	0.013	0.021	0.034				
	D → Y	(HH)	0.130	0.197	0.293	0.013	0.021	0.034				
		(LL)	0.151	0.252	0.429	0.029	0.047	0.084				
F304N1	A → Y	(HL)	0.118	0.164	0.252	0.014	0.024	0.042	A	2.5	Y	31
		(LH)	0.065	0.109	0.157	0.006	0.010	0.017	B	2.4		
	B → Y	(HL)	0.123	0.170	0.268	0.015	0.024	0.042	C	2.4		
		(LH)	0.068	0.115	0.167	0.006	0.010	0.017	D	1.0		
	C → Y	(HL)	0.123	0.169	0.270	0.014	0.024	0.042				
		(LH)	0.068	0.115	0.167	0.006	0.010	0.017				
	D → Y	(HH)	0.142	0.209	0.303	0.006	0.010	0.017				
		(LL)	0.167	0.264	0.421	0.015	0.024	0.042				

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F324N1	A → Y	(HL)	0.121	0.166	0.260	0.007	0.012	0.021	A	5.1	Y	62
		(LH)	0.064	0.110	0.158	0.003	0.005	0.008	B	5.0		
	B → Y	(HL)	0.125	0.174	0.273	0.007	0.012	0.021	C	5.0		
		(LH)	0.068	0.116	0.169	0.003	0.005	0.008	D	1.0		
	C → Y	(HL)	0.126	0.173	0.272	0.007	0.012	0.021				
		(LH)	0.068	0.116	0.168	0.003	0.005	0.008				
	D → Y	(HH)	0.185	0.268	0.386	0.003	0.005	0.008				
		(LL)	0.216	0.335	0.536	0.007	0.012	0.021				
F3C4N1	A → Y	(HL)	0.325	0.470	0.746	0.001	0.002	0.003	A	2.5	Y	285
		(LH)	0.178	0.290	0.453	0.002	0.003	0.004	B	2.5		
	B → Y	(HL)	0.322	0.481	0.792	0.001	0.002	0.003	C	2.5		
		(LH)	0.195	0.312	0.486	0.002	0.003	0.004	D	1.3		
	C → Y	(HL)	0.320	0.498	0.846	0.001	0.002	0.003				
		(LH)	0.211	0.336	0.522	0.002	0.003	0.004				
	D → Y	(HH)	0.291	0.447	0.688	0.002	0.003	0.004				
		(LL)	0.373	0.609	1.030	0.001	0.002	0.003				
F3C4N1S	A → Y	(HL)	0.136	0.165	0.222	0.004	0.006	0.011	A	10.0	Y	122
		(LH)	0.050	0.092	0.135	0.002	0.003	0.004	B	10.0		
	B → Y	(HL)	0.135	0.177	0.271	0.004	0.006	0.011	C	10.1		
		(LH)	0.065	0.112	0.164	0.002	0.003	0.004	D	4.8		
	C → Y	(HL)	0.132	0.194	0.323	0.004	0.006	0.011				
		(LH)	0.079	0.132	0.191	0.002	0.003	0.004				
	D → Y	(HH)	0.161	0.239	0.349	0.002	0.003	0.004				
		(LL)	0.190	0.308	0.512	0.004	0.006	0.011				
L304N2	A → Y	(HL)	0.124	0.143	0.190	0.029	0.047	0.084	A	1.0	Y	15
		(LH)	0.050	0.087	0.123	0.013	0.021	0.034	B	1.0		
	B → Y	(HL)	0.123	0.159	0.241	0.029	0.047	0.084	C	1.0		
		(LH)	0.062	0.105	0.152	0.013	0.021	0.034	D	1.0		
	C → Y	(HH)	0.127	0.191	0.284	0.013	0.021	0.034				
		(LL)	0.151	0.247	0.415	0.029	0.047	0.084				
	D → Y	(HH)	0.129	0.196	0.291	0.013	0.021	0.034				
		(LL)	0.150	0.251	0.429	0.029	0.047	0.084				
F304N2	A → Y	(HL)	0.117	0.164	0.253	0.015	0.024	0.042	A	2.4	Y	31
		(LH)	0.064	0.109	0.157	0.006	0.010	0.017	B	2.4		
	B → Y	(HL)	0.123	0.169	0.270	0.015	0.024	0.042	C	1.0		
		(LH)	0.068	0.114	0.166	0.006	0.010	0.017	D	1.0		
	C → Y	(HH)	0.150	0.222	0.323	0.006	0.010	0.017				
		(LL)	0.176	0.277	0.448	0.015	0.024	0.042				
	D → Y	(HH)	0.142	0.209	0.303	0.006	0.010	0.017				
		(LL)	0.168	0.264	0.422	0.015	0.024	0.042				
F324N2	A → Y	(HL)	0.121	0.166	0.262	0.007	0.012	0.021	A	5.1	Y	61
		(LH)	0.064	0.110	0.158	0.003	0.005	0.008	B	5.0		
	B → Y	(HL)	0.126	0.174	0.275	0.007	0.012	0.021	C	1.0		
		(LH)	0.067	0.115	0.168	0.003	0.005	0.008	D	1.0		
	C → Y	(HH)	0.188	0.273	0.398	0.003	0.005	0.008				
		(LL)	0.216	0.339	0.544	0.007	0.012	0.021				
	D → Y	(HH)	0.184	0.267	0.384	0.003	0.005	0.008				
		(LL)	0.215	0.336	0.536	0.007	0.012	0.021				
F3C4N2	A → Y	(HL)	0.326	0.471	0.747	0.001	0.002	0.003	A	2.5	Y	285
		(LH)	0.178	0.291	0.454	0.002	0.003	0.004	B	2.5		
	B → Y	(HL)	0.323	0.482	0.796	0.001	0.002	0.003	C	1.3		
		(LH)	0.195	0.313	0.488	0.002	0.003	0.004	D	1.3		
	C → Y	(HH)	0.282	0.435	0.670	0.002	0.003	0.004				
		(LL)	0.372	0.603	1.014	0.001	0.002	0.003				
	D → Y	(HH)	0.291	0.449	0.690	0.002	0.003	0.004				
		(LL)	0.377	0.614	1.039	0.001	0.002	0.003				

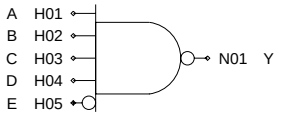
Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F3C4N2S	A → Y	(HL)	0.135	0.165	0.222	0.004	0.006	0.011	A	10.0	Y	122
		(LH)	0.050	0.092	0.135	0.002	0.003	0.004	B	10.0		
	B → Y	(HL)	0.134	0.177	0.271	0.004	0.006	0.011	C	5.0		
		(LH)	0.065	0.112	0.165	0.002	0.003	0.004	D	4.9		
	C → Y	(HH)	0.154	0.229	0.335	0.002	0.003	0.004				
		(LL)	0.186	0.298	0.493	0.004	0.006	0.011				
	D → Y	(HH)	0.157	0.235	0.345	0.002	0.003	0.004				
		(LL)	0.189	0.306	0.517	0.004	0.006	0.011				

Function	5-Input NAND										SSI Family	
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power	L305	4	L305N1	5	L305N2	5	L305N3	6				
x1	F305	5	F305N1	6	F305N2	6	F305N3	7				
x2	F325	6	F325N1	6	F325N2	7	F325N3	7				
x4												
x8												
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power												
x1												
x2												
x4												
x8												

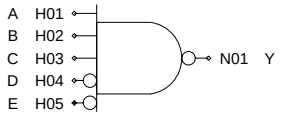
Logic Diagram for "Normal"



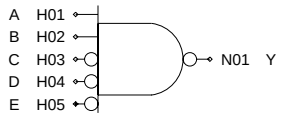
Logic Diagram for "with 1 inverter"



Logic Diagram for "with 2 inverter"



Logic Diagram for "with 3 inverter"



Logic Diagram for "with 4 inverter"

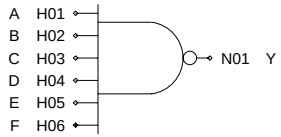
Block type	Path		Switching speed t_{LD0} (ns)			Switching speed t_{1}			Input		Output	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L305	A → Y	(HL)	0.215	0.320	0.491	0.010	0.016	0.025	A	1.0	Y	35
		(LH)	0.121	0.200	0.313	0.013	0.021	0.034	B	1.0		
	B → Y	(HL)	0.202	0.310	0.488	0.010	0.016	0.025	C	1.0		
		(LH)	0.140	0.227	0.348	0.013	0.021	0.034	D	1.0		
	C → Y	(HL)	0.263	0.391	0.605	0.010	0.016	0.025	E	1.0		
		(LH)	0.135	0.231	0.363	0.013	0.021	0.034				
	D → Y	(HL)	0.257	0.390	0.626	0.010	0.016	0.025				
		(LH)	0.156	0.256	0.399	0.013	0.021	0.034				
	E → Y	(HL)	0.246	0.392	0.650	0.010	0.016	0.025				
		(LH)	0.172	0.278	0.430	0.013	0.021	0.034				
F305	A → Y	(HL)	0.268	0.410	0.634	0.005	0.008	0.013	A	1.0	Y	71
		(LH)	0.144	0.237	0.367	0.006	0.010	0.017	B	1.0		
	B → Y	(HL)	0.256	0.398	0.631	0.005	0.008	0.013	C	1.0		
		(LH)	0.165	0.262	0.403	0.006	0.010	0.017	D	1.0		
	C → Y	(HL)	0.313	0.476	0.742	0.005	0.008	0.013	E	1.0		
		(LH)	0.155	0.259	0.407	0.006	0.010	0.017				
	D → Y	(HL)	0.308	0.475	0.764	0.005	0.008	0.013				
		(LH)	0.175	0.284	0.444	0.006	0.010	0.017				
	E → Y	(HL)	0.296	0.476	0.785	0.005	0.008	0.013				
		(LH)	0.193	0.309	0.478	0.006	0.010	0.017				
F325	A → Y	(HL)	0.340	0.524	0.815	0.003	0.004	0.007	A	1.0	Y	143
		(LH)	0.171	0.276	0.435	0.003	0.005	0.008	B	1.0		
	B → Y	(HL)	0.327	0.514	0.812	0.003	0.004	0.007	C	1.0		
		(LH)	0.191	0.303	0.470	0.003	0.005	0.008	D	1.0		
	C → Y	(HL)	0.386	0.592	0.926	0.003	0.004	0.007	E	1.0		
		(LH)	0.183	0.302	0.478	0.003	0.005	0.008				
	D → Y	(HL)	0.379	0.592	0.949	0.003	0.004	0.007				
		(LH)	0.203	0.328	0.515	0.003	0.005	0.008				
	E → Y	(HL)	0.368	0.593	0.971	0.003	0.004	0.007				
		(LH)	0.221	0.353	0.550	0.003	0.005	0.008				
L305N1	A → Y	(HL)	0.215	0.320	0.490	0.010	0.016	0.025	A	1.0	Y	35
		(LH)	0.121	0.199	0.312	0.013	0.021	0.034	B	1.0		
	B → Y	(HL)	0.202	0.310	0.488	0.010	0.016	0.025	C	1.0		
		(LH)	0.140	0.226	0.348	0.013	0.021	0.034	D	1.0		
	C → Y	(HL)	0.262	0.390	0.603	0.010	0.016	0.025	E	1.0		
		(LH)	0.135	0.229	0.361	0.013	0.021	0.034				
	D → Y	(HL)	0.256	0.389	0.626	0.010	0.016	0.025				
		(LH)	0.155	0.255	0.398	0.013	0.021	0.034				
	E → Y	(HH)	0.220	0.343	0.532	0.013	0.021	0.034				
		(LL)	0.283	0.464	0.769	0.010	0.016	0.025				
F305N1	A → Y	(HL)	0.268	0.410	0.634	0.005	0.008	0.013	A	1.0	Y	72
		(LH)	0.144	0.237	0.367	0.006	0.010	0.017	B	1.0		
	B → Y	(HL)	0.256	0.398	0.631	0.005	0.008	0.013	C	1.0		
		(LH)	0.165	0.262	0.403	0.006	0.010	0.017	D	1.0		
	C → Y	(HL)	0.313	0.476	0.742	0.005	0.008	0.013	E	1.0		
		(LH)	0.155	0.259	0.407	0.006	0.010	0.017				
	D → Y	(HL)	0.308	0.475	0.765	0.005	0.008	0.013				
		(LH)	0.175	0.285	0.444	0.006	0.010	0.017				
	E → Y	(HH)	0.241	0.374	0.584	0.006	0.010	0.017				
		(LL)	0.334	0.550	0.910	0.005	0.008	0.013				
F325N1	A → Y	(HL)	0.340	0.524	0.815	0.003	0.004	0.007	A	1.0	Y	143
		(LH)	0.170	0.276	0.434	0.003	0.005	0.008	B	1.0		
	B → Y	(HL)	0.327	0.514	0.811	0.003	0.004	0.007	C	1.0		
		(LH)	0.191	0.303	0.470	0.003	0.005	0.008	D	1.0		
	C → Y	(HL)	0.387	0.594	0.928	0.003	0.004	0.007	E	1.0		
		(LH)	0.184	0.303	0.480	0.003	0.005	0.008				

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	D → Y	(HL)	0.382	0.593	0.951	0.003	0.004	0.007				
		(LH)	0.204	0.329	0.517	0.003	0.005	0.008				
	E → Y	(HH)	0.265	0.414	0.650	0.003	0.005	0.008				
		(LL)	0.403	0.662	1.089	0.003	0.004	0.007				
L305N2	A → Y	(HL)	0.215	0.320	0.490	0.010	0.016	0.025	A	1.0	Y	35
		(LH)	0.121	0.199	0.312	0.013	0.021	0.034	B	1.0		
	B → Y	(HL)	0.202	0.310	0.488	0.010	0.016	0.025	C	1.0		
		(LH)	0.140	0.226	0.348	0.013	0.021	0.034	D	1.0		
	C → Y	(HL)	0.262	0.390	0.603	0.010	0.016	0.025	E	1.0		
		(LH)	0.135	0.229	0.361	0.013	0.021	0.034				
	D → Y	(HH)	0.205	0.319	0.499	0.013	0.021	0.034				
		(LL)	0.275	0.447	0.734	0.010	0.016	0.025				
	E → Y	(HH)	0.219	0.342	0.533	0.013	0.021	0.034				
		(LL)	0.283	0.465	0.771	0.010	0.016	0.025				
F305N2	A → Y	(HL)	0.272	0.414	0.641	0.005	0.008	0.013	A	1.0	Y	71
		(LH)	0.147	0.239	0.374	0.006	0.010	0.017	B	1.0		
	B → Y	(HL)	0.258	0.402	0.638	0.005	0.008	0.013	C	1.0		
		(LH)	0.167	0.266	0.408	0.006	0.010	0.017	D	1.0		
	C → Y	(HL)	0.313	0.475	0.742	0.005	0.008	0.013	E	1.0		
		(LH)	0.155	0.259	0.407	0.006	0.010	0.017				
	D → Y	(HH)	0.228	0.354	0.553	0.006	0.010	0.017				
		(LL)	0.332	0.541	0.884	0.005	0.008	0.013				
	E → Y	(HH)	0.242	0.376	0.586	0.006	0.010	0.017				
		(LL)	0.337	0.555	0.915	0.005	0.008	0.013				
F325N2	A → Y	(HL)	0.340	0.524	0.815	0.003	0.004	0.007	A	1.0	Y	143
		(LH)	0.170	0.276	0.434	0.003	0.005	0.008	B	1.0		
	B → Y	(HL)	0.327	0.514	0.811	0.003	0.004	0.007	C	1.0		
		(LH)	0.191	0.303	0.470	0.003	0.005	0.008	D	1.0		
	C → Y	(HL)	0.387	0.594	0.928	0.003	0.004	0.007	E	1.0		
		(LH)	0.184	0.303	0.480	0.003	0.005	0.008				
	D → Y	(HH)	0.255	0.396	0.621	0.003	0.005	0.008				
		(LL)	0.403	0.654	1.068	0.003	0.004	0.007				
	E → Y	(HH)	0.265	0.414	0.649	0.003	0.005	0.008				
		(LL)	0.403	0.663	1.092	0.003	0.004	0.007				
L305N3	A → Y	(HL)	0.215	0.320	0.490	0.010	0.016	0.025	A	1.0	Y	35
		(LH)	0.121	0.199	0.312	0.013	0.021	0.034	B	1.0		
	B → Y	(HL)	0.202	0.310	0.488	0.010	0.016	0.025	C	1.0		
		(LH)	0.140	0.226	0.348	0.013	0.021	0.034	D	1.0		
	C → Y	(HH)	0.191	0.297	0.465	0.013	0.021	0.034	E	1.0		
		(LL)	0.271	0.438	0.709	0.010	0.016	0.025				
	D → Y	(HH)	0.209	0.324	0.505	0.013	0.021	0.034				
		(LL)	0.281	0.457	0.753	0.010	0.016	0.025				
	E → Y	(HH)	0.220	0.343	0.535	0.013	0.021	0.034				
		(LL)	0.285	0.470	0.780	0.010	0.016	0.025				
F305N3	A → Y	(HL)	0.261	0.395	0.608	0.005	0.008	0.013	A	1.0	Y	71
		(LH)	0.143	0.234	0.361	0.006	0.010	0.017	B	1.0		
	B → Y	(HL)	0.248	0.383	0.604	0.005	0.008	0.013	C	1.0		
		(LH)	0.162	0.261	0.398	0.006	0.010	0.017	D	1.0		
	C → Y	(HH)	0.209	0.324	0.506	0.006	0.010	0.017	E	1.0		
		(LL)	0.315	0.506	0.817	0.005	0.008	0.013				
	D → Y	(HH)	0.225	0.348	0.543	0.006	0.010	0.017				
		(LL)	0.320	0.522	0.853	0.005	0.008	0.013				
	E → Y	(HH)	0.237	0.369	0.575	0.006	0.010	0.017				
		(LL)	0.326	0.535	0.883	0.005	0.008	0.013				

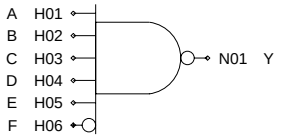
Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F325N3	A → Y	(HL)	0.341	0.524	0.816	0.003	0.004	0.007	A	1.0	Y	143
		(LH)	0.171	0.277	0.437	0.003	0.005	0.008	B	1.0		
	B → Y	(HL)	0.328	0.515	0.813	0.003	0.004	0.007	C	1.0		
		(LH)	0.192	0.304	0.471	0.003	0.005	0.008	D	1.0		
	C → Y	(HH)	0.239	0.372	0.586	0.003	0.005	0.008	E	1.0		
		(LL)	0.398	0.643	1.039	0.003	0.004	0.007				
	D → Y	(HH)	0.254	0.396	0.622	0.003	0.005	0.008				
		(LL)	0.405	0.658	1.073	0.003	0.004	0.007				
	E → Y	(HH)	0.265	0.414	0.650	0.003	0.005	0.008				
		(LL)	0.405	0.666	1.093	0.003	0.004	0.007				

Function	6-Input NAND										SSI Family	
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power	L306	5	L306N1	5	L306N2	6	L306N3	6				
x1	F306	5	F306N1	6	F306N2	6	F306N3	7				
x2	F326	6	F326N1	7	F326N2	7	F326N3	8				
x4												
x8												
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power												
x1												
x2												
x4												
x8												

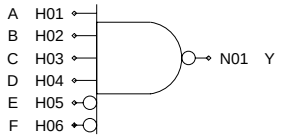
Logic Diagram for "Normal"



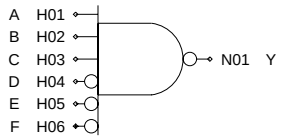
Logic Diagram for "with 1 inverter"



Logic Diagram for "with 2 inverter"



Logic Diagram for "with 3 inverter"



Logic Diagram for "with 4 inverter"

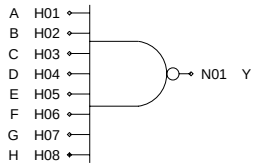
Block type	Path		Switching speed t_{LD0} (ns)			Switching speed t_{1}			Input		Output	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L306	A → Y	(HL)	0.256	0.376	0.578	0.010	0.016	0.025	A	1.0	Y	35
		(LH)	0.126	0.212	0.334	0.013	0.021	0.034	B	1.0		
	B → Y	(HL)	0.251	0.377	0.599	0.010	0.016	0.025	C	1.0		
		(LH)	0.146	0.239	0.367	0.013	0.021	0.034	D	1.0		
	C → Y	(HL)	0.240	0.376	0.621	0.010	0.016	0.025	E	1.0		
		(LH)	0.162	0.262	0.400	0.013	0.021	0.034	F	1.0		
	D → Y	(HL)	0.264	0.392	0.607	0.010	0.016	0.025				
		(LH)	0.136	0.230	0.362	0.013	0.021	0.034				
	E → Y	(HL)	0.258	0.391	0.628	0.010	0.016	0.025				
		(LH)	0.155	0.256	0.399	0.013	0.021	0.034				
	F → Y	(HL)	0.247	0.393	0.652	0.010	0.016	0.025				
		(LH)	0.172	0.279	0.430	0.013	0.021	0.034				
F306	A → Y	(HL)	0.315	0.473	0.732	0.005	0.008	0.013	A	1.0	Y	71
		(LH)	0.152	0.254	0.394	0.006	0.010	0.017	B	1.0		
	B → Y	(HL)	0.309	0.471	0.753	0.005	0.008	0.013	C	1.0		
		(LH)	0.171	0.278	0.430	0.006	0.010	0.017	D	1.1		
	C → Y	(HL)	0.297	0.471	0.778	0.005	0.008	0.013	E	1.0		
		(LH)	0.187	0.299	0.464	0.006	0.010	0.017	F	1.0		
	D → Y	(HL)	0.314	0.477	0.744	0.005	0.008	0.013				
		(LH)	0.155	0.259	0.407	0.006	0.010	0.017				
	E → Y	(HL)	0.308	0.477	0.767	0.005	0.008	0.013				
		(LH)	0.175	0.284	0.444	0.006	0.010	0.017				
	F → Y	(HL)	0.297	0.478	0.787	0.005	0.008	0.013				
		(LH)	0.193	0.309	0.479	0.006	0.010	0.017				
F326	A → Y	(HL)	0.386	0.585	0.913	0.003	0.004	0.007	A	1.0	Y	143
		(LH)	0.177	0.291	0.460	0.003	0.005	0.008	B	1.0		
	B → Y	(HL)	0.380	0.584	0.934	0.003	0.004	0.007	C	1.0		
		(LH)	0.197	0.317	0.495	0.003	0.005	0.008	D	1.0		
	C → Y	(HL)	0.368	0.584	0.957	0.003	0.004	0.007	E	1.0		
		(LH)	0.214	0.341	0.531	0.003	0.005	0.008	F	1.0		
	D → Y	(HL)	0.386	0.590	0.924	0.003	0.004	0.007				
		(LH)	0.180	0.299	0.472	0.003	0.005	0.008				
	E → Y	(HL)	0.379	0.591	0.947	0.003	0.004	0.007				
		(LH)	0.201	0.324	0.509	0.003	0.005	0.008				
	F → Y	(HL)	0.369	0.591	0.968	0.003	0.004	0.007				
		(LH)	0.219	0.350	0.545	0.003	0.005	0.008				
L306N1	A → Y	(HL)	0.255	0.376	0.577	0.010	0.016	0.025	A	1.0	Y	35
		(LH)	0.125	0.212	0.334	0.013	0.021	0.034	B	1.0		
	B → Y	(HL)	0.251	0.376	0.598	0.010	0.016	0.025	C	1.0		
		(LH)	0.145	0.238	0.368	0.013	0.021	0.034	D	1.0		
	C → Y	(HL)	0.240	0.376	0.620	0.010	0.016	0.025	E	1.0		
		(LH)	0.161	0.261	0.400	0.013	0.021	0.034	F	1.0		
	D → Y	(HL)	0.262	0.391	0.606	0.010	0.016	0.025				
		(LH)	0.136	0.230	0.362	0.013	0.021	0.034				
	E → Y	(HL)	0.257	0.390	0.627	0.010	0.016	0.025				
		(LH)	0.156	0.256	0.400	0.013	0.021	0.034				
	F → Y	(HH)	0.224	0.347	0.541	0.013	0.021	0.034				
		(LL)	0.286	0.471	0.777	0.010	0.016	0.025				
F306N1	A → Y	(HL)	0.313	0.470	0.729	0.005	0.008	0.013	A	1.0	Y	71
		(LH)	0.150	0.250	0.392	0.006	0.010	0.017	B	1.0		
	B → Y	(HL)	0.308	0.469	0.751	0.005	0.008	0.013	C	1.0		
		(LH)	0.170	0.275	0.428	0.006	0.010	0.017	D	1.0		
	C → Y	(HL)	0.295	0.469	0.774	0.005	0.008	0.013	E	1.0		
		(LH)	0.186	0.298	0.461	0.006	0.010	0.017	F	1.0		
	D → Y	(HL)	0.314	0.477	0.744	0.005	0.008	0.013				
		(LH)	0.155	0.259	0.408	0.006	0.010	0.017				

Block type	Path		Switching speed t LD0 (ns) MIN.	TYP.	MAX.	t 1 MIN.	TYP.	MAX.	Input Symbol	Fanin	Output Symbol	Fanout
	E → Y	(HL)	0.308	0.477	0.768	0.005	0.008	0.013				
		(LH)	0.175	0.284	0.444	0.006	0.010	0.017				
	F → Y	(HH)	0.241	0.374	0.584	0.006	0.010	0.017				
		(LL)	0.335	0.552	0.912	0.005	0.008	0.013				
F326N1	A → Y	(HL)	0.388	0.588	0.916	0.003	0.004	0.007	A	1.0	Y	143
		(LH)	0.178	0.293	0.462	0.003	0.005	0.008	B	1.0		
	B → Y	(HL)	0.382	0.587	0.936	0.003	0.004	0.007	C	1.0		
		(LH)	0.198	0.318	0.497	0.003	0.005	0.008	D	1.0		
	C → Y	(HL)	0.369	0.586	0.961	0.003	0.004	0.007	E	1.0		
		(LH)	0.215	0.343	0.533	0.003	0.005	0.008	F	1.0		
	D → Y	(HL)	0.385	0.590	0.923	0.003	0.004	0.007				
		(LH)	0.180	0.298	0.472	0.003	0.005	0.008				
	E → Y	(HL)	0.379	0.590	0.946	0.003	0.004	0.007				
		(LH)	0.201	0.324	0.509	0.003	0.005	0.008				
	F → Y	(HH)	0.267	0.416	0.650	0.003	0.005	0.008				
		(LL)	0.405	0.667	1.088	0.003	0.004	0.007				
L306N2	A → Y	(HL)	0.255	0.376	0.577	0.010	0.016	0.025	A	1.0	Y	35
		(LH)	0.125	0.212	0.334	0.013	0.021	0.034	B	1.0		
	B → Y	(HL)	0.251	0.376	0.598	0.010	0.016	0.025	C	1.0		
		(LH)	0.145	0.238	0.368	0.013	0.021	0.034	D	1.0		
	C → Y	(HL)	0.240	0.376	0.620	0.010	0.016	0.025	E	1.0		
		(LH)	0.161	0.261	0.400	0.013	0.021	0.034	F	1.0		
	D → Y	(HL)	0.263	0.391	0.605	0.010	0.016	0.025				
		(LH)	0.136	0.230	0.362	0.013	0.021	0.034				
	E → Y	(HH)	0.206	0.321	0.500	0.013	0.021	0.034				
		(LL)	0.276	0.449	0.738	0.010	0.016	0.025				
	F → Y	(HH)	0.224	0.347	0.540	0.013	0.021	0.034				
		(LL)	0.287	0.471	0.781	0.010	0.016	0.025				
F306N2	A → Y	(HL)	0.313	0.470	0.728	0.005	0.008	0.013	A	1.0	Y	71
		(LH)	0.150	0.250	0.392	0.006	0.010	0.017	B	1.0		
	B → Y	(HL)	0.308	0.469	0.751	0.005	0.008	0.013	C	1.0		
		(LH)	0.170	0.275	0.428	0.006	0.010	0.017	D	1.0		
	C → Y	(HL)	0.295	0.469	0.774	0.005	0.008	0.013	E	1.0		
		(LH)	0.186	0.298	0.461	0.006	0.010	0.017	F	1.0		
	D → Y	(HL)	0.315	0.477	0.744	0.005	0.008	0.013				
		(LH)	0.155	0.259	0.408	0.006	0.010	0.017				
	E → Y	(HH)	0.228	0.353	0.552	0.006	0.010	0.017				
		(LL)	0.332	0.541	0.883	0.005	0.008	0.013				
	F → Y	(HH)	0.240	0.374	0.583	0.006	0.010	0.017				
		(LL)	0.336	0.552	0.914	0.005	0.008	0.013				
F326N2	A → Y	(HL)	0.386	0.585	0.913	0.003	0.004	0.007	A	1.0	Y	143
		(LH)	0.177	0.291	0.460	0.003	0.005	0.008	B	1.0		
	B → Y	(HL)	0.380	0.584	0.934	0.003	0.004	0.007	C	1.0		
		(LH)	0.197	0.317	0.495	0.003	0.005	0.008	D	1.0		
	C → Y	(HL)	0.368	0.584	0.957	0.003	0.004	0.007	E	1.0		
		(LH)	0.214	0.341	0.531	0.003	0.005	0.008	F	1.0		
	D → Y	(HL)	0.386	0.590	0.924	0.003	0.004	0.007				
		(LH)	0.180	0.299	0.472	0.003	0.005	0.008				
	E → Y	(HH)	0.252	0.393	0.615	0.003	0.005	0.008				
		(LL)	0.401	0.655	1.065	0.003	0.004	0.007				
	F → Y	(HH)	0.267	0.415	0.650	0.003	0.005	0.008				
		(LL)	0.408	0.668	1.095	0.003	0.004	0.007				
L306N3	A → Y	(HL)	0.255	0.376	0.577	0.010	0.016	0.025	A	1.0	Y	35
		(LH)	0.125	0.212	0.334	0.013	0.021	0.034	B	1.0		
	B → Y	(HL)	0.251	0.376	0.598	0.010	0.016	0.025	C	1.0		
		(LH)	0.145	0.238	0.368	0.013	0.021	0.034	D	1.0		

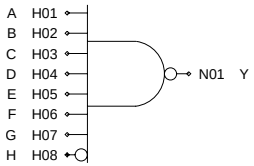
Block type	Path		Switching speed t LD0 (ns) MIN.	TYP.	MAX.	t 1 MIN.	TYP.	MAX.	Input Symbol	Fanin	Output Symbol	Fanout
	C → Y	(HL)	0.240	0.376	0.620	0.010	0.016	0.025	E	1.0		
		(LH)	0.161	0.261	0.400	0.013	0.021	0.034	F	1.0		
	D → Y	(HH)	0.194	0.299	0.468	0.013	0.021	0.034				
		(LL)	0.273	0.441	0.709	0.010	0.016	0.025				
	E → Y	(HH)	0.208	0.323	0.505	0.013	0.021	0.034				
		(LL)	0.280	0.455	0.746	0.010	0.016	0.025				
	F → Y	(HH)	0.225	0.350	0.544	0.013	0.021	0.034				
		(LL)	0.289	0.477	0.788	0.010	0.016	0.025				
F306N3	A → Y	(HL)	0.302	0.451	0.695	0.005	0.008	0.013	A	1.0	Y	71
		(LH)	0.145	0.243	0.381	0.006	0.010	0.017	B	1.0		
	B → Y	(HL)	0.297	0.449	0.717	0.005	0.008	0.013	C	1.0		
		(LH)	0.165	0.269	0.416	0.006	0.010	0.017	D	1.0		
	C → Y	(HL)	0.284	0.450	0.741	0.005	0.008	0.013	E	1.0		
		(LH)	0.182	0.291	0.448	0.006	0.010	0.017	F	1.0		
	D → Y	(HH)	0.209	0.324	0.506	0.006	0.010	0.017				
		(LL)	0.316	0.508	0.820	0.005	0.008	0.013				
	E → Y	(HH)	0.224	0.347	0.542	0.006	0.010	0.017				
		(LL)	0.321	0.521	0.853	0.005	0.008	0.013				
	F → Y	(HH)	0.237	0.368	0.572	0.006	0.010	0.017				
		(LL)	0.326	0.535	0.883	0.005	0.008	0.013				
F326N3	A → Y	(HL)	0.386	0.585	0.913	0.003	0.004	0.007	A	1.0	Y	143
		(LH)	0.177	0.291	0.460	0.003	0.005	0.008	B	1.0		
	B → Y	(HL)	0.380	0.584	0.934	0.003	0.004	0.007	C	1.0		
		(LH)	0.197	0.317	0.495	0.003	0.005	0.008	D	1.0		
	C → Y	(HL)	0.368	0.584	0.957	0.003	0.004	0.007	E	1.0		
		(LH)	0.214	0.341	0.531	0.003	0.005	0.008	F	1.0		
	D → Y	(HH)	0.238	0.370	0.582	0.003	0.005	0.008				
		(LL)	0.399	0.645	1.038	0.003	0.004	0.007				
	E → Y	(HH)	0.253	0.394	0.618	0.003	0.005	0.008				
		(LL)	0.405	0.658	1.069	0.003	0.004	0.007				
	F → Y	(HH)	0.267	0.416	0.651	0.003	0.005	0.008				
		(LL)	0.409	0.672	1.099	0.003	0.004	0.007				

Function	8-Input NAND										SSI Family	
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power			L308N1	6			L308N3	7				
x1	F308	6	F308N1	7	F308N2	7	F308N3	8	F308N4	8		
x2	F328	7	F328N1	8	F328N2	8	F328N3	9	F328N4	9		
x4												
x8												
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power												
x1												
x2												
x4												
x8												

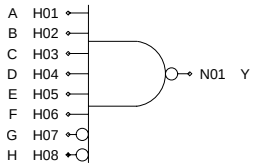
Logic Diagram for "Normal"



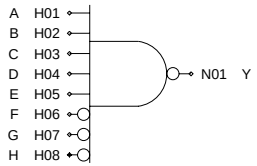
Logic Diagram for "with 1 inverter"



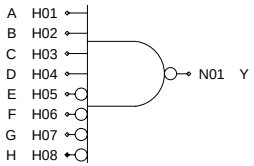
Logic Diagram for "with 2 inverter"



Logic Diagram for "with 3 inverter"



Logic Diagram for "with 4 inverter"



Block type	Switching speed									Input		Output	
	Path		t_{LD0} (ns)			t_1							
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		Symbol	Fanin	Symbol	Fanout
F308	A → Y	(HL)	0.345	0.513	0.805	0.005	0.008	0.013		A	1.0	Y	71
		(LH)	0.151	0.254	0.399	0.006	0.010	0.017		B	1.0		
	B → Y	(HL)	0.347	0.525	0.850	0.005	0.008	0.013		C	1.0		
		(LH)	0.171	0.279	0.435	0.006	0.010	0.017		D	1.0		
	C → Y	(HL)	0.346	0.540	0.898	0.005	0.008	0.013		E	1.0		
		(LH)	0.187	0.302	0.470	0.006	0.010	0.017		F	1.0		
	D → Y	(HL)	0.336	0.541	0.914	0.005	0.008	0.013		G	1.0		
		(LH)	0.197	0.315	0.487	0.006	0.010	0.017		H	1.0		
	E → Y	(HL)	0.341	0.515	0.803	0.005	0.008	0.013					
		(LH)	0.156	0.264	0.417	0.006	0.010	0.017					
	F → Y	(HL)	0.343	0.526	0.847	0.005	0.008	0.013					
		(LH)	0.177	0.290	0.454	0.006	0.010	0.017					
	G → Y	(HL)	0.340	0.540	0.898	0.005	0.008	0.013					
		(LH)	0.194	0.314	0.488	0.006	0.010	0.017					
	H → Y	(HL)	0.332	0.542	0.915	0.005	0.008	0.013					
		(LH)	0.205	0.327	0.506	0.006	0.010	0.017					
F328	A → Y	(HL)	0.411	0.617	0.970	0.003	0.004	0.007		A	1.0	Y	143
		(LH)	0.173	0.288	0.454	0.003	0.005	0.008		B	1.0		
	B → Y	(HL)	0.412	0.630	1.015	0.003	0.004	0.007		C	1.0		
		(LH)	0.193	0.314	0.491	0.003	0.005	0.008		D	1.0		
	C → Y	(HL)	0.412	0.647	1.065	0.003	0.004	0.007		E	1.0		
		(LH)	0.212	0.339	0.528	0.003	0.005	0.008		F	1.0		
	D → Y	(HL)	0.401	0.646	1.080	0.003	0.004	0.007		G	1.0		
		(LH)	0.222	0.353	0.547	0.003	0.005	0.008		H	1.0		
	E → Y	(HL)	0.417	0.637	1.000	0.003	0.004	0.007					
		(LH)	0.186	0.310	0.490	0.003	0.005	0.008					
	F → Y	(HL)	0.419	0.648	1.045	0.003	0.004	0.007					
		(LH)	0.206	0.335	0.526	0.003	0.005	0.008					
	G → Y	(HL)	0.417	0.661	1.094	0.003	0.004	0.007					
		(LH)	0.225	0.360	0.564	0.003	0.005	0.008					
	H → Y	(HL)	0.408	0.666	1.109	0.003	0.004	0.007					
		(LH)	0.235	0.374	0.584	0.003	0.005	0.008					
L308N1	A → Y	(HL)	0.296	0.434	0.676	0.010	0.016	0.026		A	1.0	Y	35
		(LH)	0.131	0.224	0.352	0.013	0.021	0.034		B	1.0		
	B → Y	(HL)	0.299	0.447	0.719	0.010	0.016	0.025		C	1.0		
		(LH)	0.151	0.250	0.389	0.013	0.021	0.034		D	1.0		
	C → Y	(HL)	0.297	0.463	0.770	0.010	0.016	0.025		E	1.0		
		(LH)	0.168	0.273	0.422	0.013	0.021	0.034		F	1.0		
	D → Y	(HL)	0.288	0.464	0.786	0.010	0.016	0.025		G	1.0		
		(LH)	0.176	0.284	0.437	0.013	0.021	0.034		H	1.0		
	E → Y	(HL)	0.304	0.451	0.703	0.010	0.016	0.026					
		(LH)	0.143	0.246	0.386	0.013	0.021	0.034					
	F → Y	(HL)	0.305	0.463	0.749	0.010	0.016	0.026					
		(LH)	0.163	0.270	0.422	0.013	0.021	0.034					
	G → Y	(HL)	0.303	0.477	0.798	0.010	0.016	0.026					
		(LH)	0.180	0.294	0.457	0.013	0.021	0.034					
	H → Y	(HH)	0.235	0.367	0.572	0.013	0.021	0.034					
		(LL)	0.330	0.550	0.934	0.010	0.016	0.025					
F308N1	A → Y	(HL)	0.347	0.518	0.813	0.005	0.008	0.013		A	1.0	Y	71
		(LH)	0.153	0.256	0.403	0.006	0.010	0.017		B	1.0		
	B → Y	(HL)	0.350	0.529	0.858	0.005	0.008	0.013		C	1.0		
		(LH)	0.172	0.283	0.438	0.006	0.010	0.017		D	1.0		
	C → Y	(HL)	0.349	0.545	0.904	0.005	0.008	0.013		E	1.0		
		(LH)	0.189	0.305	0.473	0.006	0.010	0.017		F	1.0		
	D → Y	(HL)	0.338	0.546	0.922	0.005	0.008	0.013		G	1.0		
		(LH)	0.199	0.318	0.491	0.006	0.010	0.017		H	1.0		

Block type	Path		Switching speed t_{LD0} (ns)			Switching speed t_1			Input		Output	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	E → Y	(HL)	0.341	0.515	0.803	0.005	0.008	0.013				
		(LH)	0.156	0.264	0.418	0.006	0.010	0.017				
	F → Y	(HL)	0.343	0.526	0.847	0.005	0.008	0.013				
		(LH)	0.176	0.290	0.454	0.006	0.010	0.017				
	G → Y	(HL)	0.340	0.541	0.897	0.005	0.008	0.013				
		(LH)	0.194	0.314	0.488	0.006	0.010	0.017				
	H → Y	(HH)	0.254	0.394	0.613	0.006	0.010	0.017				
		(LL)	0.375	0.621	1.041	0.005	0.008	0.013				
F328N1	A → Y	(HL)	0.411	0.617	0.970	0.003	0.004	0.007	A	1.0	Y	143
		(LH)	0.173	0.288	0.454	0.003	0.005	0.008	B	1.0		
	B → Y	(HL)	0.412	0.630	1.015	0.003	0.004	0.007	C	1.0		
		(LH)	0.193	0.314	0.491	0.003	0.005	0.008	D	1.0		
	C → Y	(HL)	0.412	0.647	1.065	0.003	0.004	0.007	E	1.0		
		(LH)	0.212	0.339	0.528	0.003	0.005	0.008	F	1.0		
	D → Y	(HL)	0.401	0.646	1.080	0.003	0.004	0.007	G	1.0		
		(LH)	0.222	0.353	0.547	0.003	0.005	0.008	H	1.0		
	E → Y	(HL)	0.416	0.636	0.998	0.003	0.004	0.007				
		(LH)	0.186	0.308	0.489	0.003	0.005	0.008				
	F → Y	(HL)	0.417	0.646	1.044	0.003	0.004	0.007				
		(LH)	0.205	0.334	0.525	0.003	0.005	0.008				
	G → Y	(HL)	0.417	0.660	1.091	0.003	0.004	0.007				
		(LH)	0.224	0.360	0.563	0.003	0.005	0.008				
	H → Y	(HH)	0.280	0.435	0.681	0.003	0.005	0.008				
		(LL)	0.444	0.736	1.229	0.003	0.004	0.007				
F308N2	A → Y	(HL)	0.343	0.511	0.801	0.005	0.008	0.013	A	1.0	Y	71
		(LH)	0.150	0.254	0.395	0.006	0.010	0.017	B	1.0		
	B → Y	(HL)	0.345	0.522	0.843	0.005	0.008	0.013	C	1.0		
		(LH)	0.170	0.279	0.433	0.006	0.010	0.017	D	1.0		
	C → Y	(HL)	0.343	0.537	0.892	0.005	0.008	0.013	E	1.0		
		(LH)	0.186	0.301	0.466	0.006	0.010	0.017	F	1.0		
	D → Y	(HL)	0.334	0.538	0.910	0.005	0.008	0.013	G	1.0		
		(LH)	0.197	0.314	0.484	0.006	0.010	0.017	H	1.0		
	E → Y	(HL)	0.341	0.515	0.803	0.005	0.008	0.013				
		(LH)	0.156	0.264	0.417	0.006	0.010	0.017				
	F → Y	(HL)	0.343	0.525	0.847	0.005	0.008	0.013				
		(LH)	0.177	0.290	0.453	0.006	0.010	0.017				
	G → Y	(HH)	0.245	0.382	0.596	0.006	0.010	0.017				
		(LL)	0.372	0.612	1.026	0.005	0.008	0.013				
	H → Y	(HH)	0.254	0.395	0.614	0.006	0.010	0.017				
		(LL)	0.377	0.623	1.044	0.005	0.008	0.013				
F328N2	A → Y	(HL)	0.411	0.617	0.970	0.003	0.004	0.007	A	1.0	Y	143
		(LH)	0.173	0.288	0.454	0.003	0.005	0.008	B	1.0		
	B → Y	(HL)	0.412	0.630	1.015	0.003	0.004	0.007	C	1.0		
		(LH)	0.193	0.314	0.491	0.003	0.005	0.008	D	1.0		
	C → Y	(HL)	0.412	0.647	1.065	0.003	0.004	0.007	E	1.0		
		(LH)	0.212	0.339	0.528	0.003	0.005	0.008	F	1.0		
	D → Y	(HL)	0.401	0.646	1.080	0.003	0.004	0.007	G	1.0		
		(LH)	0.222	0.353	0.547	0.003	0.005	0.008	H	1.0		
	E → Y	(HL)	0.415	0.634	0.994	0.003	0.004	0.007				
		(LH)	0.185	0.307	0.487	0.003	0.005	0.008				
	F → Y	(HL)	0.417	0.644	1.043	0.003	0.004	0.007				
		(LH)	0.205	0.333	0.523	0.003	0.005	0.008				
	G → Y	(HH)	0.272	0.424	0.665	0.003	0.005	0.008				
		(LL)	0.443	0.729	1.212	0.003	0.004	0.007				
	H → Y	(HH)	0.278	0.433	0.677	0.003	0.005	0.008				
		(LL)	0.442	0.733	1.224	0.003	0.004	0.007				

Block type	Path		Switching speed t_{LD0} (ns)			Switching speed t_1			Input		Output	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L308N3	A → Y	(HL)	0.296	0.434	0.676	0.010	0.016	0.026	A	1.0	Y	35
		(LH)	0.131	0.224	0.352	0.013	0.021	0.034	B	1.0		
	B → Y	(HL)	0.299	0.447	0.719	0.010	0.016	0.025	C	1.0		
		(LH)	0.151	0.250	0.389	0.013	0.021	0.034	D	1.0		
	C → Y	(HL)	0.297	0.463	0.770	0.010	0.016	0.025	E	1.0		
		(LH)	0.168	0.273	0.422	0.013	0.021	0.034	F	1.0		
	D → Y	(HL)	0.288	0.464	0.785	0.010	0.016	0.025	G	1.0		
		(LH)	0.176	0.284	0.437	0.013	0.021	0.034	H	1.0		
	E → Y	(HL)	0.301	0.449	0.698	0.010	0.016	0.026				
		(LH)	0.142	0.243	0.384	0.013	0.021	0.034				
	F → Y	(HH)	0.215	0.334	0.523	0.013	0.021	0.034				
		(LL)	0.317	0.515	0.856	0.010	0.016	0.026				
	G → Y	(HH)	0.228	0.357	0.557	0.013	0.021	0.034				
		(LL)	0.331	0.546	0.918	0.010	0.016	0.026				
	H → Y	(HH)	0.233	0.365	0.568	0.013	0.021	0.034				
		(LL)	0.330	0.551	0.931	0.010	0.016	0.026				
F308N3	A → Y	(HL)	0.342	0.511	0.800	0.005	0.008	0.013	A	1.0	Y	71
		(LH)	0.150	0.254	0.395	0.006	0.010	0.017	B	1.0		
	B → Y	(HL)	0.345	0.522	0.843	0.005	0.008	0.013	C	1.0		
		(LH)	0.170	0.279	0.433	0.006	0.010	0.017	D	1.0		
	C → Y	(HL)	0.343	0.537	0.892	0.005	0.008	0.013	E	1.0		
		(LH)	0.186	0.301	0.466	0.006	0.011	0.017	F	1.0		
	D → Y	(HL)	0.334	0.538	0.910	0.005	0.008	0.013	G	1.0		
		(LH)	0.197	0.314	0.485	0.006	0.011	0.017	H	1.0		
	E → Y	(HL)	0.341	0.516	0.803	0.005	0.008	0.013				
		(LH)	0.156	0.264	0.418	0.006	0.011	0.017				
	F → Y	(HH)	0.231	0.360	0.562	0.006	0.011	0.017				
		(LL)	0.360	0.587	0.969	0.005	0.008	0.013				
	G → Y	(HH)	0.245	0.382	0.596	0.006	0.011	0.017				
		(LL)	0.373	0.614	1.028	0.005	0.008	0.013				
	H → Y	(HH)	0.254	0.395	0.614	0.006	0.011	0.017				
		(LL)	0.377	0.626	1.048	0.005	0.008	0.013				
F328N3	A → Y	(HL)	0.411	0.617	0.970	0.003	0.004	0.007	A	1.0	Y	143
		(LH)	0.173	0.288	0.454	0.003	0.005	0.008	B	1.0		
	B → Y	(HL)	0.412	0.630	1.015	0.003	0.004	0.007	C	1.0		
		(LH)	0.193	0.314	0.491	0.003	0.005	0.008	D	1.0		
	C → Y	(HL)	0.412	0.647	1.065	0.003	0.004	0.007	E	1.0		
		(LH)	0.212	0.339	0.528	0.003	0.005	0.008	F	1.0		
	D → Y	(HL)	0.401	0.646	1.080	0.003	0.004	0.007	G	1.0		
		(LH)	0.222	0.353	0.547	0.003	0.005	0.008	H	1.0		
	E → Y	(HL)	0.415	0.634	0.996	0.003	0.004	0.007				
		(LH)	0.185	0.307	0.486	0.003	0.005	0.008				
	F → Y	(HH)	0.256	0.400	0.628	0.003	0.005	0.008				
		(LL)	0.431	0.701	1.157	0.003	0.004	0.007				
	G → Y	(HH)	0.271	0.424	0.664	0.003	0.005	0.008				
		(LL)	0.445	0.730	1.214	0.003	0.004	0.007				
	H → Y	(HH)	0.278	0.432	0.677	0.003	0.005	0.008				
		(LL)	0.442	0.733	1.228	0.003	0.004	0.007				
F308N4	A → Y	(HL)	0.334	0.493	0.769	0.005	0.008	0.013	A	1.0	Y	71
		(LH)	0.147	0.249	0.386	0.006	0.010	0.017	B	1.0		
	B → Y	(HL)	0.336	0.505	0.816	0.005	0.008	0.013	C	1.0		
		(LH)	0.166	0.272	0.423	0.006	0.011	0.017	D	1.0		
	C → Y	(HL)	0.334	0.522	0.865	0.005	0.008	0.013	E	1.0		
		(LH)	0.184	0.295	0.457	0.006	0.011	0.017	F	1.0		
	D → Y	(HL)	0.324	0.523	0.880	0.005	0.008	0.013	G	1.0		
		(LH)	0.193	0.309	0.473	0.006	0.010	0.017	H	1.0		

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			Input		Output	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	E → Y	(HH)	0.214	0.331	0.515	0.006	0.010	0.017				
		(LL)	0.338	0.545	0.887	0.005	0.008	0.013				
	F → Y	(HH)	0.228	0.353	0.552	0.006	0.011	0.017				
		(LL)	0.350	0.569	0.942	0.005	0.008	0.013				
	G → Y	(HH)	0.243	0.378	0.589	0.006	0.011	0.017				
		(LL)	0.365	0.599	1.003	0.005	0.008	0.013				
	H → Y	(HH)	0.252	0.392	0.608	0.006	0.011	0.017				
		(LL)	0.370	0.611	1.022	0.005	0.008	0.013				
F328N4	A → Y	(HL)	0.411	0.618	0.972	0.003	0.004	0.007	A	1.0	Y	143
		(LH)	0.173	0.288	0.455	0.003	0.005	0.008	B	1.0		
	B → Y	(HL)	0.414	0.631	1.016	0.003	0.004	0.007	C	1.0		
		(LH)	0.193	0.314	0.492	0.003	0.005	0.008	D	1.0		
	C → Y	(HL)	0.413	0.648	1.065	0.003	0.004	0.007	E	1.0		
		(LH)	0.212	0.339	0.529	0.003	0.005	0.008	F	1.0		
	D → Y	(HL)	0.402	0.648	1.083	0.003	0.004	0.007	G	1.0		
		(LH)	0.222	0.354	0.547	0.003	0.005	0.008	H	1.0		
	E → Y	(HH)	0.242	0.377	0.594	0.003	0.005	0.008				
		(LL)	0.423	0.682	1.106	0.003	0.004	0.007				
	F → Y	(HH)	0.257	0.400	0.629	0.003	0.005	0.008				
		(LL)	0.433	0.705	1.164	0.003	0.004	0.007				
	G → Y	(HH)	0.272	0.424	0.665	0.003	0.005	0.008				
		(LL)	0.446	0.732	1.218	0.003	0.004	0.007				
	H → Y	(HH)	0.278	0.433	0.679	0.003	0.005	0.008				
		(LL)	0.444	0.739	1.231	0.003	0.004	0.007				

[MEMO]

Function	2-Input AND								SSI Family			
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power	L312	2										
x1	F312	2										
x2	F332	3										
x4	F352	6										
x8	F3D2	16										
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power												
x1												
x2	F332NS	4										
x4	F352NS	7										
x8												

Logic Diagram for "Normal"

Logic Diagram for "with 1 inverter"

Logic Diagram for "with 2 inverter"

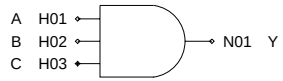
Logic Diagram for "with 3 inverter"

Logic Diagram for "with 4 inverter"

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L312	A → Y	(HH)	0.129	0.179	0.268	0.013	0.021	0.034	A	1.0	Y	35
		(LL)	0.090	0.146	0.221	0.010	0.016	0.025	B	1.0		
	B → Y	(HH)	0.115	0.170	0.262	0.013	0.021	0.034				
		(LL)	0.111	0.175	0.257	0.010	0.016	0.025				
F312	A → Y	(HH)	0.159	0.222	0.329	0.006	0.011	0.017	A	1.0	Y	71
		(LL)	0.119	0.187	0.277	0.005	0.008	0.013	B	1.0		
	B → Y	(HH)	0.140	0.206	0.324	0.006	0.011	0.017				
		(LL)	0.136	0.210	0.312	0.005	0.008	0.013				
F332	A → Y	(HH)	0.212	0.299	0.454	0.003	0.005	0.009	A	1.0	Y	141
		(LL)	0.169	0.260	0.394	0.003	0.004	0.006	B	1.0		
	B → Y	(HH)	0.186	0.280	0.452	0.003	0.005	0.009				
		(LL)	0.182	0.280	0.426	0.003	0.004	0.006				
F352	A → Y	(HH)	0.200	0.292	0.457	0.002	0.003	0.004	A	2.5	Y	283
		(LL)	0.176	0.271	0.412	0.001	0.002	0.003	B	2.5		
	B → Y	(HH)	0.200	0.292	0.456	0.002	0.003	0.004				
		(LL)	0.177	0.270	0.412	0.001	0.002	0.003				
F3D2	A → Y	(HH)	0.163	0.232	0.341	0.001	0.001	0.002	A	9.7	Y	568
		(LL)	0.124	0.192	0.289	0.001	0.001	0.002	B	9.6		
	B → Y	(HH)	0.145	0.214	0.338	0.001	0.001	0.002				
		(LL)	0.141	0.217	0.324	0.001	0.001	0.002				
F332NS	A → Y	(HH)	0.165	0.234	0.344	0.003	0.005	0.009	A	2.4	Y	142
		(LL)	0.125	0.194	0.291	0.003	0.004	0.006	B	2.4		
	B → Y	(HH)	0.145	0.219	0.342	0.003	0.005	0.009				
		(LL)	0.141	0.218	0.326	0.003	0.004	0.006				
F352NS	A → Y	(HH)	0.182	0.259	0.386	0.002	0.003	0.004	A	3.7	Y	284
		(LL)	0.141	0.218	0.330	0.001	0.002	0.003	B	3.6		
	B → Y	(HH)	0.161	0.239	0.382	0.002	0.003	0.004				
		(LL)	0.157	0.241	0.363	0.001	0.002	0.003				

Function	3-Input AND										SSI Family	
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power	L313	2										
x1	F313	3										
x2	F333	4										
x4	F3D3	9										
x8												
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power												
x1												
x2	F333NS	5										
x4												
x8												

Logic Diagram for "Normal"



Logic Diagram for "with 1 inverter"

Logic Diagram for "with 2 inverter"

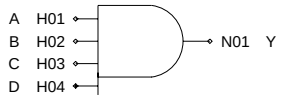
Logic Diagram for "with 3 inverter"

Logic Diagram for "with 4 inverter"

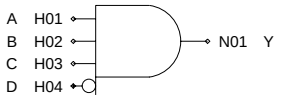
Block type	Switching speed									Input		Output	
	Path		t LD0 (ns)			t 1							
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		Symbol	Fanin	Symbol	Fanout
L313	A → Y	(HH)	0.171	0.242	0.366	0.013	0.021	0.034		A	1.0	Y	35
		(LL)	0.100	0.166	0.252	0.010	0.016	0.025		B	1.0		
	B → Y	(HH)	0.166	0.242	0.386	0.013	0.021	0.034		C	1.0		
		(LL)	0.120	0.190	0.287	0.010	0.016	0.025					
	C → Y	(HH)	0.153	0.241	0.410	0.013	0.021	0.034					
		(LL)	0.136	0.214	0.320	0.010	0.016	0.025					
F313	A → Y	(HH)	0.203	0.286	0.437	0.006	0.011	0.017		A	1.1	Y	70
		(LL)	0.124	0.198	0.298	0.005	0.008	0.013		B	1.0		
	B → Y	(HH)	0.195	0.285	0.460	0.006	0.011	0.017		C	1.0		
		(LL)	0.141	0.220	0.333	0.005	0.008	0.013					
	C → Y	(HH)	0.181	0.284	0.484	0.006	0.011	0.017					
		(LL)	0.157	0.244	0.366	0.005	0.008	0.013					
F333	A → Y	(HH)	0.273	0.390	0.623	0.003	0.005	0.009		A	1.0	Y	140
		(LL)	0.173	0.271	0.414	0.003	0.004	0.006		B	1.0		
	B → Y	(HH)	0.259	0.390	0.647	0.003	0.005	0.009		C	1.0		
		(LL)	0.187	0.293	0.449	0.003	0.004	0.006					
	C → Y	(HH)	0.244	0.389	0.670	0.003	0.005	0.009					
		(LL)	0.203	0.317	0.484	0.003	0.004	0.007					
F3D3	A → Y	(HH)	0.232	0.329	0.514	0.002	0.003	0.004		A	3.7	Y	281
		(LL)	0.145	0.229	0.347	0.001	0.002	0.003		B	3.7		
	B → Y	(HH)	0.221	0.328	0.538	0.002	0.003	0.004		C	3.7		
		(LL)	0.161	0.252	0.380	0.001	0.002	0.003					
	C → Y	(HH)	0.207	0.330	0.563	0.002	0.003	0.004					
		(LL)	0.177	0.274	0.416	0.001	0.002	0.003					
F333NS	A → Y	(HH)	0.211	0.298	0.459	0.003	0.005	0.009		A	2.5	Y	140
		(LL)	0.129	0.206	0.309	0.003	0.004	0.006		B	2.5		
	B → Y	(HH)	0.202	0.297	0.482	0.003	0.005	0.009		C	2.4		
		(LL)	0.145	0.228	0.345	0.003	0.004	0.006					
	C → Y	(HH)	0.189	0.298	0.509	0.003	0.005	0.009					
		(LL)	0.164	0.254	0.382	0.003	0.004	0.006					

Function	4-Input AND								SSI Family			
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power	L314	3	L314N1	3								
x1	F314	3	F314N1	4								
x2	F334	4	F334N1	5								
x4	F3D4	10										
x8												
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power												
x1												
x2	F334NS	6										
x4												
x8												

Logic Diagram for "Normal"



Logic Diagram for "with 1 inverter"



Logic Diagram for "with 2 inverter"

Logic Diagram for "with 3 inverter"

Logic Diagram for "with 4 inverter"

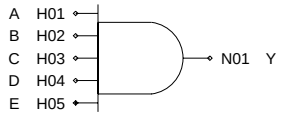
Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L314	A → Y	(HH)	0.198	0.277	0.426	0.013	0.021	0.034	A	1.0	Y	35
		(LL)	0.098	0.167	0.252	0.010	0.016	0.025	B	1.0		
	B → Y	(HH)	0.201	0.289	0.469	0.013	0.021	0.034	C	1.0		
		(LL)	0.119	0.191	0.288	0.010	0.016	0.025	D	1.0		
	C → Y	(HH)	0.198	0.305	0.519	0.013	0.021	0.034				
		(LL)	0.136	0.217	0.323	0.010	0.016	0.025				
	D → Y	(HH)	0.188	0.306	0.535	0.013	0.021	0.034				
		(LL)	0.146	0.230	0.341	0.010	0.016	0.025				
F314	A → Y	(HH)	0.241	0.340	0.536	0.006	0.011	0.017	A	1.0	Y	70
		(LL)	0.126	0.204	0.308	0.005	0.008	0.013	B	1.0		
	B → Y	(HH)	0.240	0.351	0.582	0.006	0.011	0.017	C	1.0		
		(LL)	0.143	0.227	0.344	0.005	0.008	0.013	D	1.0		
	C → Y	(HH)	0.237	0.367	0.632	0.006	0.011	0.017				
		(LL)	0.159	0.250	0.380	0.005	0.008	0.013				
	D → Y	(HH)	0.227	0.368	0.649	0.006	0.011	0.017				
		(LL)	0.170	0.264	0.397	0.005	0.008	0.013				
F334	A → Y	(HH)	0.324	0.468	0.766	0.003	0.005	0.009	A	1.0	Y	139
		(LL)	0.175	0.274	0.420	0.003	0.004	0.006	B	1.0		
	B → Y	(HH)	0.320	0.482	0.815	0.003	0.005	0.009	C	1.0		
		(LL)	0.189	0.298	0.456	0.003	0.004	0.007	D	1.0		
	C → Y	(HH)	0.317	0.498	0.866	0.003	0.005	0.009				
		(LL)	0.205	0.321	0.491	0.003	0.004	0.007				
	D → Y	(HH)	0.306	0.499	0.883	0.003	0.005	0.009				
		(LL)	0.215	0.336	0.513	0.003	0.004	0.007				
F3D4	A → Y	(HH)	0.281	0.402	0.648	0.002	0.003	0.004	A	3.7	Y	279
		(LL)	0.150	0.239	0.363	0.001	0.002	0.003	B	3.8		
	B → Y	(HH)	0.278	0.414	0.697	0.002	0.003	0.004	C	3.8		
		(LL)	0.166	0.261	0.397	0.001	0.002	0.003	D	3.7		
	C → Y	(HH)	0.274	0.432	0.748	0.002	0.003	0.004				
		(LL)	0.181	0.285	0.432	0.001	0.002	0.003				
	D → Y	(HH)	0.263	0.432	0.765	0.002	0.003	0.004				
		(LL)	0.190	0.299	0.453	0.001	0.002	0.003				
F334NS	A → Y	(HH)	0.253	0.361	0.576	0.003	0.005	0.009	A	2.5	Y	140
		(LL)	0.134	0.215	0.327	0.003	0.004	0.006	B	2.4		
	B → Y	(HH)	0.252	0.373	0.622	0.003	0.005	0.009	C	2.5		
		(LL)	0.150	0.239	0.363	0.003	0.004	0.006	D	2.4		
	C → Y	(HH)	0.248	0.390	0.677	0.003	0.005	0.009				
		(LL)	0.167	0.262	0.398	0.003	0.004	0.006				
	D → Y	(HH)	0.238	0.391	0.689	0.003	0.005	0.009				
		(LL)	0.176	0.277	0.416	0.003	0.004	0.006				
L314N1	A → Y	(HH)	0.199	0.279	0.429	0.013	0.021	0.034	A	1.0	Y	35
		(LL)	0.099	0.169	0.253	0.010	0.016	0.025	B	1.0		
	B → Y	(HH)	0.202	0.291	0.474	0.013	0.021	0.034	C	1.0		
		(LL)	0.119	0.192	0.290	0.010	0.016	0.025	D	1.0		
	C → Y	(HH)	0.199	0.307	0.523	0.013	0.021	0.034				
		(LL)	0.138	0.217	0.325	0.010	0.016	0.025				
	D → Y	(HL)	0.197	0.300	0.451	0.010	0.016	0.025				
		(LH)	0.232	0.388	0.668	0.013	0.021	0.034				
F314N1	A → Y	(HH)	0.239	0.339	0.533	0.006	0.011	0.017	A	1.0	Y	70
		(LL)	0.125	0.204	0.307	0.005	0.008	0.013	B	1.0		
	B → Y	(HH)	0.239	0.350	0.580	0.006	0.011	0.017	C	1.0		
		(LL)	0.143	0.226	0.342	0.005	0.008	0.013	D	1.0		
	C → Y	(HH)	0.236	0.366	0.630	0.006	0.011	0.017				
		(LL)	0.159	0.249	0.378	0.005	0.008	0.013				
	D → Y	(HL)	0.213	0.325	0.495	0.005	0.008	0.013				
		(LH)	0.263	0.438	0.763	0.006	0.011	0.017				

Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_1						
	IN	→	OUT	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F334N1	A	→	Y (HH)	0.326	0.473	0.775	0.003	0.005	0.009	A	1.0	Y	138
			(LL)	0.176	0.277	0.424	0.003	0.004	0.006	B	1.0		
	B	→	Y (HH)	0.323	0.486	0.824	0.003	0.005	0.009	C	1.0		
			(LL)	0.190	0.300	0.460	0.003	0.004	0.007	D	1.0		
	C	→	Y (HH)	0.319	0.503	0.875	0.003	0.005	0.009				
			(LL)	0.206	0.325	0.497	0.003	0.004	0.007				
	D	→	Y (HL)	0.260	0.402	0.617	0.003	0.004	0.007				
			(LH)	0.347	0.576	1.008	0.003	0.005	0.009				

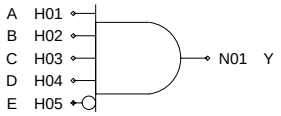
[MEMO]

Function	5-Input AND								SSI Family			
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power	L315	4	L315N1	4								
x1	F315	5	F315N1	5								
x2	F335	7	F335N1	7								
x4												
x8												
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power												
x1												
x2												
x4												
x8												

Logic Diagram for "Normal"



Logic Diagram for "with 1 inverter"



Logic Diagram for "with 2 inverter"

Logic Diagram for "with 3 inverter"

Logic Diagram for "with 4 inverter"

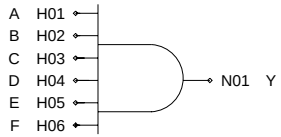
Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L315	A → Y	(HH)	0.139	0.200	0.300	0.024	0.041	0.067	A	1.0	Y	18
		(LL)	0.091	0.149	0.225	0.010	0.016	0.025	B	1.0		
	B → Y	(HH)	0.126	0.189	0.298	0.024	0.041	0.067	C	1.0		
		(LL)	0.111	0.175	0.261	0.010	0.016	0.025	D	1.0		
	C → Y	(HH)	0.187	0.274	0.417	0.024	0.041	0.067	E	1.0		
		(LL)	0.107	0.179	0.271	0.010	0.016	0.025				
	D → Y	(HH)	0.181	0.273	0.439	0.024	0.041	0.067				
		(LL)	0.127	0.203	0.309	0.010	0.016	0.025				
	E → Y	(HH)	0.170	0.274	0.461	0.024	0.041	0.067				
		(LL)	0.145	0.229	0.342	0.010	0.016	0.025				
F315	A → Y	(HH)	0.162	0.247	0.391	0.012	0.021	0.034	A	1.1	Y	35
		(LL)	0.143	0.222	0.333	0.005	0.008	0.013	B	1.0		
	B → Y	(HH)	0.181	0.263	0.396	0.012	0.021	0.034	C	1.0		
		(LL)	0.125	0.199	0.298	0.005	0.008	0.013	D	1.0		
	C → Y	(HH)	0.201	0.321	0.544	0.012	0.021	0.034	E	1.1		
		(LL)	0.164	0.257	0.387	0.005	0.008	0.013				
	D → Y	(HH)	0.214	0.320	0.520	0.012	0.021	0.034				
		(LL)	0.148	0.234	0.354	0.005	0.008	0.013				
	E → Y	(HH)	0.223	0.322	0.498	0.012	0.021	0.034				
		(LL)	0.130	0.210	0.320	0.005	0.008	0.013				
F335	A → Y	(HH)	0.302	0.464	0.727	0.003	0.005	0.008	A	1.0	Y	144
		(LL)	0.209	0.338	0.530	0.003	0.004	0.006	B	1.0		
	B → Y	(HH)	0.288	0.452	0.723	0.003	0.005	0.008	C	1.0		
		(LL)	0.228	0.363	0.564	0.003	0.004	0.006	D	1.0		
	C → Y	(HH)	0.347	0.531	0.835	0.003	0.005	0.008	E	1.0		
		(LL)	0.221	0.363	0.574	0.003	0.004	0.006				
	D → Y	(HH)	0.341	0.530	0.860	0.003	0.005	0.008				
		(LL)	0.242	0.388	0.610	0.003	0.004	0.006				
	E → Y	(HH)	0.330	0.532	0.882	0.003	0.005	0.008				
		(LL)	0.259	0.413	0.643	0.003	0.004	0.006				
L315N1	A → Y	(HH)	0.139	0.200	0.300	0.024	0.041	0.067	A	1.0	Y	18
		(LL)	0.091	0.149	0.225	0.010	0.016	0.025	B	1.0		
	B → Y	(HH)	0.126	0.189	0.298	0.024	0.041	0.067	C	1.0		
		(LL)	0.111	0.175	0.261	0.010	0.016	0.025	D	1.0		
	C → Y	(HH)	0.187	0.274	0.417	0.024	0.041	0.067	E	1.0		
		(LL)	0.107	0.179	0.271	0.010	0.016	0.025				
	D → Y	(HH)	0.181	0.273	0.438	0.024	0.041	0.067				
		(LL)	0.127	0.203	0.309	0.010	0.016	0.025				
	E → Y	(HL)	0.189	0.290	0.441	0.010	0.016	0.025				
		(LH)	0.203	0.342	0.576	0.024	0.041	0.067				
F315N1	A → Y	(HH)	0.163	0.248	0.392	0.012	0.021	0.034	A	1.1	Y	35
		(LL)	0.143	0.222	0.334	0.005	0.008	0.013	B	1.0		
	B → Y	(HH)	0.180	0.263	0.396	0.012	0.021	0.034	C	1.0		
		(LL)	0.126	0.200	0.301	0.005	0.008	0.013	D	1.0		
	C → Y	(HH)	0.201	0.321	0.546	0.012	0.021	0.034	E	1.0		
		(LL)	0.163	0.256	0.386	0.005	0.008	0.013				
	D → Y	(HH)	0.214	0.321	0.521	0.012	0.021	0.034				
		(LL)	0.147	0.233	0.354	0.005	0.008	0.013				
	E → Y	(HL)	0.184	0.279	0.427	0.005	0.008	0.013				
		(LH)	0.230	0.372	0.610	0.012	0.021	0.034				
F335N1	A → Y	(HH)	0.302	0.464	0.727	0.003	0.005	0.008	A	1.0	Y	144
		(LL)	0.209	0.338	0.530	0.003	0.004	0.006	B	1.0		
	B → Y	(HH)	0.288	0.452	0.723	0.003	0.005	0.008	C	1.0		
		(LL)	0.228	0.363	0.564	0.003	0.004	0.006	D	1.0		
	C → Y	(HH)	0.348	0.533	0.839	0.003	0.005	0.008	E	1.0		
		(LL)	0.223	0.364	0.576	0.003	0.004	0.006				

Block type	Switching speed										
	Path		t LD0 (ns)			t 1			Input		Output	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	D → Y	(HH)	0.343	0.533	0.862	0.003	0.005	0.008				
		(LL)	0.243	0.390	0.611	0.003	0.004	0.006				
	E → Y	(HL)	0.302	0.474	0.743	0.003	0.004	0.006				
		(LH)	0.363	0.601	0.998	0.003	0.005	0.008				

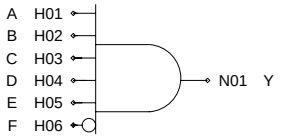
[MEMO]

Function	6-Input AND										SSI Family	
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power	L316	4	L316N1	5	L316N2	5						
x1	F316	5	F316N1	6	F316N2	6						
x2	F336	7	F336N1	8	F336N2	8						
x4												
x8												
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power												
x1												
x2												
x4												
x8												

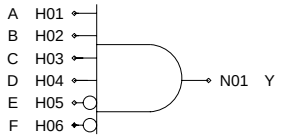
Logic Diagram for "Normal"



Logic Diagram for "with 1 inverter"



Logic Diagram for "with 2 inverter"



Logic Diagram for "with 3 inverter"

Logic Diagram for "with 4 inverter"

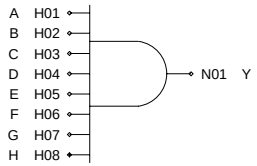
Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L316	A → Y	(HH)	0.189	0.271	0.410	0.024	0.041	0.067	A	1.0	Y	18
		(LL)	0.104	0.171	0.263	0.010	0.016	0.025	B	1.0		
	B → Y	(HH)	0.184	0.271	0.430	0.024	0.041	0.067	C	1.0		
		(LL)	0.123	0.198	0.297	0.010	0.016	0.025	D	1.0		
	C → Y	(HH)	0.172	0.270	0.454	0.024	0.041	0.067	E	1.0		
		(LL)	0.139	0.222	0.331	0.010	0.016	0.025	F	1.0		
	D → Y	(HH)	0.188	0.274	0.417	0.024	0.041	0.067				
		(LL)	0.106	0.178	0.270	0.010	0.016	0.025				
	E → Y	(HH)	0.182	0.274	0.441	0.024	0.041	0.067				
		(LL)	0.127	0.203	0.307	0.010	0.016	0.025				
	F → Y	(HH)	0.171	0.274	0.462	0.024	0.041	0.067				
		(LL)	0.144	0.228	0.341	0.010	0.016	0.025				
F316	A → Y	(HH)	0.226	0.327	0.506	0.012	0.021	0.034	A	1.1	Y	35
		(LL)	0.133	0.213	0.325	0.005	0.008	0.013	B	1.0		
	B → Y	(HH)	0.216	0.325	0.528	0.012	0.021	0.034	C	1.0		
		(LL)	0.150	0.237	0.359	0.005	0.008	0.013	D	1.1		
	C → Y	(HH)	0.203	0.324	0.551	0.012	0.021	0.034	E	1.0		
		(LL)	0.165	0.260	0.393	0.005	0.008	0.013	F	1.0		
	D → Y	(HH)	0.222	0.322	0.497	0.012	0.021	0.034				
		(LL)	0.130	0.209	0.319	0.005	0.008	0.013				
	E → Y	(HH)	0.214	0.320	0.519	0.012	0.021	0.034				
		(LL)	0.147	0.234	0.353	0.005	0.008	0.013				
	F → Y	(HH)	0.200	0.320	0.544	0.012	0.021	0.034				
		(LL)	0.163	0.256	0.386	0.005	0.008	0.013				
F336	A → Y	(HH)	0.347	0.524	0.821	0.003	0.005	0.008	A	1.0	Y	144
		(LL)	0.216	0.352	0.554	0.003	0.004	0.006	B	1.0		
	B → Y	(HH)	0.342	0.524	0.843	0.003	0.005	0.008	C	1.0		
		(LL)	0.234	0.377	0.590	0.003	0.004	0.006	D	1.0		
	C → Y	(HH)	0.330	0.524	0.868	0.003	0.005	0.008	E	1.0		
		(LL)	0.251	0.400	0.620	0.003	0.004	0.006	F	1.0		
	D → Y	(HH)	0.346	0.529	0.833	0.003	0.005	0.008				
		(LL)	0.219	0.359	0.567	0.003	0.004	0.006				
	E → Y	(HH)	0.340	0.528	0.854	0.003	0.005	0.008				
		(LL)	0.239	0.385	0.604	0.003	0.004	0.006				
	F → Y	(HH)	0.329	0.529	0.878	0.003	0.005	0.008				
		(LL)	0.257	0.410	0.638	0.003	0.004	0.006				
L316N1	A → Y	(HH)	0.187	0.268	0.405	0.024	0.041	0.067	A	1.0	Y	17
		(LL)	0.104	0.169	0.260	0.010	0.016	0.025	B	1.0		
	B → Y	(HH)	0.182	0.267	0.425	0.024	0.041	0.067	C	1.0		
		(LL)	0.122	0.195	0.294	0.010	0.016	0.025	D	1.0		
	C → Y	(HH)	0.170	0.268	0.450	0.024	0.041	0.067	E	1.0		
		(LL)	0.139	0.219	0.328	0.010	0.016	0.025	F	1.0		
	D → Y	(HH)	0.188	0.274	0.417	0.024	0.041	0.067				
		(LL)	0.106	0.178	0.270	0.010	0.016	0.025				
	E → Y	(HH)	0.182	0.274	0.440	0.024	0.041	0.067				
		(LL)	0.127	0.203	0.307	0.010	0.016	0.025				
	F → Y	(HL)	0.193	0.295	0.447	0.010	0.016	0.025				
		(LH)	0.209	0.351	0.585	0.024	0.041	0.067				
F316N1	A → Y	(HH)	0.226	0.327	0.506	0.012	0.021	0.034	A	1.1	Y	35
		(LL)	0.133	0.213	0.325	0.005	0.008	0.013	B	1.0		
	B → Y	(HH)	0.216	0.325	0.528	0.012	0.021	0.034	C	1.0		
		(LL)	0.150	0.237	0.359	0.005	0.008	0.013	D	1.1		
	C → Y	(HH)	0.203	0.324	0.551	0.012	0.021	0.034	E	1.0		
		(LL)	0.165	0.260	0.393	0.005	0.008	0.013	F	1.0		
	D → Y	(HH)	0.222	0.322	0.497	0.012	0.021	0.034				
		(LL)	0.130	0.209	0.319	0.005	0.008	0.013				

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			Input		Output	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	E → Y	(HH)	0.214	0.320	0.519	0.012	0.021	0.034				
		(LL)	0.147	0.233	0.353	0.005	0.008	0.013				
	F → Y	(HL)	0.209	0.321	0.490	0.005	0.008	0.013				
		(LH)	0.236	0.392	0.664	0.012	0.021	0.034				
F336N1	A → Y	(HH)	0.346	0.522	0.820	0.003	0.005	0.008	A	1.0	Y	144
		(LL)	0.213	0.351	0.553	0.003	0.004	0.006	B	1.0		
	B → Y	(HH)	0.341	0.522	0.841	0.003	0.005	0.008	C	1.0		
		(LL)	0.233	0.376	0.588	0.003	0.004	0.006	D	1.0		
	C → Y	(HH)	0.329	0.522	0.867	0.003	0.005	0.008	E	1.0		
		(LL)	0.250	0.399	0.620	0.003	0.004	0.006	F	1.0		
	D → Y	(HH)	0.347	0.530	0.836	0.003	0.005	0.008				
		(LL)	0.221	0.362	0.569	0.003	0.004	0.006				
	E → Y	(HH)	0.341	0.530	0.858	0.003	0.005	0.008				
		(LL)	0.241	0.386	0.606	0.003	0.004	0.006				
	F → Y	(HL)	0.306	0.477	0.746	0.003	0.004	0.006				
		(LH)	0.369	0.606	1.003	0.003	0.005	0.008				
L316N2	A → Y	(HH)	0.187	0.268	0.405	0.024	0.041	0.067	A	1.0	Y	18
		(LL)	0.103	0.168	0.260	0.010	0.016	0.025	B	1.0		
	B → Y	(HH)	0.182	0.267	0.425	0.024	0.041	0.067	C	1.0		
		(LL)	0.122	0.196	0.294	0.010	0.016	0.025	D	1.0		
	C → Y	(HH)	0.170	0.268	0.450	0.024	0.041	0.067	E	1.0		
		(LL)	0.138	0.219	0.328	0.010	0.016	0.025	F	1.0		
	D → Y	(HH)	0.188	0.274	0.417	0.024	0.041	0.067				
		(LL)	0.106	0.178	0.270	0.010	0.016	0.025				
	E → Y	(HL)	0.178	0.269	0.411	0.010	0.016	0.025				
		(LH)	0.204	0.337	0.555	0.024	0.041	0.067				
	F → Y	(HL)	0.193	0.294	0.448	0.010	0.016	0.025				
		(LH)	0.211	0.353	0.591	0.024	0.041	0.067				
F316N2	A → Y	(HH)	0.226	0.327	0.506	0.012	0.021	0.034	A	1.1	Y	35
		(LL)	0.133	0.213	0.325	0.005	0.008	0.013	B	1.0		
	B → Y	(HH)	0.216	0.325	0.528	0.012	0.021	0.034	C	1.0		
		(LL)	0.150	0.237	0.359	0.005	0.008	0.013	D	1.1		
	C → Y	(HH)	0.203	0.324	0.551	0.012	0.021	0.034	E	1.0		
		(LL)	0.165	0.260	0.393	0.005	0.008	0.013	F	1.0		
	D → Y	(HH)	0.222	0.321	0.496	0.012	0.021	0.034				
		(LL)	0.130	0.209	0.319	0.005	0.008	0.013				
	E → Y	(HL)	0.194	0.297	0.454	0.005	0.008	0.013				
		(LH)	0.229	0.376	0.631	0.012	0.021	0.034				
	F → Y	(HL)	0.209	0.321	0.490	0.005	0.008	0.013				
		(LH)	0.237	0.394	0.667	0.012	0.021	0.034				
F336N2	A → Y	(HH)	0.346	0.522	0.821	0.003	0.005	0.008	A	1.0	Y	144
		(LL)	0.214	0.352	0.553	0.003	0.004	0.006	B	1.0		
	B → Y	(HH)	0.341	0.522	0.841	0.003	0.005	0.008	C	1.0		
		(LL)	0.235	0.377	0.587	0.003	0.004	0.006	D	1.0		
	C → Y	(HH)	0.329	0.522	0.867	0.003	0.005	0.008	E	1.0		
		(LL)	0.250	0.399	0.619	0.003	0.004	0.006	F	1.0		
	D → Y	(HH)	0.346	0.529	0.833	0.003	0.005	0.008				
		(LL)	0.219	0.359	0.567	0.003	0.004	0.006				
	E → Y	(HL)	0.290	0.452	0.708	0.003	0.004	0.006				
		(LH)	0.362	0.591	0.972	0.003	0.005	0.008				
	F → Y	(HL)	0.305	0.476	0.744	0.003	0.004	0.006				
		(LH)	0.369	0.608	1.006	0.003	0.005	0.008				

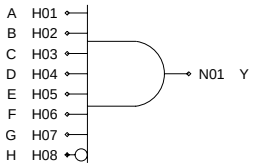
[MEMO]

Function	8-Input AND										SSI Family	
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power	L318	5	L318N1	6	L318N2	6	L318N3	7				
x1	F318	6	F318N1	7	F318N2	7	F318N3	8				
x2	F338	8	F338N1	9	F338N2	9	F338N3	10				
x4												
x8												
Block type	Normal		with 1 inverter		with 2 inverter		with 3 inverter		with 4 inverter		-	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power												
x1												
x2												
x4												
x8												

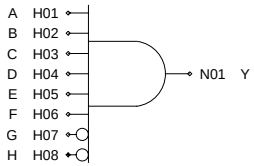
Logic Diagram for "Normal"



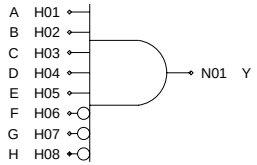
Logic Diagram for "with 1 inverter"



Logic Diagram for "with 2 inverter"



Logic Diagram for "with 3 inverter"



Logic Diagram for "with 4 inverter"

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L318	A → Y	(HH)	0.219	0.312	0.481	0.024	0.041	0.067	A	1.0	Y	17
		(LL)	0.105	0.174	0.267	0.010	0.016	0.025	B	1.0		
	B → Y	(HH)	0.221	0.323	0.527	0.024	0.041	0.067	C	1.0		
		(LL)	0.124	0.200	0.302	0.010	0.016	0.025	D	1.0		
	C → Y	(HH)	0.219	0.340	0.576	0.024	0.041	0.067	E	1.0		
		(LL)	0.141	0.225	0.338	0.010	0.016	0.025	F	1.0		
	D → Y	(HH)	0.210	0.341	0.592	0.024	0.041	0.067	G	1.0		
		(LL)	0.152	0.239	0.356	0.010	0.016	0.025	H	1.0		
	E → Y	(HH)	0.216	0.313	0.479	0.024	0.041	0.067				
		(LL)	0.109	0.182	0.282	0.010	0.016	0.025				
	F → Y	(HH)	0.217	0.322	0.523	0.024	0.041	0.067				
		(LL)	0.129	0.209	0.317	0.010	0.016	0.025				
	G → Y	(HH)	0.215	0.339	0.573	0.024	0.041	0.067				
		(LL)	0.148	0.235	0.354	0.010	0.016	0.025				
	H → Y	(HH)	0.205	0.338	0.589	0.024	0.041	0.067				
		(LL)	0.157	0.249	0.373	0.010	0.016	0.025				
F318	A → Y	(HH)	0.266	0.383	0.608	0.012	0.021	0.034	A	1.0	Y	35
		(LL)	0.137	0.223	0.341	0.005	0.008	0.013	B	1.0		
	B → Y	(HH)	0.265	0.395	0.655	0.012	0.021	0.034	C	1.0		
		(LL)	0.154	0.245	0.374	0.005	0.008	0.013	D	1.0		
	C → Y	(HH)	0.262	0.411	0.705	0.012	0.021	0.034	E	1.0		
		(LL)	0.170	0.270	0.411	0.005	0.008	0.013	F	1.0		
	D → Y	(HH)	0.252	0.413	0.723	0.012	0.021	0.034	G	1.0		
		(LL)	0.180	0.282	0.429	0.005	0.008	0.013	H	1.0		
	E → Y	(HH)	0.260	0.374	0.591	0.012	0.021	0.034				
		(LL)	0.134	0.217	0.331	0.005	0.008	0.013				
	F → Y	(HH)	0.258	0.385	0.637	0.012	0.021	0.034				
		(LL)	0.150	0.241	0.366	0.005	0.008	0.013				
	G → Y	(HH)	0.256	0.402	0.686	0.012	0.021	0.034				
		(LL)	0.167	0.264	0.401	0.005	0.008	0.013				
	H → Y	(HH)	0.246	0.403	0.704	0.012	0.021	0.034				
		(LL)	0.176	0.278	0.418	0.005	0.008	0.013				
F338	A → Y	(HH)	0.379	0.571	0.901	0.003	0.005	0.008	A	1.0	Y	144
		(LL)	0.213	0.354	0.556	0.003	0.004	0.006	B	1.0		
	B → Y	(HH)	0.382	0.583	0.944	0.003	0.005	0.008	C	1.0		
		(LL)	0.234	0.378	0.593	0.003	0.004	0.006	D	1.0		
	C → Y	(HH)	0.380	0.600	0.996	0.003	0.005	0.008	E	1.0		
		(LL)	0.252	0.403	0.628	0.003	0.004	0.006	F	1.0		
	D → Y	(HH)	0.371	0.599	1.011	0.003	0.005	0.008	G	1.0		
		(LL)	0.260	0.416	0.645	0.003	0.004	0.006	H	1.0		
	E → Y	(HH)	0.386	0.588	0.932	0.003	0.005	0.008				
		(LL)	0.228	0.373	0.591	0.003	0.004	0.006				
	F → Y	(HH)	0.387	0.598	0.976	0.003	0.005	0.008				
		(LL)	0.247	0.400	0.628	0.003	0.004	0.006				
	G → Y	(HH)	0.385	0.614	1.025	0.003	0.005	0.008				
		(LL)	0.265	0.425	0.664	0.003	0.004	0.006				
	H → Y	(HH)	0.376	0.615	1.041	0.003	0.005	0.008				
		(LL)	0.274	0.437	0.684	0.003	0.004	0.006				
L318N1	A → Y	(HH)	0.216	0.307	0.472	0.024	0.041	0.067	A	1.0	Y	17
		(LL)	0.102	0.172	0.263	0.010	0.016	0.025	B	1.0		
	B → Y	(HH)	0.219	0.319	0.517	0.024	0.041	0.067	C	1.0		
		(LL)	0.122	0.197	0.298	0.010	0.016	0.025	D	1.0		
	C → Y	(HH)	0.217	0.335	0.567	0.024	0.041	0.067	E	1.0		
		(LL)	0.140	0.222	0.334	0.010	0.016	0.025	F	1.0		
	D → Y	(HH)	0.207	0.336	0.583	0.024	0.041	0.067	G	1.0		
		(LL)	0.149	0.236	0.351	0.010	0.016	0.025	H	1.0		

Block type	Path IN → OUT		Switching speed t LD0 (ns) MIN.	TYP.	MAX.	t 1 MIN.	TYP.	MAX.	Input Symbol	Fanin	Output Symbol	Fanout
	E → Y	(HH)	0.214	0.312	0.477	0.024	0.041	0.067				
		(LL)	0.108	0.182	0.280	0.010	0.016	0.025				
	F → Y	(HH)	0.216	0.322	0.521	0.024	0.041	0.067				
		(LL)	0.128	0.208	0.316	0.010	0.016	0.025				
	G → Y	(HH)	0.214	0.337	0.570	0.024	0.041	0.067				
		(LL)	0.147	0.234	0.352	0.010	0.016	0.025				
	H → Y	(HL)	0.207	0.315	0.478	0.010	0.016	0.025				
		(LH)	0.248	0.418	0.713	0.024	0.041	0.067				
F318N1	A → Y	(HH)	0.266	0.383	0.608	0.012	0.021	0.034	A	1.0	Y	35
		(LL)	0.137	0.223	0.341	0.005	0.008	0.013	B	1.0		
	B → Y	(HH)	0.265	0.395	0.655	0.012	0.021	0.034	C	1.0		
		(LL)	0.154	0.245	0.374	0.005	0.008	0.013	D	1.0		
	C → Y	(HH)	0.262	0.411	0.705	0.012	0.021	0.034	E	1.0		
		(LL)	0.170	0.270	0.411	0.005	0.008	0.013	F	1.0		
	D → Y	(HH)	0.252	0.413	0.723	0.012	0.021	0.034	G	1.0		
		(LL)	0.180	0.282	0.429	0.005	0.008	0.013	H	1.0		
	E → Y	(HH)	0.260	0.374	0.591	0.012	0.021	0.034				
		(LL)	0.134	0.217	0.331	0.005	0.008	0.013				
	F → Y	(HH)	0.258	0.385	0.637	0.012	0.021	0.034				
		(LL)	0.150	0.241	0.366	0.005	0.008	0.013				
	G → Y	(HH)	0.256	0.402	0.686	0.012	0.021	0.034				
		(LL)	0.167	0.264	0.401	0.005	0.008	0.013				
	H → Y	(HL)	0.225	0.345	0.527	0.005	0.008	0.013				
		(LH)	0.291	0.482	0.830	0.012	0.021	0.034				
F338N1	A → Y	(HH)	0.379	0.571	0.901	0.003	0.005	0.008	A	1.0	Y	144
		(LL)	0.213	0.354	0.556	0.003	0.004	0.006	B	1.0		
	B → Y	(HH)	0.382	0.583	0.944	0.003	0.005	0.008	C	1.0		
		(LL)	0.234	0.378	0.593	0.003	0.004	0.006	D	1.0		
	C → Y	(HH)	0.380	0.600	0.996	0.003	0.005	0.008	E	1.0		
		(LL)	0.252	0.403	0.628	0.003	0.004	0.006	F	1.0		
	D → Y	(HH)	0.371	0.599	1.011	0.003	0.005	0.008	G	1.0		
		(LL)	0.260	0.416	0.645	0.003	0.004	0.006	H	1.0		
	E → Y	(HH)	0.386	0.588	0.932	0.003	0.005	0.008				
		(LL)	0.228	0.373	0.591	0.003	0.004	0.006				
	F → Y	(HH)	0.387	0.598	0.976	0.003	0.005	0.008				
		(LL)	0.247	0.400	0.628	0.003	0.004	0.006				
	G → Y	(HH)	0.385	0.614	1.025	0.003	0.005	0.008				
		(LL)	0.265	0.425	0.664	0.003	0.004	0.006				
	H → Y	(HL)	0.318	0.499	0.780	0.003	0.004	0.006				
		(LH)	0.413	0.687	1.161	0.003	0.005	0.008				
L318N2	A → Y	(HH)	0.218	0.310	0.478	0.024	0.041	0.067	A	1.0	Y	17
		(LL)	0.103	0.173	0.266	0.010	0.016	0.025	B	1.0		
	B → Y	(HH)	0.220	0.322	0.524	0.024	0.041	0.067	C	1.0		
		(LL)	0.124	0.199	0.300	0.010	0.016	0.025	D	1.0		
	C → Y	(HH)	0.218	0.337	0.573	0.024	0.041	0.067	E	1.0		
		(LL)	0.141	0.224	0.337	0.010	0.016	0.025	F	1.0		
	D → Y	(HH)	0.209	0.340	0.588	0.024	0.041	0.067	G	1.0		
		(LL)	0.151	0.238	0.354	0.010	0.016	0.025	H	1.0		
	E → Y	(HH)	0.213	0.309	0.473	0.024	0.041	0.067				
		(LL)	0.107	0.182	0.277	0.010	0.016	0.025				
	F → Y	(HH)	0.215	0.320	0.517	0.024	0.041	0.067				
		(LL)	0.128	0.207	0.314	0.010	0.016	0.025				
	G → Y	(HL)	0.199	0.303	0.460	0.010	0.016	0.025				
		(LH)	0.246	0.409	0.697	0.024	0.041	0.067				
	H → Y	(HL)	0.205	0.312	0.475	0.010	0.016	0.025				
		(LH)	0.247	0.417	0.712	0.024	0.041	0.067				

Block type	Path IN → OUT		Switching speed t LD0 (ns) MIN.	TYP.	MAX.	t 1 MIN.	TYP.	MAX.	Input Symbol	Fanin	Output Symbol	Fanout
F318N2	A → Y	(HH)	0.266	0.383	0.607	0.012	0.021	0.034	A	1.0	Y	35
		(LL)	0.137	0.223	0.340	0.005	0.008	0.013	B	1.0		
	B → Y	(HH)	0.265	0.394	0.655	0.012	0.021	0.034	C	1.0		
		(LL)	0.154	0.245	0.373	0.005	0.008	0.013	D	1.0		
	C → Y	(HH)	0.262	0.411	0.704	0.012	0.021	0.034	E	1.0		
		(LL)	0.170	0.270	0.411	0.005	0.008	0.013	F	1.0		
	D → Y	(HH)	0.251	0.412	0.722	0.012	0.021	0.034	G	1.0		
		(LL)	0.180	0.282	0.428	0.005	0.008	0.013	H	1.0		
	E → Y	(HH)	0.260	0.374	0.591	0.012	0.021	0.034				
		(LL)	0.133	0.218	0.331	0.005	0.008	0.013				
	F → Y	(HH)	0.258	0.385	0.637	0.012	0.021	0.034				
		(LL)	0.150	0.241	0.366	0.005	0.008	0.013				
	G → Y	(HL)	0.217	0.335	0.510	0.005	0.008	0.013				
		(LH)	0.288	0.476	0.818	0.012	0.021	0.034				
	H → Y	(HL)	0.224	0.343	0.525	0.005	0.008	0.013				
		(LH)	0.290	0.482	0.831	0.012	0.021	0.034				
F338N2	A → Y	(HH)	0.379	0.571	0.901	0.003	0.005	0.008	A	1.0	Y	144
		(LL)	0.213	0.354	0.556	0.003	0.004	0.006	B	1.0		
	B → Y	(HH)	0.382	0.583	0.944	0.003	0.005	0.008	C	1.0		
		(LL)	0.234	0.378	0.593	0.003	0.004	0.006	D	1.0		
	C → Y	(HH)	0.380	0.600	0.996	0.003	0.005	0.008	E	1.0		
		(LL)	0.252	0.403	0.628	0.003	0.004	0.006	F	1.0		
	D → Y	(HH)	0.371	0.599	1.011	0.003	0.005	0.008	G	1.0		
		(LL)	0.260	0.416	0.645	0.003	0.004	0.006	H	1.0		
	E → Y	(HH)	0.386	0.588	0.932	0.003	0.005	0.008				
		(LL)	0.228	0.374	0.592	0.003	0.004	0.006				
	F → Y	(HH)	0.387	0.598	0.976	0.003	0.005	0.008				
		(LL)	0.247	0.401	0.628	0.003	0.004	0.006				
	G → Y	(HL)	0.313	0.490	0.769	0.003	0.004	0.006				
		(LH)	0.414	0.684	1.149	0.003	0.005	0.008				
	H → Y	(HL)	0.317	0.498	0.780	0.003	0.004	0.006				
		(LH)	0.413	0.688	1.160	0.003	0.005	0.008				
L318N3	A → Y	(HH)	0.216	0.307	0.472	0.024	0.041	0.067	A	1.0	Y	17
		(LL)	0.102	0.172	0.263	0.010	0.016	0.025	B	1.0		
	B → Y	(HH)	0.219	0.319	0.517	0.024	0.041	0.067	C	1.0		
		(LL)	0.122	0.197	0.298	0.010	0.016	0.025	D	1.0		
	C → Y	(HH)	0.217	0.335	0.567	0.024	0.041	0.067	E	1.0		
		(LL)	0.140	0.222	0.334	0.010	0.016	0.025	F	1.0		
	D → Y	(HH)	0.207	0.336	0.583	0.024	0.041	0.067	G	1.0		
		(LL)	0.149	0.236	0.351	0.010	0.016	0.025	H	1.0		
	E → Y	(HH)	0.214	0.311	0.475	0.024	0.041	0.067				
		(LL)	0.108	0.183	0.280	0.010	0.016	0.025				
	F → Y	(HL)	0.182	0.277	0.422	0.010	0.016	0.025				
		(LH)	0.232	0.381	0.640	0.024	0.041	0.067				
	G → Y	(HL)	0.199	0.303	0.461	0.010	0.016	0.025				
		(LH)	0.247	0.412	0.703	0.024	0.041	0.067				
	H → Y	(HL)	0.205	0.313	0.476	0.010	0.016	0.025				
		(LH)	0.249	0.419	0.717	0.024	0.041	0.067				
F318N3	A → Y	(HH)	0.266	0.383	0.606	0.012	0.021	0.034	A	1.0	Y	34
		(LL)	0.137	0.222	0.338	0.005	0.008	0.013	B	1.0		
	B → Y	(HH)	0.264	0.394	0.653	0.012	0.021	0.034	C	1.0		
		(LL)	0.153	0.245	0.374	0.005	0.008	0.013	D	1.0		
	C → Y	(HH)	0.261	0.410	0.702	0.012	0.021	0.034	E	1.1		
		(LL)	0.170	0.269	0.409	0.005	0.008	0.013	F	1.0		
	D → Y	(HH)	0.251	0.411	0.720	0.012	0.021	0.034	G	1.0		
		(LL)	0.179	0.282	0.427	0.005	0.008	0.013	H	1.0		

Block type	Switching speed										
	Path		t LD0 (ns)			t 1			Input		Output	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	E → Y	(HH)	0.261	0.376	0.595	0.012	0.021	0.034				
		(LL)	0.134	0.219	0.332	0.005	0.008	0.013				
	F → Y	(HL)	0.205	0.313	0.478	0.005	0.008	0.013				
		(LH)	0.278	0.452	0.765	0.012	0.021	0.034				
	G → Y	(HL)	0.218	0.335	0.511	0.005	0.008	0.013				
		(LH)	0.290	0.480	0.824	0.012	0.021	0.034				
	H → Y	(HL)	0.224	0.345	0.526	0.005	0.008	0.013				
		(LH)	0.293	0.486	0.839	0.012	0.021	0.034				
F338N3	A → Y	(HH)	0.379	0.571	0.901	0.003	0.005	0.008	A	1.0	Y	144
		(LL)	0.213	0.354	0.556	0.003	0.004	0.006	B	1.0		
	B → Y	(HH)	0.382	0.583	0.944	0.003	0.005	0.008	C	1.0		
		(LL)	0.234	0.378	0.593	0.003	0.004	0.006	D	1.0		
	C → Y	(HH)	0.380	0.600	0.996	0.003	0.005	0.008	E	1.0		
		(LL)	0.252	0.403	0.628	0.003	0.004	0.006	F	1.0		
	D → Y	(HH)	0.371	0.599	1.011	0.003	0.005	0.008	G	1.0		
		(LL)	0.260	0.416	0.645	0.003	0.004	0.006	H	1.0		
	E → Y	(HH)	0.384	0.586	0.927	0.003	0.005	0.008				
		(LL)	0.227	0.373	0.590	0.003	0.004	0.006				
	F → Y	(HL)	0.298	0.464	0.730	0.003	0.004	0.006				
		(LH)	0.400	0.654	1.091	0.003	0.005	0.008				
	G → Y	(HL)	0.312	0.489	0.765	0.003	0.004	0.006				
		(LH)	0.414	0.684	1.146	0.003	0.005	0.008				
	H → Y	(HL)	0.316	0.496	0.778	0.003	0.004	0.006				
		(LH)	0.413	0.688	1.160	0.003	0.005	0.008				

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[MEMO]

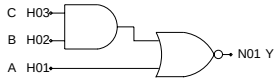
[MEMO]

2.4 AND-NOR

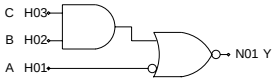
[MEMO]

Function	1-2-Input AND-NOR										SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	L421	2	L421NA	2	L421NB	3	L421NC	3	L421ND	2	L421NE	3
x1	F421	3	F421NA	4	F421NB	4	F421NC	5	F421ND	4	F421NE	4
x2	F421NP	5	F421NAP	5	F421NBP	6	F421NCP	6	F421NDP	5	F421NEP	6
x4	F421T	12	F421NAT	14	F421NBT	16	F421NCT	9	F421NDT	14	F421NET	16
x8												
Block type	with inv. F		with inv. G		with inv. H		-		-		-	
Drivability	Name	cells	Name	cells	Name	cells						
Low Power												
x1												
x2												
x4												
x8												

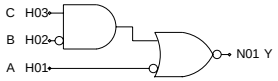
Logic Diagram for "Normal"



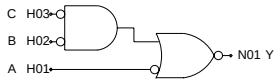
Logic Diagram for "with inv. A type"



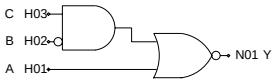
Logic Diagram for "with inv. B type"



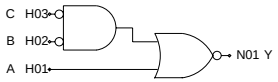
Logic Diagram for "with inv. C type"



Logic Diagram for "with inv. D type"



Logic Diagram for "with inv. E type"



Logic Diagram for "with inv. F type"

Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

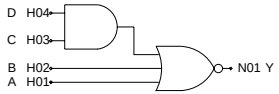
Block type	Switching speed Path IN → OUT		t LD0 (ns) MIN.	TYP.	MAX.	t 1 MIN.	TYP.	MAX.	Input Symbol	Fanin	Output Symbol	Fanout
L421	A → Y	(HL)	0.075	0.103	0.120	0.010	0.016	0.025	A	1.0	Y	17
		(LH)	0.060	0.141	0.210	0.018	0.041	0.067	B	1.0		
	B → Y	(HL)	0.114	0.139	0.183	0.016	0.026	0.044	C	1.0		
		(LH)	0.058	0.110	0.184	0.024	0.041	0.067				
	C → Y	(HL)	0.089	0.129	0.191	0.016	0.026	0.044				
		(LH)	0.084	0.152	0.250	0.024	0.041	0.067				
F421	A → Y	(HL)	0.067	0.093	0.117	0.005	0.008	0.013	A	2.4	Y	34
		(LH)	0.062	0.115	0.163	0.009	0.020	0.034	B	2.4		
	B → Y	(HL)	0.094	0.130	0.181	0.008	0.013	0.022	C	2.5		
		(LH)	0.071	0.129	0.210	0.012	0.021	0.034				
	C → Y	(HL)	0.094	0.130	0.180	0.008	0.013	0.022				
		(LH)	0.071	0.129	0.210	0.012	0.021	0.034				
F421NP	A → Y	(HL)	0.185	0.297	0.442	0.003	0.004	0.006	A	1.0	Y	143
		(LH)	0.202	0.426	0.664	0.003	0.005	0.008	B	1.0		
	B → Y	(HL)	0.251	0.370	0.562	0.003	0.004	0.006	C	1.0		
		(LH)	0.224	0.372	0.606	0.003	0.005	0.008				
	C → Y	(HL)	0.231	0.357	0.570	0.003	0.004	0.006				
		(LH)	0.258	0.429	0.695	0.003	0.005	0.008				
F421T	A → Y	(HL)	0.066	0.097	0.119	0.001	0.002	0.003	A	9.9	Y	134
		(LH)	0.065	0.141	0.205	0.002	0.005	0.008	B	9.9		
	B → Y	(HL)	0.111	0.144	0.192	0.002	0.003	0.006	C	9.8		
		(LH)	0.066	0.122	0.201	0.003	0.005	0.008				
	C → Y	(HL)	0.089	0.127	0.191	0.002	0.003	0.006				
		(LH)	0.088	0.159	0.259	0.003	0.005	0.008				
L421NA	A → Y	(HH)	0.100	0.206	0.317	0.018	0.041	0.067	A	1.0	Y	17
		(LL)	0.099	0.156	0.229	0.010	0.016	0.025	B	1.0		
	B → Y	(HL)	0.114	0.139	0.183	0.016	0.026	0.044	C	1.0		
		(LH)	0.058	0.111	0.187	0.024	0.041	0.067				
	C → Y	(HL)	0.089	0.129	0.191	0.016	0.026	0.044				
		(LH)	0.084	0.153	0.252	0.024	0.041	0.067				
F421NA	A → Y	(HH)	0.124	0.206	0.303	0.009	0.021	0.034	A	1.0	Y	34
		(LL)	0.123	0.190	0.280	0.005	0.008	0.013	B	2.4		
	B → Y	(HL)	0.094	0.129	0.181	0.008	0.013	0.022	C	2.5		
		(LH)	0.072	0.131	0.215	0.012	0.021	0.034				
	C → Y	(HL)	0.094	0.129	0.180	0.008	0.013	0.022				
		(LH)	0.072	0.131	0.215	0.012	0.021	0.034				
F421NAP	A → Y	(HH)	0.236	0.482	0.760	0.003	0.005	0.008	A	1.0	Y	143
		(LL)	0.213	0.349	0.546	0.003	0.004	0.006	B	1.0		
	B → Y	(HL)	0.252	0.367	0.560	0.003	0.004	0.006	C	1.0		
		(LH)	0.223	0.371	0.606	0.003	0.005	0.008				
	C → Y	(HL)	0.230	0.355	0.569	0.003	0.004	0.006				
		(LH)	0.258	0.429	0.696	0.003	0.005	0.008				
F421NAT	A → Y	(HH)	0.129	0.235	0.349	0.002	0.005	0.008	A	4.8	Y	133
		(LL)	0.126	0.197	0.287	0.001	0.002	0.003	B	9.9		
	B → Y	(HL)	0.111	0.144	0.191	0.002	0.003	0.006	C	9.7		
		(LH)	0.067	0.123	0.205	0.003	0.005	0.008				
	C → Y	(HL)	0.089	0.127	0.191	0.002	0.003	0.006				
		(LH)	0.089	0.160	0.264	0.003	0.005	0.008				
L421NB	A → Y	(HH)	0.097	0.202	0.311	0.018	0.041	0.067	A	1.0	Y	17
		(LL)	0.095	0.152	0.223	0.010	0.016	0.025	B	1.0		
	B → Y	(HH)	0.126	0.198	0.305	0.024	0.041	0.067	C	1.0		
		(LL)	0.119	0.183	0.283	0.016	0.026	0.044				
	C → Y	(HL)	0.090	0.130	0.195	0.016	0.026	0.044				
		(LH)	0.083	0.153	0.252	0.024	0.041	0.067				

Block type	Path		Switching speed t LD0 (ns) MIN.	TYP.	MAX.	t 1 MIN.	TYP.	MAX.	Input Symbol	Fanin	Output Symbol	Fanout
F421NB	A → Y	(HH)	0.124	0.205	0.302	0.009	0.021	0.034	A	1.0	Y	34
		(LL)	0.122	0.189	0.278	0.005	0.008	0.013	B	1.0		
	B → Y	(HH)	0.162	0.251	0.377	0.012	0.021	0.034	C	2.5		
		(LL)	0.144	0.224	0.351	0.008	0.013	0.022				
	C → Y	(HL)	0.095	0.130	0.182	0.008	0.013	0.022				
		(LH)	0.071	0.131	0.214	0.012	0.021	0.034				
F421NBP	A → Y	(HH)	0.234	0.478	0.756	0.003	0.005	0.008	A	1.0	Y	143
		(LL)	0.210	0.343	0.541	0.003	0.004	0.006	B	1.0		
	B → Y	(HH)	0.285	0.456	0.724	0.003	0.005	0.008	C	1.0		
		(LL)	0.256	0.410	0.661	0.003	0.004	0.006				
	C → Y	(HL)	0.231	0.357	0.572	0.003	0.004	0.006				
		(LH)	0.258	0.429	0.696	0.003	0.005	0.008				
F421NBT	A → Y	(HH)	0.129	0.233	0.347	0.002	0.005	0.008	A	4.8	Y	133
		(LL)	0.127	0.195	0.286	0.001	0.002	0.003	B	4.8		
	B → Y	(HH)	0.158	0.244	0.365	0.003	0.005	0.008	C	9.7		
		(LL)	0.151	0.231	0.358	0.002	0.003	0.006				
	C → Y	(HL)	0.089	0.130	0.198	0.002	0.003	0.006				
		(LH)	0.088	0.159	0.262	0.003	0.005	0.008				
L421NC	A → Y	(HH)	0.098	0.203	0.314	0.018	0.041	0.067	A	1.0	Y	17
		(LL)	0.095	0.152	0.224	0.010	0.016	0.025	B	1.0		
	B → Y	(HH)	0.127	0.201	0.309	0.024	0.041	0.067	C	1.0		
		(LL)	0.119	0.184	0.286	0.016	0.026	0.044				
	C → Y	(HH)	0.153	0.245	0.379	0.024	0.041	0.067				
		(LL)	0.122	0.198	0.316	0.016	0.026	0.044				
F421NC	A → Y	(HH)	0.124	0.204	0.302	0.009	0.021	0.034	A	1.0	Y	35
		(LL)	0.122	0.188	0.278	0.005	0.008	0.013	B	1.0		
	B → Y	(HH)	0.162	0.250	0.377	0.012	0.021	0.034	C	1.0		
		(LL)	0.145	0.226	0.353	0.008	0.013	0.022				
	C → Y	(HH)	0.161	0.250	0.376	0.012	0.021	0.034				
		(LL)	0.145	0.226	0.351	0.008	0.013	0.022				
F421NCP	A → Y	(HH)	0.234	0.480	0.759	0.003	0.005	0.008	A	1.0	Y	143
		(LL)	0.210	0.343	0.541	0.003	0.004	0.006	B	1.0		
	B → Y	(HH)	0.286	0.459	0.728	0.003	0.005	0.008	C	1.0		
		(LL)	0.257	0.410	0.664	0.003	0.004	0.006				
	C → Y	(HH)	0.324	0.521	0.824	0.003	0.005	0.008				
		(LL)	0.263	0.425	0.698	0.003	0.004	0.006				
F421NCT	A → Y	(HH)	0.163	0.287	0.435	0.002	0.003	0.004	A	3.7	Y	282
		(LL)	0.142	0.233	0.354	0.001	0.002	0.003	B	3.8		
	B → Y	(HH)	0.167	0.254	0.410	0.002	0.003	0.004	C	3.6		
		(LL)	0.260	0.407	0.634	0.001	0.002	0.003				
	C → Y	(HH)	0.182	0.277	0.451	0.002	0.003	0.004				
		(LL)	0.249	0.411	0.661	0.001	0.002	0.003				
L421ND	A → Y	(HL)	0.075	0.102	0.120	0.010	0.016	0.025	A	1.0	Y	17
		(LH)	0.060	0.141	0.211	0.018	0.041	0.067	B	1.0		
	B → Y	(HH)	0.124	0.196	0.302	0.024	0.041	0.067	C	1.0		
		(LL)	0.117	0.183	0.282	0.016	0.026	0.044				
	C → Y	(HL)	0.090	0.130	0.195	0.016	0.026	0.044				
		(LH)	0.083	0.151	0.250	0.024	0.041	0.067				
F421ND	A → Y	(HL)	0.068	0.093	0.117	0.005	0.008	0.013	A	2.4	Y	34
		(LH)	0.062	0.116	0.164	0.009	0.020	0.034	B	1.0		
	B → Y	(HH)	0.159	0.245	0.369	0.012	0.021	0.034	C	2.5		
		(LL)	0.142	0.223	0.346	0.008	0.013	0.022				
	C → Y	(HL)	0.095	0.130	0.183	0.008	0.013	0.022				
		(LH)	0.071	0.129	0.210	0.012	0.021	0.034				

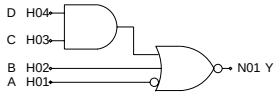
Block type	Path		Switching speed t LD0 (ns) MIN.	TYP.	MAX.	t 1 MIN.	TYP.	MAX.	Input Symbol	Fanin	Output Symbol	Fanout
F421NDP	A → Y	(HL)	0.185	0.296	0.440	0.003	0.004	0.006	A	1.0	Y	143
		(LH)	0.202	0.424	0.661	0.003	0.005	0.008	B	1.0		
	B → Y	(HH)	0.284	0.454	0.721	0.003	0.005	0.008	C	1.0		
		(LL)	0.256	0.410	0.661	0.003	0.004	0.006				
	C → Y	(HL)	0.230	0.356	0.572	0.003	0.004	0.006				
		(LH)	0.257	0.428	0.694	0.003	0.005	0.008				
F421NDT	A → Y	(HL)	0.066	0.095	0.118	0.001	0.002	0.003	A	10.0	Y	133
		(LH)	0.065	0.140	0.204	0.002	0.005	0.008	B	4.8		
	B → Y	(HH)	0.156	0.241	0.360	0.003	0.005	0.008	C	9.7		
		(LL)	0.151	0.232	0.358	0.002	0.003	0.006				
	C → Y	(HL)	0.089	0.129	0.198	0.002	0.003	0.006				
		(LH)	0.087	0.158	0.258	0.003	0.005	0.008				
L421NE	A → Y	(HL)	0.075	0.102	0.120	0.010	0.016	0.025	A	1.0	Y	17
		(LH)	0.060	0.140	0.210	0.018	0.041	0.067	B	1.0		
	B → Y	(HH)	0.124	0.196	0.302	0.024	0.041	0.067	C	1.0		
		(LL)	0.117	0.182	0.282	0.016	0.026	0.044				
	C → Y	(HH)	0.150	0.239	0.369	0.024	0.041	0.067				
		(LL)	0.120	0.194	0.311	0.016	0.026	0.044				
F421NE	A → Y	(HL)	0.067	0.092	0.116	0.005	0.008	0.013	A	2.4	Y	34
		(LH)	0.062	0.115	0.163	0.009	0.020	0.034	B	1.0		
	B → Y	(HH)	0.157	0.243	0.365	0.012	0.021	0.034	C	1.0		
		(LL)	0.141	0.221	0.344	0.008	0.013	0.022				
	C → Y	(HH)	0.160	0.246	0.371	0.012	0.021	0.034				
		(LL)	0.146	0.227	0.354	0.008	0.013	0.022				
F421NEP	A → Y	(HL)	0.185	0.296	0.440	0.003	0.004	0.006	A	1.0	Y	143
		(LH)	0.202	0.423	0.661	0.003	0.005	0.008	B	1.0		
	B → Y	(HH)	0.284	0.454	0.722	0.003	0.005	0.008	C	1.0		
		(LL)	0.256	0.410	0.661	0.003	0.004	0.006				
	C → Y	(HH)	0.320	0.514	0.814	0.003	0.005	0.008				
		(LL)	0.261	0.421	0.689	0.003	0.004	0.006				
F421NET	A → Y	(HL)	0.066	0.095	0.118	0.001	0.002	0.003	A	10.0	Y	134
		(LH)	0.065	0.140	0.204	0.002	0.005	0.008	B	4.8		
	B → Y	(HH)	0.156	0.242	0.360	0.003	0.005	0.008	C	4.8		
		(LL)	0.151	0.232	0.358	0.002	0.003	0.006				
	C → Y	(HH)	0.176	0.274	0.417	0.003	0.005	0.008				
		(LL)	0.148	0.234	0.368	0.002	0.003	0.006				

Function	1-1-2-Input AND-NOR											SSI Family
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power												
x1	F422	4	F422NA	5	F422NB	5	F422NC	6	F422ND	6	F422NE	5
x2	F422NP	5	F422NAP	6	F422NBP	6	F422NCP	7	F422NDP	7	F422NEP	6
x4	F422T	16	F422NAT	18	F422NBT	16	F422NCT	18	F422NDT	10	F422NET	20
x8												
Block type	with inv. F		with inv. G		with inv. H		-		-		-	
Drivability	Name	cells	Name	cells	Name	cells						
Low Power												
x1	F422NF	6	F422NG	5	F422NH	5						
x2	F422NFP	7	F422NGP	6	F422NHP	6						
x4	F422NFT	22	F422NGT	18	F422NHT	20						
x8												

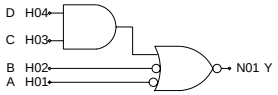
Logic Diagram for "Normal"



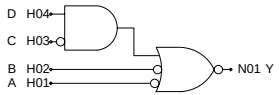
Logic Diagram for "with inv. A type"



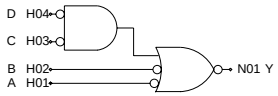
Logic Diagram for "with inv. B type"



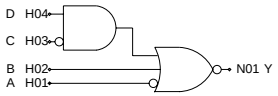
Logic Diagram for "with inv. C type"



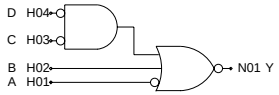
Logic Diagram for "with inv. D type"



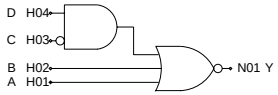
Logic Diagram for "with inv. E type"



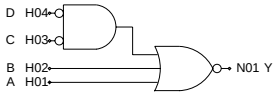
Logic Diagram for "with inv. F type"



Logic Diagram for "with inv. G type"



Logic Diagram for "with inv. H type"



Block type	Path		Switching speed t_{LD0} (ns)			Switching speed t_1			Input		Output	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F422	A → Y	(HL)	0.070	0.100	0.126	0.005	0.008	0.013	A	2.4	Y	21
		(LH)	0.084	0.148	0.220	0.015	0.031	0.051	B	2.4		
	B → Y	(HL)	0.085	0.119	0.152	0.005	0.008	0.013	C	2.4		
		(LH)	0.086	0.194	0.319	0.015	0.031	0.051	D	2.5		
	C → Y	(HL)	0.106	0.148	0.211	0.008	0.013	0.022				
		(LH)	0.117	0.222	0.374	0.018	0.031	0.051				
	D → Y	(HL)	0.106	0.148	0.211	0.008	0.013	0.022				
		(LH)	0.117	0.222	0.374	0.018	0.031	0.051				
F422NP	A → Y	(HL)	0.189	0.301	0.449	0.003	0.004	0.006	A	1.0	Y	144
		(LH)	0.272	0.542	0.852	0.003	0.005	0.008	B	1.0		
	B → Y	(HL)	0.203	0.318	0.472	0.003	0.004	0.006	C	1.0		
		(LH)	0.268	0.572	0.925	0.003	0.005	0.008	D	1.0		
	C → Y	(HL)	0.263	0.389	0.604	0.003	0.004	0.006				
		(LH)	0.311	0.528	0.871	0.003	0.005	0.008				
	D → Y	(HL)	0.238	0.371	0.602	0.003	0.004	0.006				
		(LH)	0.350	0.598	0.978	0.003	0.005	0.008				
F422T	A → Y	(HL)	0.066	0.104	0.134	0.001	0.002	0.003	A	10.2	Y	80
		(LH)	0.099	0.207	0.313	0.004	0.008	0.013	B	10.1		
	B → Y	(HL)	0.080	0.123	0.158	0.001	0.002	0.003	C	10.1		
		(LH)	0.093	0.236	0.383	0.004	0.008	0.013	D	9.9		
	C → Y	(HL)	0.120	0.163	0.224	0.002	0.003	0.006				
		(LH)	0.115	0.217	0.363	0.005	0.008	0.013				
	D → Y	(HL)	0.098	0.146	0.220	0.002	0.003	0.006				
		(LH)	0.147	0.272	0.454	0.005	0.008	0.013				
F422NA	A → Y	(HH)	0.139	0.237	0.361	0.015	0.031	0.051	A	1.0	Y	21
		(LL)	0.125	0.193	0.287	0.005	0.008	0.013	B	2.4		
	B → Y	(HL)	0.085	0.119	0.152	0.005	0.008	0.013	C	2.4		
		(LH)	0.086	0.196	0.323	0.015	0.031	0.051	D	2.5		
	C → Y	(HL)	0.106	0.148	0.212	0.008	0.013	0.022				
		(LH)	0.118	0.225	0.379	0.018	0.031	0.051				
	D → Y	(HL)	0.106	0.149	0.213	0.008	0.013	0.022				
		(LH)	0.119	0.225	0.379	0.018	0.031	0.051				
F422NAP	A → Y	(HH)	0.305	0.602	0.961	0.003	0.005	0.008	A	1.0	Y	143
		(LL)	0.214	0.349	0.549	0.003	0.004	0.006	B	1.0		
	B → Y	(HL)	0.204	0.319	0.473	0.003	0.004	0.006	C	1.0		
		(LH)	0.271	0.577	0.935	0.003	0.005	0.008	D	1.0		
	C → Y	(HL)	0.265	0.391	0.608	0.003	0.004	0.006				
		(LH)	0.314	0.535	0.881	0.003	0.005	0.008				
	D → Y	(HL)	0.240	0.374	0.609	0.003	0.004	0.006				
		(LH)	0.353	0.604	0.988	0.003	0.005	0.008				
F422NAT	A → Y	(HH)	0.154	0.300	0.461	0.004	0.008	0.013	A	4.8	Y	80
		(LL)	0.132	0.206	0.303	0.001	0.002	0.003	B	10.1		
	B → Y	(HL)	0.080	0.122	0.158	0.001	0.002	0.003	C	10.0		
		(LH)	0.094	0.237	0.386	0.004	0.008	0.013	D	9.9		
	C → Y	(HL)	0.120	0.163	0.226	0.002	0.003	0.006				
		(LH)	0.115	0.219	0.369	0.005	0.008	0.013				
	D → Y	(HL)	0.099	0.147	0.221	0.002	0.003	0.006				
		(LH)	0.148	0.274	0.458	0.005	0.008	0.013				
F422NB	A → Y	(HH)	0.140	0.241	0.365	0.015	0.031	0.051	A	1.0	Y	22
		(LL)	0.128	0.196	0.290	0.005	0.008	0.013	B	1.0		
	B → Y	(HH)	0.170	0.315	0.484	0.015	0.031	0.051	C	2.4		
		(LL)	0.138	0.215	0.323	0.005	0.008	0.013	D	2.5		
	C → Y	(HL)	0.106	0.150	0.213	0.008	0.013	0.022				
		(LH)	0.120	0.228	0.385	0.018	0.031	0.051				
	D → Y	(HL)	0.106	0.149	0.214	0.008	0.013	0.022				
		(LH)	0.120	0.228	0.385	0.018	0.031	0.051				

Block type	Path IN → OUT		Switching speed t LD0 (ns) MIN.	TYP.	MAX.	t 1 MIN.	TYP.	MAX.	Input Symbol	Fanin	Output Symbol	Fanout
F422NBP	A → Y	(HH)	0.305	0.602	0.961	0.003	0.005	0.008	A	1.0	Y	143
		(LL)	0.213	0.348	0.549	0.003	0.004	0.006	B	1.0		
	B → Y	(HH)	0.328	0.663	1.059	0.003	0.005	0.008	C	1.0		
		(LL)	0.227	0.370	0.579	0.003	0.004	0.006	D	1.0		
	C → Y	(HL)	0.265	0.392	0.608	0.003	0.004	0.006				
		(LH)	0.315	0.536	0.883	0.003	0.005	0.008				
	D → Y	(HL)	0.240	0.374	0.608	0.003	0.004	0.006				
		(LH)	0.354	0.605	0.989	0.003	0.005	0.008				
F422NBT	A → Y	(HH)	0.174	0.299	0.453	0.002	0.005	0.008	A	4.9	Y	134
		(LL)	0.126	0.204	0.303	0.001	0.002	0.003	B	4.8		
	B → Y	(HH)	0.155	0.283	0.448	0.002	0.005	0.008	C	9.9		
		(LL)	0.142	0.228	0.337	0.001	0.002	0.003	D	9.7		
	C → Y	(HL)	0.111	0.143	0.192	0.002	0.003	0.006				
		(LH)	0.067	0.127	0.211	0.003	0.005	0.008				
	D → Y	(HL)	0.089	0.127	0.190	0.002	0.003	0.006				
		(LH)	0.090	0.163	0.268	0.003	0.005	0.008				
F422NC	A → Y	(HH)	0.140	0.241	0.366	0.015	0.031	0.051	A	1.0	Y	22
		(LL)	0.128	0.196	0.290	0.005	0.008	0.013	B	1.0		
	B → Y	(HH)	0.170	0.315	0.484	0.015	0.031	0.051	C	1.0		
		(LL)	0.138	0.215	0.323	0.005	0.008	0.013	D	2.5		
	C → Y	(HH)	0.224	0.355	0.550	0.018	0.031	0.051				
		(LL)	0.153	0.241	0.381	0.008	0.013	0.022				
	D → Y	(HL)	0.107	0.150	0.215	0.008	0.013	0.022				
		(LH)	0.120	0.228	0.385	0.018	0.031	0.051				
F422NCP	A → Y	(HH)	0.305	0.601	0.959	0.003	0.005	0.008	A	1.0	Y	143
		(LL)	0.212	0.347	0.547	0.003	0.004	0.006	B	1.0		
	B → Y	(HH)	0.328	0.662	1.056	0.003	0.005	0.008	C	1.0		
		(LL)	0.226	0.368	0.578	0.003	0.004	0.006	D	1.0		
	C → Y	(HH)	0.397	0.640	1.020	0.003	0.005	0.008				
		(LL)	0.278	0.444	0.724	0.003	0.004	0.006				
	D → Y	(HL)	0.240	0.376	0.608	0.003	0.004	0.006				
		(LH)	0.353	0.604	0.990	0.003	0.005	0.008				
F422NCT	A → Y	(HH)	0.174	0.296	0.450	0.002	0.005	0.008	A	4.9	Y	133
		(LL)	0.126	0.203	0.302	0.001	0.002	0.003	B	4.8		
	B → Y	(HH)	0.155	0.280	0.446	0.002	0.005	0.008	C	4.8		
		(LL)	0.143	0.226	0.335	0.001	0.002	0.003	D	9.7		
	C → Y	(HH)	0.160	0.245	0.370	0.003	0.005	0.008				
		(LL)	0.150	0.231	0.358	0.002	0.003	0.006				
	D → Y	(HL)	0.090	0.129	0.198	0.002	0.003	0.006				
		(LH)	0.089	0.161	0.268	0.003	0.005	0.008				
F422ND	A → Y	(HH)	0.140	0.240	0.365	0.015	0.031	0.051	A	1.0	Y	22
		(LL)	0.128	0.196	0.290	0.005	0.008	0.013	B	1.0		
	B → Y	(HH)	0.170	0.315	0.483	0.015	0.031	0.051	C	1.0		
		(LL)	0.138	0.215	0.323	0.005	0.008	0.013	D	1.0		
	C → Y	(HH)	0.223	0.352	0.547	0.018	0.031	0.051				
		(LL)	0.153	0.240	0.379	0.008	0.013	0.022				
	D → Y	(HH)	0.226	0.356	0.551	0.018	0.031	0.051				
		(LL)	0.156	0.246	0.389	0.008	0.013	0.022				
F422NDP	A → Y	(HH)	0.303	0.596	0.951	0.003	0.005	0.008	A	1.0	Y	143
		(LL)	0.213	0.345	0.543	0.003	0.004	0.006	B	1.0		
	B → Y	(HH)	0.325	0.657	1.049	0.003	0.005	0.008	C	1.0		
		(LL)	0.224	0.366	0.573	0.003	0.004	0.006	D	1.0		
	C → Y	(HH)	0.395	0.636	1.014	0.003	0.005	0.008				
		(LL)	0.277	0.441	0.720	0.003	0.004	0.006				
	D → Y	(HH)	0.433	0.701	1.116	0.003	0.005	0.008				
		(LL)	0.274	0.443	0.730	0.003	0.004	0.006				

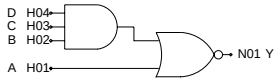
Block type	Path IN → OUT		Switching speed t LD0 (ns) MIN.	TYP.	MAX.	t 1 MIN.	TYP.	MAX.	Input Symbol	Fanin	Output Symbol	Fanout
F422NDT	A → Y	(HH)	0.214	0.369	0.587	0.002	0.003	0.004	A	3.7	Y	280
		(LL)	0.146	0.243	0.371	0.001	0.002	0.003	B	3.8		
	B → Y	(HH)	0.197	0.367	0.611	0.002	0.003	0.004	C	3.8		
		(LL)	0.162	0.266	0.405	0.001	0.002	0.003	D	3.7		
	C → Y	(HH)	0.214	0.346	0.592	0.002	0.003	0.004				
		(LL)	0.295	0.470	0.737	0.001	0.002	0.003				
	D → Y	(HH)	0.233	0.376	0.648	0.002	0.003	0.004				
		(LL)	0.282	0.475	0.759	0.001	0.002	0.003				
F422NE	A → Y	(HH)	0.138	0.237	0.362	0.015	0.031	0.051	A	1.0	Y	21
		(LL)	0.125	0.193	0.287	0.005	0.008	0.013	B	2.4		
	B → Y	(HL)	0.085	0.119	0.152	0.005	0.008	0.013	C	1.0		
		(LH)	0.086	0.196	0.323	0.015	0.031	0.051	D	2.5		
	C → Y	(HH)	0.226	0.356	0.550	0.018	0.031	0.051				
		(LL)	0.157	0.247	0.389	0.008	0.013	0.022				
	D → Y	(HL)	0.107	0.150	0.216	0.008	0.013	0.022				
		(LH)	0.119	0.227	0.382	0.018	0.031	0.051				
F422NEP	A → Y	(HH)	0.304	0.598	0.956	0.003	0.005	0.008	A	1.0	Y	143
		(LL)	0.214	0.347	0.547	0.003	0.004	0.006	B	1.0		
	B → Y	(HL)	0.203	0.317	0.472	0.003	0.004	0.006	C	1.0		
		(LH)	0.270	0.573	0.929	0.003	0.005	0.008	D	1.0		
	C → Y	(HH)	0.393	0.634	1.009	0.003	0.005	0.008				
		(LL)	0.275	0.439	0.717	0.003	0.004	0.006				
	D → Y	(HL)	0.240	0.374	0.607	0.003	0.004	0.006				
		(LH)	0.351	0.600	0.981	0.003	0.005	0.008				
F422NET	A → Y	(HH)	0.154	0.299	0.459	0.004	0.008	0.013	A	4.8	Y	80
		(LL)	0.133	0.205	0.303	0.001	0.002	0.003	B	10.1		
	B → Y	(HL)	0.080	0.121	0.158	0.001	0.002	0.003	C	4.8		
		(LH)	0.095	0.236	0.385	0.004	0.008	0.013	D	9.9		
	C → Y	(HH)	0.219	0.347	0.536	0.005	0.008	0.013				
		(LL)	0.163	0.253	0.394	0.002	0.003	0.006				
	D → Y	(HL)	0.099	0.149	0.229	0.002	0.003	0.006				
		(LH)	0.148	0.274	0.457	0.005	0.008	0.013				
F422NF	A → Y	(HH)	0.139	0.237	0.360	0.015	0.031	0.051	A	1.0	Y	21
		(LL)	0.125	0.193	0.287	0.005	0.008	0.013	B	2.4		
	B → Y	(HL)	0.085	0.119	0.151	0.005	0.008	0.013	C	1.0		
		(LH)	0.086	0.195	0.322	0.015	0.031	0.051	D	1.0		
	C → Y	(HH)	0.221	0.348	0.540	0.018	0.031	0.051				
		(LL)	0.151	0.240	0.379	0.008	0.013	0.022				
	D → Y	(HH)	0.223	0.352	0.545	0.018	0.031	0.051				
		(LL)	0.156	0.246	0.388	0.008	0.013	0.022				
F422NFP	A → Y	(HH)	0.303	0.597	0.954	0.003	0.005	0.008	A	1.0	Y	143
		(LL)	0.213	0.346	0.546	0.003	0.004	0.006	B	1.0		
	B → Y	(HL)	0.202	0.316	0.471	0.003	0.004	0.006	C	1.0		
		(LH)	0.270	0.573	0.927	0.003	0.005	0.008	D	1.0		
	C → Y	(HH)	0.392	0.633	1.008	0.003	0.005	0.008				
		(LL)	0.274	0.438	0.716	0.003	0.004	0.006				
	D → Y	(HH)	0.433	0.702	1.116	0.003	0.005	0.008				
		(LL)	0.276	0.446	0.735	0.003	0.004	0.006				
F422NFT	A → Y	(HH)	0.154	0.297	0.457	0.004	0.008	0.013	A	4.8	Y	80
		(LL)	0.132	0.203	0.303	0.001	0.002	0.003	B	10.1		
	B → Y	(HL)	0.080	0.121	0.157	0.001	0.002	0.003	C	4.8		
		(LH)	0.094	0.234	0.384	0.004	0.008	0.013	D	4.9		
	C → Y	(HH)	0.219	0.346	0.535	0.005	0.008	0.013				
		(LL)	0.163	0.252	0.393	0.002	0.003	0.006				
	D → Y	(HH)	0.245	0.392	0.613	0.005	0.008	0.013				
		(LL)	0.155	0.245	0.393	0.002	0.003	0.006				

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F422NG	A → Y	(HL)	0.070	0.100	0.126	0.005	0.008	0.013	A	2.4	Y	21
		(LH)	0.084	0.148	0.220	0.015	0.031	0.051	B	2.4		
	B → Y	(HL)	0.085	0.119	0.152	0.005	0.008	0.013	C	1.0		
		(LH)	0.085	0.194	0.319	0.015	0.031	0.051	D	2.5		
	C → Y	(HH)	0.225	0.354	0.546	0.018	0.031	0.051				
		(LL)	0.157	0.248	0.392	0.008	0.013	0.022				
	D → Y	(HL)	0.107	0.149	0.215	0.008	0.013	0.022				
		(LH)	0.119	0.225	0.377	0.018	0.031	0.051				
F422NGP	A → Y	(HL)	0.189	0.300	0.446	0.003	0.004	0.006	A	1.0	Y	144
		(LH)	0.271	0.537	0.845	0.003	0.005	0.008	B	1.0		
	B → Y	(HL)	0.201	0.316	0.469	0.003	0.004	0.006	C	1.0		
		(LH)	0.266	0.568	0.919	0.003	0.005	0.008	D	1.0		
	C → Y	(HH)	0.388	0.626	0.997	0.003	0.005	0.008				
		(LL)	0.273	0.436	0.712	0.003	0.004	0.006				
	D → Y	(HL)	0.238	0.372	0.602	0.003	0.004	0.006				
		(LH)	0.348	0.594	0.971	0.003	0.005	0.008				
F422NGT	A → Y	(HL)	0.066	0.103	0.134	0.001	0.002	0.003	A	10.2	Y	80
		(LH)	0.099	0.206	0.313	0.004	0.008	0.013	B	10.1		
	B → Y	(HL)	0.080	0.122	0.158	0.001	0.002	0.003	C	4.8		
		(LH)	0.094	0.235	0.383	0.004	0.008	0.013	D	9.9		
	C → Y	(HH)	0.217	0.344	0.532	0.005	0.008	0.013				
		(LL)	0.163	0.252	0.393	0.002	0.003	0.006				
	D → Y	(HL)	0.099	0.148	0.228	0.002	0.003	0.006				
		(LH)	0.146	0.271	0.454	0.005	0.008	0.013				
F422NH	A → Y	(HL)	0.070	0.100	0.126	0.005	0.008	0.013	A	2.4	Y	21
		(LH)	0.084	0.148	0.219	0.015	0.031	0.051	B	2.4		
	B → Y	(HL)	0.085	0.119	0.152	0.005	0.008	0.013	C	1.0		
		(LH)	0.085	0.194	0.318	0.015	0.031	0.051	D	1.0		
	C → Y	(HH)	0.219	0.346	0.536	0.018	0.031	0.051				
		(LL)	0.151	0.239	0.378	0.008	0.013	0.022				
	D → Y	(HH)	0.221	0.349	0.540	0.018	0.031	0.051				
		(LL)	0.156	0.246	0.388	0.008	0.013	0.022				
F422NHP	A → Y	(HL)	0.189	0.300	0.446	0.003	0.004	0.006	A	1.0	Y	144
		(LH)	0.271	0.537	0.845	0.003	0.005	0.008	B	1.0		
	B → Y	(HL)	0.201	0.316	0.469	0.003	0.004	0.006	C	1.0		
		(LH)	0.267	0.568	0.917	0.003	0.005	0.008	D	1.0		
	C → Y	(HH)	0.388	0.626	0.997	0.003	0.005	0.008				
		(LL)	0.273	0.436	0.711	0.003	0.004	0.006				
	D → Y	(HH)	0.426	0.691	1.098	0.003	0.005	0.008				
		(LL)	0.270	0.439	0.724	0.003	0.004	0.006				
F422NHT	A → Y	(HL)	0.066	0.103	0.133	0.001	0.002	0.003	A	10.2	Y	80
		(LH)	0.099	0.204	0.311	0.004	0.008	0.013	B	10.1		
	B → Y	(HL)	0.080	0.121	0.157	0.001	0.002	0.003	C	4.8		
		(LH)	0.093	0.233	0.381	0.004	0.008	0.013	D	4.9		
	C → Y	(HH)	0.216	0.343	0.530	0.005	0.008	0.013				
		(LL)	0.163	0.251	0.392	0.002	0.003	0.006				
	D → Y	(HH)	0.243	0.390	0.608	0.005	0.008	0.013				
		(LL)	0.154	0.244	0.391	0.002	0.003	0.006				

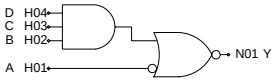
[MEMO]

Function	1-3-Input AND-NOR												SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E			
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power	L423	2	L423NA	3	L423NB	3	L423NC	4	L423ND	4	L423NE	3		
x1	F423	4	F423NA	5	F423NB	5	F423NC	6	F423ND	6	F423NE	5		
x2	F423NP	5	F423NAP	6	F423NBP	6	F423NCP	7	F423NDP	7	F423NEP	6		
x4	F423T	16	F423NAT	18	F423NBT	20	F423NCT	22	F423NDT	10	F423NET	18		
x8														
Block type	with inv. F		with inv. G		with inv. H		-		-		-			
Drivability	Name	cells	Name	cells	Name	cells								
Low Power	L423NF	3	L423NG	4										
x1	F423NF	5	F423NG	6										
x2	F423NFP	6	F423NGP	7										
x4	F423NFT	20	F423NGT	22										
x8														

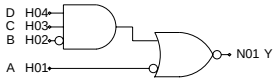
Logic Diagram for "Normal"



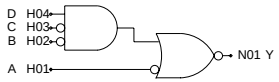
Logic Diagram for "with inv. A type"



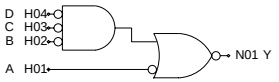
Logic Diagram for "with inv. B type"



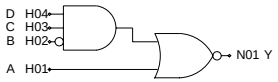
Logic Diagram for "with inv. C type"



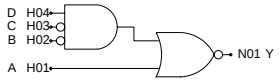
Logic Diagram for "with inv. D type"



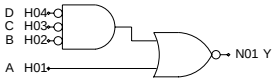
Logic Diagram for "with inv. E type"



Logic Diagram for "with inv. F type"



Logic Diagram for "with inv. G type"



Logic Diagram for "with inv. H type"

Block type	Switching speed									Input		Output	
	Path		t LD0 (ns)			t 1							
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		Symbol	Fanin	Symbol	Fanout
L423	A → Y	(HL)	0.076	0.104	0.120	0.010	0.016	0.025		A	1.0	Y	16
		(LH)	0.058	0.173	0.261	0.016	0.041	0.067		B	1.0		
	B → Y	(HL)	0.130	0.160	0.221	0.022	0.036	0.064		C	1.0		
		(LH)	0.060	0.118	0.196	0.024	0.041	0.067		D	1.0		
	C → Y	(HL)	0.120	0.166	0.259	0.022	0.036	0.064					
		(LH)	0.085	0.159	0.262	0.024	0.041	0.067					
	D → Y	(HL)	0.103	0.161	0.271	0.022	0.036	0.064					
		(LH)	0.104	0.190	0.310	0.024	0.041	0.067					
F423	A → Y	(HL)	0.067	0.096	0.115	0.005	0.008	0.013		A	2.4	Y	33
		(LH)	0.057	0.141	0.205	0.008	0.021	0.034		B	2.4		
	B → Y	(HL)	0.115	0.161	0.246	0.011	0.018	0.032		C	2.5		
		(LH)	0.083	0.156	0.253	0.012	0.021	0.034		D	2.4		
	C → Y	(HL)	0.120	0.168	0.261	0.011	0.018	0.032					
		(LH)	0.088	0.164	0.267	0.012	0.021	0.033					
	D → Y	(HL)	0.115	0.161	0.245	0.011	0.018	0.032					
		(LH)	0.083	0.155	0.251	0.012	0.021	0.034					
F423NP	A → Y	(HL)	0.184	0.303	0.448	0.003	0.004	0.006		A	1.0	Y	143
		(LH)	0.191	0.464	0.724	0.003	0.005	0.008		B	1.0		
	B → Y	(HL)	0.293	0.428	0.675	0.003	0.004	0.006		C	1.0		
		(LH)	0.224	0.377	0.616	0.003	0.005	0.008		D	1.0		
	C → Y	(HL)	0.287	0.433	0.712	0.003	0.004	0.006					
		(LH)	0.259	0.435	0.706	0.003	0.005	0.008					
	D → Y	(HL)	0.269	0.429	0.723	0.003	0.004	0.006					
		(LH)	0.282	0.473	0.764	0.003	0.005	0.008					
F423T	A → Y	(HL)	0.069	0.102	0.126	0.001	0.002	0.003		A	10.3	Y	127
		(LH)	0.065	0.188	0.283	0.002	0.005	0.008		B	10.1		
	B → Y	(HL)	0.139	0.179	0.251	0.003	0.005	0.008		C	10.0		
		(LH)	0.072	0.138	0.225	0.003	0.005	0.008		D	10.2		
	C → Y	(HL)	0.128	0.178	0.277	0.003	0.005	0.008					
		(LH)	0.093	0.174	0.285	0.003	0.005	0.008					
	D → Y	(HL)	0.115	0.179	0.302	0.003	0.005	0.008					
		(LH)	0.117	0.212	0.345	0.003	0.005	0.008					
L423NA	A → Y	(HH)	0.097	0.235	0.361	0.016	0.041	0.067		A	1.0	Y	16
		(LL)	0.095	0.153	0.224	0.010	0.016	0.025		B	1.0		
	B → Y	(HL)	0.130	0.160	0.221	0.022	0.036	0.064		C	1.0		
		(LH)	0.061	0.119	0.199	0.024	0.041	0.067		D	1.0		
	C → Y	(HL)	0.120	0.168	0.260	0.022	0.036	0.064					
		(LH)	0.086	0.161	0.266	0.024	0.041	0.067					
	D → Y	(HL)	0.104	0.162	0.272	0.022	0.036	0.064					
		(LH)	0.104	0.192	0.314	0.024	0.041	0.067					
F423NA	A → Y	(HH)	0.121	0.231	0.345	0.008	0.021	0.034		A	1.0	Y	33
		(LL)	0.121	0.190	0.279	0.005	0.008	0.013		B	2.4		
	B → Y	(HL)	0.115	0.161	0.246	0.011	0.018	0.032		C	2.4		
		(LH)	0.084	0.158	0.258	0.012	0.021	0.034		D	2.3		
	C → Y	(HL)	0.120	0.168	0.262	0.011	0.018	0.032					
		(LH)	0.089	0.166	0.272	0.012	0.021	0.033					
	D → Y	(HL)	0.115	0.161	0.245	0.011	0.018	0.032					
		(LH)	0.084	0.157	0.256	0.012	0.021	0.034					
F423NAP	A → Y	(HH)	0.225	0.519	0.816	0.003	0.005	0.008		A	1.0	Y	143
		(LL)	0.209	0.349	0.549	0.003	0.004	0.006		B	1.0		
	B → Y	(HL)	0.293	0.428	0.674	0.003	0.004	0.006		C	1.0		
		(LH)	0.224	0.378	0.617	0.003	0.005	0.008		D	1.0		
	C → Y	(HL)	0.286	0.433	0.712	0.003	0.004	0.006					
		(LH)	0.259	0.435	0.708	0.003	0.005	0.008					
	D → Y	(HL)	0.269	0.428	0.723	0.003	0.004	0.006					
		(LH)	0.283	0.473	0.766	0.003	0.005	0.008					

Block type	Path		Switching speed t_{LD0} (ns)			Switching speed t_1			Input		Output	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F423NAT	A → Y	(HH)	0.131	0.284	0.428	0.002	0.005	0.008	A	4.8	Y	127
		(LL)	0.130	0.201	0.296	0.001	0.002	0.003	B	10.1		
	B → Y	(HL)	0.139	0.179	0.251	0.003	0.005	0.008	C	9.9		
		(LH)	0.073	0.140	0.230	0.003	0.005	0.008	D	10.2		
	C → Y	(HL)	0.129	0.180	0.277	0.003	0.005	0.008				
		(LH)	0.094	0.176	0.289	0.003	0.005	0.008				
	D → Y	(HL)	0.114	0.179	0.302	0.003	0.005	0.008				
		(LH)	0.118	0.214	0.349	0.003	0.005	0.008				
L423NB	A → Y	(HH)	0.097	0.236	0.362	0.016	0.041	0.067	A	1.0	Y	16
		(LL)	0.095	0.152	0.224	0.010	0.016	0.025	B	1.0		
	B → Y	(HH)	0.134	0.211	0.323	0.024	0.041	0.067	C	1.0		
		(LL)	0.137	0.210	0.333	0.022	0.037	0.064	D	1.0		
	C → Y	(HL)	0.122	0.172	0.267	0.022	0.036	0.064				
		(LH)	0.087	0.163	0.269	0.024	0.041	0.067				
	D → Y	(HL)	0.106	0.167	0.280	0.022	0.036	0.064				
		(LH)	0.106	0.194	0.317	0.024	0.041	0.067				
F423NB	A → Y	(HH)	0.121	0.230	0.344	0.008	0.021	0.034	A	1.0	Y	33
		(LL)	0.121	0.191	0.278	0.005	0.008	0.013	B	1.0		
	B → Y	(HH)	0.180	0.279	0.421	0.012	0.021	0.034	C	2.4		
		(LL)	0.167	0.264	0.420	0.011	0.018	0.032	D	2.3		
	C → Y	(HL)	0.120	0.168	0.262	0.011	0.018	0.032				
		(LH)	0.088	0.165	0.271	0.012	0.021	0.033				
	D → Y	(HL)	0.115	0.161	0.247	0.011	0.018	0.032				
		(LH)	0.084	0.156	0.255	0.012	0.021	0.034				
F423NBP	A → Y	(HH)	0.226	0.521	0.820	0.003	0.005	0.008	A	1.0	Y	143
		(LL)	0.208	0.350	0.549	0.003	0.004	0.006	B	1.0		
	B → Y	(HH)	0.294	0.471	0.747	0.003	0.005	0.008	C	1.0		
		(LL)	0.301	0.476	0.788	0.003	0.004	0.006	D	1.0		
	C → Y	(HL)	0.289	0.438	0.720	0.003	0.004	0.006				
		(LH)	0.261	0.440	0.715	0.003	0.005	0.008				
	D → Y	(HL)	0.272	0.434	0.733	0.003	0.004	0.006				
		(LH)	0.285	0.479	0.774	0.003	0.005	0.008				
F423NBT	A → Y	(HH)	0.131	0.283	0.428	0.002	0.005	0.008	A	4.8	Y	126
		(LL)	0.130	0.200	0.296	0.001	0.002	0.003	B	4.8		
	B → Y	(HH)	0.167	0.259	0.389	0.003	0.005	0.008	C	10.0		
		(LL)	0.172	0.266	0.419	0.003	0.005	0.008	D	10.2		
	C → Y	(HL)	0.130	0.181	0.282	0.003	0.005	0.008				
		(LH)	0.093	0.174	0.287	0.003	0.005	0.008				
	D → Y	(HL)	0.116	0.184	0.309	0.003	0.005	0.008				
		(LH)	0.118	0.213	0.348	0.003	0.005	0.008				
L423NC	A → Y	(HH)	0.098	0.236	0.362	0.016	0.041	0.067	A	1.0	Y	16
		(LL)	0.095	0.152	0.224	0.010	0.016	0.025	B	1.0		
	B → Y	(HH)	0.134	0.211	0.319	0.024	0.041	0.067	C	1.0		
		(LL)	0.138	0.213	0.335	0.022	0.037	0.064	D	1.0		
	C → Y	(HH)	0.160	0.255	0.393	0.024	0.041	0.067				
		(LL)	0.148	0.236	0.391	0.022	0.037	0.064				
	D → Y	(HL)	0.106	0.167	0.283	0.022	0.037	0.064				
		(LH)	0.105	0.194	0.317	0.024	0.041	0.067				
F423NC	A → Y	(HH)	0.121	0.230	0.344	0.008	0.021	0.034	A	1.0	Y	34
		(LL)	0.121	0.192	0.278	0.005	0.008	0.013	B	1.0		
	B → Y	(HH)	0.180	0.279	0.420	0.012	0.021	0.034	C	1.0		
		(LL)	0.167	0.264	0.421	0.011	0.018	0.032	D	2.3		
	C → Y	(HH)	0.183	0.285	0.432	0.012	0.021	0.033				
		(LL)	0.169	0.267	0.431	0.011	0.018	0.032				
	D → Y	(HL)	0.115	0.161	0.247	0.011	0.018	0.032				
		(LH)	0.083	0.156	0.255	0.012	0.021	0.034				

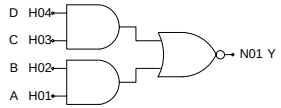
Block type	Path		Switching speed t_{LD0} (ns)			Switching speed t_1			Input		Output	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F423NCP	A → Y	(HH)	0.224	0.517	0.814	0.003	0.005	0.008	A	1.0	Y	143
		(LL)	0.208	0.346	0.546	0.003	0.004	0.006	B	1.0		
	B → Y	(HH)	0.293	0.468	0.743	0.003	0.005	0.008	C	1.0		
		(LL)	0.300	0.477	0.785	0.003	0.004	0.006	D	1.0		
	C → Y	(HH)	0.329	0.527	0.833	0.003	0.005	0.008				
		(LL)	0.310	0.502	0.841	0.003	0.004	0.006				
	D → Y	(HL)	0.271	0.431	0.734	0.003	0.004	0.006				
		(LH)	0.283	0.475	0.767	0.003	0.005	0.008				
F423NCT	A → Y	(HH)	0.131	0.282	0.427	0.002	0.005	0.008	A	4.8	Y	126
		(LL)	0.130	0.200	0.296	0.001	0.002	0.003	B	4.8		
	B → Y	(HH)	0.163	0.253	0.380	0.003	0.005	0.008	C	5.0		
		(LL)	0.167	0.257	0.407	0.003	0.005	0.008	D	10.2		
	C → Y	(HH)	0.184	0.288	0.440	0.003	0.005	0.008				
		(LL)	0.172	0.273	0.444	0.003	0.005	0.008				
	D → Y	(HL)	0.117	0.185	0.313	0.003	0.005	0.008				
		(LH)	0.117	0.212	0.347	0.003	0.005	0.008				
L423ND	A → Y	(HH)	0.098	0.235	0.361	0.016	0.041	0.067	A	1.0	Y	16
		(LL)	0.095	0.152	0.224	0.010	0.016	0.025	B	1.0		
	B → Y	(HH)	0.134	0.211	0.319	0.024	0.041	0.067	C	1.0		
		(LL)	0.138	0.213	0.335	0.022	0.037	0.064	D	1.0		
	C → Y	(HH)	0.160	0.256	0.394	0.024	0.041	0.067				
		(LL)	0.149	0.238	0.393	0.022	0.037	0.064				
	D → Y	(HH)	0.177	0.285	0.440	0.024	0.041	0.067				
		(LL)	0.152	0.248	0.410	0.022	0.036	0.064				
F423ND	A → Y	(HH)	0.121	0.230	0.343	0.008	0.021	0.034	A	1.0	Y	34
		(LL)	0.122	0.192	0.278	0.005	0.008	0.013	B	1.0		
	B → Y	(HH)	0.180	0.279	0.421	0.012	0.021	0.034	C	1.0		
		(LL)	0.168	0.267	0.425	0.011	0.018	0.032	D	1.0		
	C → Y	(HH)	0.183	0.285	0.432	0.012	0.021	0.034				
		(LL)	0.170	0.270	0.435	0.011	0.018	0.032				
	D → Y	(HH)	0.177	0.275	0.414	0.012	0.021	0.034				
		(LL)	0.165	0.261	0.417	0.011	0.018	0.032				
F423NDP	A → Y	(HH)	0.224	0.516	0.812	0.003	0.005	0.008	A	1.0	Y	143
		(LL)	0.209	0.346	0.545	0.003	0.004	0.006	B	1.0		
	B → Y	(HH)	0.292	0.467	0.740	0.003	0.005	0.008	C	1.0		
		(LL)	0.300	0.477	0.784	0.003	0.004	0.006	D	1.0		
	C → Y	(HH)	0.328	0.526	0.832	0.003	0.005	0.008				
		(LL)	0.310	0.500	0.840	0.003	0.004	0.006				
	D → Y	(HH)	0.352	0.564	0.890	0.003	0.005	0.008				
		(LL)	0.313	0.509	0.857	0.003	0.004	0.006				
F423NDT	A → Y	(HH)	0.155	0.307	0.474	0.002	0.003	0.004	A	3.8	Y	281
		(LL)	0.142	0.239	0.367	0.001	0.002	0.003	B	3.8		
	B → Y	(HH)	0.171	0.263	0.425	0.002	0.003	0.004	C	3.7		
		(LL)	0.360	0.574	0.902	0.001	0.002	0.003	D	3.7		
	C → Y	(HH)	0.185	0.286	0.466	0.002	0.003	0.004				
		(LL)	0.369	0.610	0.977	0.001	0.002	0.003				
	D → Y	(HH)	0.194	0.303	0.497	0.002	0.003	0.004				
		(LL)	0.372	0.631	1.029	0.001	0.002	0.003				
L423NE	A → Y	(HL)	0.076	0.103	0.119	0.010	0.016	0.025	A	1.0	Y	16
		(LH)	0.058	0.173	0.261	0.016	0.041	0.067	B	1.0		
	B → Y	(HH)	0.131	0.204	0.315	0.024	0.041	0.067	C	1.0		
		(LL)	0.135	0.206	0.328	0.022	0.037	0.064	D	1.0		
	C → Y	(HL)	0.121	0.169	0.263	0.022	0.036	0.064				
		(LH)	0.085	0.159	0.263	0.024	0.041	0.067				
	D → Y	(HL)	0.105	0.165	0.276	0.022	0.036	0.064				
		(LH)	0.104	0.190	0.311	0.024	0.041	0.067				

Block type	Path		Switching speed t LD0 (ns) MIN.	TYP.	MAX.	t 1 MIN.	TYP.	MAX.	Input Symbol	Fanin	Output Symbol	Fanout
F423NE	A → Y	(HL)	0.067	0.095	0.115	0.005	0.008	0.013	A	2.5	Y	33
		(LH)	0.056	0.140	0.204	0.008	0.021	0.034	B	1.0		
	B → Y	(HH)	0.178	0.276	0.416	0.012	0.021	0.034	C	2.4		
		(LL)	0.167	0.265	0.422	0.011	0.018	0.032	D	2.3		
	C → Y	(HL)	0.120	0.168	0.262	0.011	0.018	0.032				
		(LH)	0.087	0.163	0.266	0.012	0.021	0.033				
	D → Y	(HL)	0.115	0.161	0.246	0.011	0.018	0.032				
		(LH)	0.083	0.154	0.250	0.012	0.021	0.034				
F423NEP	A → Y	(HL)	0.185	0.302	0.447	0.003	0.004	0.006	A	1.0	Y	143
		(LH)	0.191	0.464	0.725	0.003	0.005	0.008	B	1.0		
	B → Y	(HH)	0.290	0.463	0.735	0.003	0.005	0.008	C	1.0		
		(LL)	0.297	0.471	0.781	0.003	0.004	0.006	D	1.0		
	C → Y	(HL)	0.287	0.434	0.716	0.003	0.004	0.006				
		(LH)	0.258	0.434	0.705	0.003	0.005	0.008				
	D → Y	(HL)	0.269	0.431	0.727	0.003	0.004	0.006				
		(LH)	0.282	0.472	0.764	0.003	0.005	0.008				
F423NET	A → Y	(HL)	0.069	0.101	0.124	0.001	0.002	0.003	A	10.2	Y	126
		(LH)	0.064	0.186	0.282	0.002	0.005	0.008	B	4.8		
	B → Y	(HH)	0.166	0.256	0.383	0.003	0.005	0.008	C	10.0		
		(LL)	0.172	0.266	0.420	0.003	0.005	0.008	D	10.2		
	C → Y	(HL)	0.130	0.180	0.283	0.003	0.005	0.008				
		(LH)	0.092	0.173	0.283	0.003	0.005	0.008				
	D → Y	(HL)	0.116	0.183	0.310	0.003	0.005	0.008				
		(LH)	0.116	0.211	0.345	0.003	0.005	0.008				
L423NF	A → Y	(HL)	0.077	0.104	0.121	0.010	0.016	0.025	A	1.0	Y	16
		(LH)	0.059	0.175	0.264	0.016	0.041	0.067	B	1.0		
	B → Y	(HH)	0.133	0.210	0.322	0.024	0.041	0.067	C	1.0		
		(LL)	0.138	0.211	0.336	0.022	0.037	0.064	D	1.0		
	C → Y	(HH)	0.159	0.254	0.391	0.024	0.041	0.067				
		(LL)	0.148	0.237	0.391	0.022	0.036	0.064				
	D → Y	(HL)	0.107	0.168	0.285	0.022	0.036	0.064				
		(LH)	0.106	0.194	0.318	0.024	0.041	0.067				
F423NF	A → Y	(HL)	0.067	0.095	0.115	0.005	0.008	0.013	A	2.4	Y	33
		(LH)	0.056	0.140	0.204	0.008	0.021	0.034	B	1.0		
	B → Y	(HH)	0.174	0.270	0.407	0.012	0.021	0.034	C	1.0		
		(LL)	0.162	0.258	0.413	0.011	0.018	0.032	D	2.3		
	C → Y	(HH)	0.181	0.283	0.429	0.012	0.021	0.033				
		(LL)	0.170	0.269	0.435	0.011	0.018	0.032				
	D → Y	(HL)	0.116	0.162	0.249	0.011	0.018	0.032				
		(LH)	0.083	0.154	0.251	0.012	0.021	0.034				
F423NFP	A → Y	(HL)	0.183	0.300	0.446	0.003	0.004	0.006	A	1.0	Y	143
		(LH)	0.190	0.462	0.720	0.003	0.005	0.008	B	1.0		
	B → Y	(HH)	0.288	0.461	0.731	0.003	0.005	0.008	C	1.0		
		(LL)	0.296	0.471	0.775	0.003	0.004	0.006	D	1.0		
	C → Y	(HH)	0.325	0.522	0.825	0.003	0.005	0.008				
		(LL)	0.307	0.497	0.835	0.003	0.004	0.006				
	D → Y	(HL)	0.269	0.429	0.726	0.003	0.004	0.006				
		(LH)	0.280	0.470	0.760	0.003	0.005	0.008				
F423NFT	A → Y	(HL)	0.069	0.101	0.124	0.001	0.002	0.003	A	10.2	Y	126
		(LH)	0.064	0.185	0.281	0.002	0.005	0.008	B	5.0		
	B → Y	(HH)	0.162	0.251	0.375	0.003	0.005	0.008	C	5.0		
		(LL)	0.167	0.257	0.408	0.003	0.005	0.008	D	10.2		
	C → Y	(HH)	0.181	0.284	0.433	0.003	0.005	0.008				
		(LL)	0.171	0.273	0.443	0.003	0.005	0.008				
	D → Y	(HL)	0.117	0.184	0.313	0.003	0.005	0.008				
		(LH)	0.116	0.210	0.343	0.003	0.005	0.008				

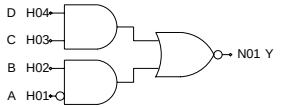
Block type	Path		Switching speed t LD0 (ns) MIN.	TYP.	MAX.	t 1 MIN.	TYP.	MAX.	Input Symbol	Fanin	Output Symbol	Fanout
L423NG	A → Y	(HL)	0.076	0.103	0.119	0.010	0.016	0.025	A	1.0	Y	16
		(LH)	0.059	0.172	0.260	0.016	0.041	0.067	B	1.0		
	B → Y	(HH)	0.130	0.205	0.311	0.024	0.041	0.067	C	1.0		
		(LL)	0.135	0.210	0.330	0.022	0.036	0.064	D	1.0		
	C → Y	(HH)	0.156	0.250	0.385	0.024	0.041	0.067				
		(LL)	0.146	0.233	0.385	0.022	0.037	0.064				
	D → Y	(HH)	0.174	0.280	0.433	0.024	0.041	0.067				
		(LL)	0.150	0.245	0.406	0.022	0.037	0.064				
F423NG	A → Y	(HL)	0.067	0.094	0.115	0.005	0.008	0.013	A	2.5	Y	33
		(LH)	0.056	0.140	0.203	0.008	0.021	0.034	B	1.0		
	B → Y	(HH)	0.173	0.269	0.406	0.012	0.021	0.034	C	1.0		
		(LL)	0.164	0.259	0.414	0.011	0.018	0.032	D	1.0		
	C → Y	(HH)	0.180	0.282	0.427	0.012	0.021	0.033				
		(LL)	0.170	0.269	0.435	0.011	0.018	0.032				
	D → Y	(HH)	0.176	0.273	0.412	0.012	0.021	0.034				
		(LL)	0.167	0.265	0.421	0.011	0.018	0.032				
F423NGP	A → Y	(HL)	0.182	0.300	0.446	0.003	0.004	0.006	A	1.0	Y	143
		(LH)	0.189	0.462	0.719	0.003	0.005	0.008	B	1.0		
	B → Y	(HH)	0.289	0.462	0.732	0.003	0.005	0.008	C	1.0		
		(LL)	0.297	0.474	0.779	0.003	0.004	0.006	D	1.0		
	C → Y	(HH)	0.324	0.520	0.823	0.003	0.005	0.008				
		(LL)	0.307	0.497	0.833	0.003	0.004	0.006				
	D → Y	(HH)	0.349	0.559	0.882	0.003	0.005	0.008				
		(LL)	0.312	0.508	0.853	0.003	0.004	0.006				
F423NGT	A → Y	(HL)	0.069	0.101	0.124	0.001	0.002	0.003	A	10.2	Y	127
		(LH)	0.064	0.185	0.281	0.002	0.005	0.008	B	5.0		
	B → Y	(HH)	0.161	0.249	0.375	0.003	0.005	0.008	C	5.0		
		(LL)	0.166	0.256	0.407	0.003	0.005	0.008	D	4.8		
	C → Y	(HH)	0.182	0.285	0.435	0.003	0.005	0.008				
		(LL)	0.172	0.273	0.444	0.003	0.005	0.008				
	D → Y	(HH)	0.207	0.328	0.503	0.003	0.005	0.008				
		(LL)	0.184	0.295	0.489	0.003	0.005	0.008				

Function	2-2-Input AND-NOR										SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	L424	2	L424NA	3	L424NB	3	L424NC	4	L424ND	3	L424NE	4
x1	F424	4	F424NA	5	F424NB	5	F424NC	6	F424ND	5	F424NE	6
x2	F424NP	5	F424NAP	6	F424NBP	6	F424NCP	7	F424NDP	6	F424NEP	7
x4	F424T	16	F424NAT	18	F424NBT	20	F424NCT	10	F424NDT	20	F424NET	22
x8												
Block type	with inv. F		with inv. G		with inv. H		-		-		-	
Drivability	Name	cells	Name	cells	Name	cells						
Low Power												
x1												
x2												
x4												
x8												

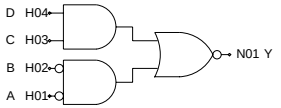
Logic Diagram for "Normal"



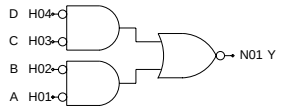
Logic Diagram for "with inv. A type"



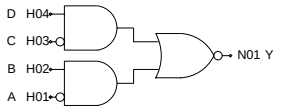
Logic Diagram for "with inv. B type"



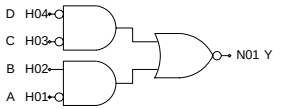
Logic Diagram for "with inv. C type"



Logic Diagram for "with inv. D type"



Logic Diagram for "with inv. E type"



Logic Diagram for "with inv. F type"

Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

Block type	Switching speed Path IN → OUT		t LD0 (ns) MIN.	TYP.	MAX.	t 1 MIN.	TYP.	MAX.	Input Symbol	Fanin	Output Symbol	Fanout
L424	A → Y	(HL)	0.100	0.129	0.164	0.016	0.026	0.044	A	1.0	Y	16
		(LH)	0.064	0.146	0.220	0.018	0.041	0.067	B	1.0		
	B → Y	(HL)	0.078	0.115	0.160	0.016	0.026	0.044	C	1.0		
		(LH)	0.081	0.179	0.275	0.018	0.041	0.067	D	1.0		
	C → Y	(HL)	0.133	0.173	0.244	0.016	0.026	0.044				
		(LH)	0.072	0.174	0.286	0.018	0.041	0.067				
	D → Y	(HL)	0.106	0.157	0.241	0.016	0.026	0.044				
		(LH)	0.087	0.208	0.342	0.019	0.041	0.067				
F424	A → Y	(HL)	0.085	0.116	0.158	0.008	0.013	0.022	A	2.5	Y	33
		(LH)	0.073	0.146	0.217	0.009	0.020	0.033	B	2.5		
	B → Y	(HL)	0.085	0.116	0.156	0.008	0.013	0.022	C	2.5		
		(LH)	0.073	0.146	0.217	0.009	0.020	0.034	D	2.4		
	C → Y	(HL)	0.111	0.166	0.242	0.008	0.013	0.022				
		(LH)	0.079	0.175	0.286	0.009	0.021	0.033				
	D → Y	(HL)	0.111	0.166	0.242	0.008	0.013	0.022				
		(LH)	0.079	0.176	0.286	0.009	0.021	0.033				
F424NP	A → Y	(HL)	0.234	0.362	0.550	0.003	0.004	0.006	A	1.0	Y	143
		(LH)	0.206	0.425	0.665	0.003	0.005	0.008	B	1.0		
	B → Y	(HL)	0.214	0.346	0.548	0.003	0.004	0.006	C	1.0		
		(LH)	0.227	0.468	0.734	0.003	0.005	0.008	D	1.0		
	C → Y	(HL)	0.273	0.401	0.620	0.003	0.004	0.006				
		(LH)	0.208	0.452	0.728	0.003	0.005	0.008				
	D → Y	(HL)	0.246	0.383	0.622	0.003	0.004	0.006				
		(LH)	0.229	0.497	0.799	0.003	0.005	0.008				
F424T	A → Y	(HL)	0.099	0.136	0.173	0.002	0.003	0.006	A	10.0	Y	126
		(LH)	0.068	0.155	0.235	0.002	0.005	0.008	B	10.0		
	B → Y	(HL)	0.080	0.119	0.169	0.002	0.003	0.006	C	10.1		
		(LH)	0.085	0.191	0.292	0.002	0.005	0.008	D	10.1		
	C → Y	(HL)	0.133	0.181	0.252	0.002	0.003	0.006				
		(LH)	0.073	0.183	0.300	0.002	0.005	0.008				
	D → Y	(HL)	0.109	0.164	0.251	0.002	0.003	0.006				
		(LH)	0.090	0.220	0.358	0.002	0.005	0.008				
L424NA	A → Y	(HH)	0.111	0.214	0.327	0.018	0.041	0.067	A	1.0	Y	16
		(LL)	0.112	0.180	0.270	0.016	0.026	0.044	B	1.0		
	B → Y	(HL)	0.079	0.117	0.166	0.016	0.026	0.044	C	1.0		
		(LH)	0.081	0.179	0.274	0.018	0.041	0.067	D	1.0		
	C → Y	(HL)	0.132	0.174	0.244	0.016	0.026	0.044				
		(LH)	0.072	0.174	0.286	0.018	0.041	0.067				
	D → Y	(HL)	0.105	0.158	0.242	0.016	0.026	0.044				
		(LH)	0.088	0.208	0.342	0.018	0.041	0.067				
F424NA	A → Y	(HH)	0.141	0.243	0.365	0.009	0.021	0.033	A	1.0	Y	33
		(LL)	0.136	0.216	0.327	0.008	0.013	0.022	B	2.4		
	B → Y	(HL)	0.085	0.117	0.158	0.008	0.013	0.022	C	2.5		
		(LH)	0.073	0.145	0.216	0.009	0.020	0.034	D	2.4		
	C → Y	(HL)	0.111	0.166	0.240	0.008	0.013	0.022				
		(LH)	0.080	0.174	0.286	0.009	0.021	0.033				
	D → Y	(HL)	0.111	0.166	0.241	0.008	0.013	0.022				
		(LH)	0.080	0.175	0.285	0.009	0.021	0.034				
F424NAP	A → Y	(HH)	0.245	0.486	0.768	0.003	0.005	0.008	A	1.0	Y	143
		(LL)	0.246	0.409	0.656	0.003	0.004	0.006	B	1.0		
	B → Y	(HL)	0.214	0.346	0.550	0.003	0.004	0.006	C	1.0		
		(LH)	0.226	0.467	0.733	0.003	0.005	0.008	D	1.0		
	C → Y	(HL)	0.272	0.399	0.621	0.003	0.004	0.006				
		(LH)	0.209	0.452	0.729	0.003	0.005	0.008				
	D → Y	(HL)	0.247	0.381	0.618	0.003	0.004	0.006				
		(LH)	0.230	0.496	0.801	0.003	0.005	0.008				

Block type	Path		Switching speed t LD0 (ns) MIN.	TYP.	MAX.	t 1 MIN.	TYP.	MAX.	Input Symbol	Fanin	Output Symbol	Fanout
F424NAT	A → Y	(HH)	0.132	0.247	0.372	0.002	0.005	0.008	A	4.9	Y	126
		(LL)	0.138	0.218	0.326	0.002	0.003	0.006	B	10.0		
	B → Y	(HL)	0.080	0.123	0.175	0.002	0.003	0.006	C	10.1		
		(LH)	0.084	0.189	0.290	0.002	0.005	0.008	D	10.0		
	C → Y	(HL)	0.131	0.181	0.251	0.002	0.003	0.006				
		(LH)	0.073	0.181	0.297	0.002	0.005	0.008				
	D → Y	(HL)	0.107	0.165	0.250	0.002	0.003	0.006				
		(LH)	0.091	0.218	0.356	0.002	0.005	0.008				
L424NB	A → Y	(HH)	0.110	0.213	0.325	0.018	0.041	0.067	A	1.0	Y	16
		(LL)	0.110	0.179	0.268	0.016	0.026	0.044	B	1.0		
	B → Y	(HH)	0.123	0.246	0.381	0.018	0.041	0.067	C	1.0		
		(LL)	0.110	0.183	0.282	0.016	0.026	0.044	D	1.0		
	C → Y	(HL)	0.132	0.174	0.243	0.016	0.026	0.044				
		(LH)	0.071	0.176	0.290	0.019	0.041	0.067				
	D → Y	(HL)	0.105	0.158	0.242	0.016	0.026	0.044				
		(LH)	0.088	0.210	0.345	0.018	0.041	0.067				
F424NB	A → Y	(HH)	0.141	0.242	0.365	0.009	0.021	0.033	A	1.0	Y	33
		(LL)	0.137	0.217	0.330	0.008	0.013	0.022	B	1.0		
	B → Y	(HH)	0.140	0.241	0.362	0.009	0.021	0.034	C	2.5		
		(LL)	0.136	0.215	0.327	0.008	0.013	0.022	D	2.4		
	C → Y	(HL)	0.111	0.166	0.239	0.008	0.013	0.022				
		(LH)	0.080	0.177	0.290	0.009	0.021	0.033				
	D → Y	(HL)	0.111	0.166	0.241	0.008	0.013	0.022				
		(LH)	0.080	0.178	0.289	0.009	0.021	0.034				
F424NBP	A → Y	(HH)	0.245	0.486	0.767	0.003	0.005	0.008	A	1.0	Y	143
		(LL)	0.245	0.408	0.654	0.003	0.004	0.006	B	1.0		
	B → Y	(HH)	0.265	0.528	0.835	0.003	0.005	0.008	C	1.0		
		(LL)	0.245	0.412	0.669	0.003	0.004	0.006	D	1.0		
	C → Y	(HL)	0.272	0.400	0.621	0.003	0.004	0.006				
		(LH)	0.209	0.455	0.732	0.003	0.005	0.008				
	D → Y	(HL)	0.248	0.382	0.620	0.003	0.004	0.006				
		(LH)	0.230	0.499	0.803	0.003	0.005	0.008				
F424NBT	A → Y	(HH)	0.133	0.248	0.374	0.002	0.005	0.008	A	4.9	Y	126
		(LL)	0.139	0.218	0.328	0.002	0.003	0.006	B	4.9		
	B → Y	(HH)	0.145	0.279	0.426	0.002	0.005	0.008	C	10.1		
		(LL)	0.135	0.220	0.336	0.002	0.003	0.006	D	10.0		
	C → Y	(HL)	0.132	0.181	0.251	0.002	0.003	0.006				
		(LH)	0.074	0.183	0.302	0.002	0.005	0.008				
	D → Y	(HL)	0.107	0.164	0.248	0.002	0.003	0.006				
		(LH)	0.090	0.220	0.361	0.002	0.005	0.008				
L424NC	A → Y	(HH)	0.110	0.214	0.326	0.018	0.041	0.067	A	1.0	Y	16
		(LL)	0.111	0.179	0.268	0.016	0.026	0.044	B	1.0		
	B → Y	(HH)	0.124	0.246	0.383	0.018	0.041	0.067	C	1.0		
		(LL)	0.110	0.183	0.282	0.016	0.026	0.044	D	1.0		
	C → Y	(HH)	0.133	0.260	0.405	0.019	0.041	0.067				
		(LL)	0.134	0.218	0.348	0.016	0.026	0.044				
	D → Y	(HH)	0.148	0.296	0.463	0.019	0.041	0.067				
		(LL)	0.135	0.225	0.366	0.016	0.026	0.044				
F424NC	A → Y	(HH)	0.141	0.242	0.364	0.009	0.021	0.033	A	1.0	Y	33
		(LL)	0.137	0.217	0.329	0.008	0.013	0.022	B	1.0		
	B → Y	(HH)	0.140	0.241	0.361	0.009	0.021	0.034	C	1.0		
		(LL)	0.135	0.215	0.326	0.008	0.013	0.022	D	1.0		
	C → Y	(HH)	0.165	0.294	0.448	0.009	0.021	0.033				
		(LL)	0.158	0.261	0.414	0.008	0.013	0.022				
	D → Y	(HH)	0.162	0.290	0.443	0.009	0.021	0.034				
		(LL)	0.154	0.257	0.407	0.008	0.013	0.022				

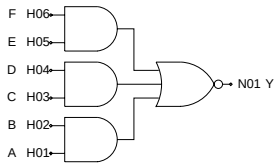
Block type	Path		Switching speed t LD0 (ns) MIN.	TYP.	MAX.	t 1 MIN.	TYP.	MAX.	Input Symbol	Fanin	Output Symbol	Fanout
F424NCP	A → Y	(HH)	0.243	0.481	0.761	0.003	0.005	0.008	A	1.0	Y	143
		(LL)	0.242	0.403	0.646	0.003	0.004	0.006	B	1.0		
	B → Y	(HH)	0.263	0.524	0.827	0.003	0.005	0.008	C	1.0		
		(LL)	0.242	0.407	0.659	0.003	0.004	0.006	D	1.0		
	C → Y	(HH)	0.277	0.536	0.849	0.003	0.005	0.008				
		(LL)	0.281	0.450	0.733	0.003	0.004	0.006				
	D → Y	(HH)	0.297	0.579	0.916	0.003	0.005	0.008				
		(LL)	0.279	0.452	0.743	0.003	0.004	0.006				
F424NCT	A → Y	(HH)	0.168	0.300	0.460	0.002	0.003	0.004	A	3.8	Y	281
		(LL)	0.234	0.384	0.598	0.001	0.002	0.003	B	3.8		
	B → Y	(HH)	0.182	0.321	0.498	0.002	0.003	0.004	C	3.8		
		(LL)	0.220	0.383	0.622	0.001	0.002	0.003	D	3.7		
	C → Y	(HH)	0.158	0.309	0.491	0.002	0.003	0.004				
		(LL)	0.286	0.475	0.748	0.001	0.002	0.003				
	D → Y	(HH)	0.168	0.332	0.530	0.002	0.003	0.004				
		(LL)	0.275	0.478	0.772	0.001	0.002	0.003				
L424ND	A → Y	(HH)	0.111	0.214	0.327	0.018	0.041	0.067	A	1.0	Y	16
		(LL)	0.112	0.180	0.271	0.016	0.026	0.044	B	1.0		
	B → Y	(HL)	0.080	0.115	0.166	0.016	0.026	0.044	C	1.0		
		(LH)	0.081	0.178	0.274	0.018	0.041	0.067	D	1.0		
	C → Y	(HH)	0.136	0.264	0.408	0.019	0.041	0.067				
		(LL)	0.139	0.226	0.357	0.016	0.026	0.044				
	D → Y	(HL)	0.106	0.160	0.248	0.016	0.026	0.044				
		(LH)	0.088	0.209	0.342	0.018	0.041	0.067				
F424ND	A → Y	(HH)	0.141	0.242	0.364	0.009	0.021	0.033	A	1.0	Y	33
		(LL)	0.136	0.216	0.327	0.008	0.013	0.022	B	2.4		
	B → Y	(HL)	0.085	0.116	0.158	0.008	0.013	0.022	C	1.0		
		(LH)	0.073	0.145	0.216	0.009	0.020	0.034	D	2.4		
	C → Y	(HH)	0.168	0.295	0.450	0.009	0.021	0.033				
		(LL)	0.160	0.267	0.419	0.008	0.013	0.022				
	D → Y	(HL)	0.111	0.167	0.244	0.008	0.013	0.022				
		(LH)	0.080	0.175	0.286	0.009	0.021	0.034				
F424NDP	A → Y	(HH)	0.246	0.487	0.768	0.003	0.005	0.008	A	1.0	Y	143
		(LL)	0.246	0.409	0.657	0.003	0.004	0.006	B	1.0		
	B → Y	(HL)	0.214	0.346	0.551	0.003	0.004	0.006	C	1.0		
		(LH)	0.226	0.466	0.733	0.003	0.005	0.008	D	1.0		
	C → Y	(HH)	0.277	0.535	0.848	0.003	0.005	0.008				
		(LL)	0.280	0.448	0.733	0.003	0.004	0.006				
	D → Y	(HL)	0.248	0.383	0.624	0.003	0.004	0.006				
		(LH)	0.230	0.497	0.802	0.003	0.005	0.008				
F424NDT	A → Y	(HH)	0.132	0.245	0.370	0.002	0.005	0.008	A	4.9	Y	126
		(LL)	0.138	0.217	0.325	0.002	0.003	0.006	B	10.0		
	B → Y	(HL)	0.080	0.121	0.173	0.002	0.003	0.006	C	4.8		
		(LH)	0.084	0.188	0.289	0.002	0.005	0.008	D	10.0		
	C → Y	(HH)	0.161	0.299	0.457	0.002	0.005	0.008				
		(LL)	0.168	0.270	0.420	0.002	0.003	0.006				
	D → Y	(HL)	0.107	0.167	0.255	0.002	0.003	0.006				
		(LH)	0.090	0.217	0.355	0.002	0.005	0.008				
L424NE	A → Y	(HH)	0.111	0.214	0.328	0.018	0.041	0.067	A	1.0	Y	16
		(LL)	0.112	0.180	0.271	0.016	0.026	0.044	B	1.0		
	B → Y	(HL)	0.080	0.117	0.167	0.016	0.026	0.044	C	1.0		
		(LH)	0.081	0.179	0.276	0.018	0.041	0.067	D	1.0		
	C → Y	(HH)	0.132	0.259	0.402	0.019	0.041	0.067				
		(LL)	0.134	0.219	0.348	0.016	0.026	0.044				
	D → Y	(HH)	0.148	0.295	0.460	0.018	0.041	0.067				
		(LL)	0.135	0.225	0.367	0.016	0.026	0.044				

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F424NE	A → Y	(HH)	0.141	0.243	0.365	0.009	0.021	0.033	A	1.0	Y	33
		(LL)	0.136	0.216	0.327	0.008	0.013	0.022	B	2.4		
	B → Y	(HL)	0.085	0.116	0.157	0.008	0.013	0.022	C	1.0		
		(LH)	0.073	0.145	0.216	0.009	0.020	0.034	D	1.0		
	C → Y	(HH)	0.165	0.291	0.443	0.009	0.021	0.033				
		(LL)	0.158	0.263	0.416	0.008	0.013	0.022				
	D → Y	(HH)	0.162	0.287	0.437	0.009	0.021	0.034				
		(LL)	0.154	0.258	0.408	0.008	0.013	0.022				
F424NEP	A → Y	(HH)	0.243	0.481	0.760	0.003	0.005	0.008	A	1.0	Y	143
		(LL)	0.244	0.404	0.649	0.003	0.004	0.006	B	1.0		
	B → Y	(HL)	0.212	0.342	0.544	0.003	0.004	0.006	C	1.0		
		(LH)	0.224	0.462	0.726	0.003	0.005	0.008	D	1.0		
	C → Y	(HH)	0.276	0.533	0.846	0.003	0.005	0.008				
		(LL)	0.281	0.449	0.732	0.003	0.004	0.006				
	D → Y	(HH)	0.297	0.577	0.912	0.003	0.005	0.008				
		(LL)	0.279	0.451	0.743	0.003	0.004	0.006				
F424NET	A → Y	(HH)	0.132	0.245	0.370	0.002	0.005	0.008	A	4.9	Y	127
		(LL)	0.138	0.217	0.325	0.002	0.003	0.006	B	10.0		
	B → Y	(HL)	0.080	0.121	0.173	0.002	0.003	0.006	C	4.9		
		(LH)	0.084	0.188	0.288	0.002	0.005	0.008	D	4.9		
	C → Y	(HH)	0.156	0.293	0.448	0.002	0.005	0.008				
		(LL)	0.163	0.263	0.410	0.002	0.003	0.006				
	D → Y	(HH)	0.171	0.327	0.505	0.002	0.005	0.008				
		(LL)	0.160	0.263	0.423	0.002	0.003	0.006				

[MEMO]

Function	2-2-2-Input AND-NOR										SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	L425	5										
x1	F425	6										
x2	F425NP	6										
x4	F425T	24										
x8												
Block type	with inv. F		with inv. G		with inv. H		-		-		-	
Drivability	Name	cells	Name	cells	Name	cells						
Low Power												
x1												
x2												
x4												
x8												

Logic Diagram for "Normal"



Logic Diagram for "with inv. A type"

Logic Diagram for "with inv. B type"

Logic Diagram for "with inv. C type"

Logic Diagram for "with inv. D type"

Logic Diagram for "with inv. E type"

Logic Diagram for "with inv. F type"

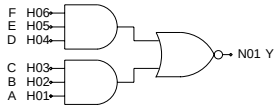
Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L425	A → Y	(HL)	0.184	0.272	0.413	0.010	0.016	0.025	A	1.2	Y	35
		(LH)	0.169	0.282	0.465	0.013	0.021	0.034	B	1.3		
	B → Y	(HL)	0.172	0.262	0.410	0.010	0.016	0.025	C	1.3		
		(LH)	0.192	0.310	0.501	0.013	0.021	0.034	D	1.3		
	C → Y	(HL)	0.206	0.306	0.463	0.010	0.016	0.025	E	1.3		
		(LH)	0.182	0.306	0.512	0.013	0.021	0.034	F	1.3		
	D → Y	(HL)	0.192	0.294	0.459	0.010	0.016	0.025				
		(LH)	0.203	0.330	0.544	0.013	0.021	0.034				
	E → Y	(HL)	0.220	0.329	0.499	0.010	0.016	0.025				
		(LH)	0.186	0.319	0.543	0.013	0.021	0.034				
	F → Y	(HL)	0.206	0.317	0.495	0.010	0.016	0.025				
		(LH)	0.205	0.344	0.573	0.013	0.021	0.034				
F425	A → Y	(HL)	0.093	0.133	0.180	0.008	0.013	0.022	A	2.4	Y	19
		(LH)	0.090	0.219	0.345	0.012	0.031	0.050	B	2.4		
	B → Y	(HL)	0.093	0.133	0.179	0.008	0.013	0.022	C	2.4		
		(LH)	0.091	0.219	0.345	0.012	0.031	0.050	D	2.4		
	C → Y	(HL)	0.124	0.182	0.270	0.008	0.013	0.022	E	2.4		
		(LH)	0.113	0.317	0.521	0.012	0.031	0.050	F	2.4		
	D → Y	(HL)	0.124	0.181	0.270	0.008	0.013	0.022				
		(LH)	0.113	0.317	0.522	0.012	0.031	0.050				
	E → Y	(HL)	0.134	0.211	0.324	0.008	0.013	0.022				
		(LH)	0.129	0.353	0.583	0.012	0.031	0.050				
	F → Y	(HL)	0.134	0.211	0.324	0.008	0.013	0.022				
		(LH)	0.129	0.353	0.583	0.012	0.031	0.050				
F425NP	A → Y	(HL)	0.241	0.390	0.595	0.003	0.004	0.006	A	1.1	Y	143
		(LH)	0.243	0.624	0.992	0.003	0.005	0.008	B	1.0		
	B → Y	(HL)	0.221	0.372	0.593	0.003	0.004	0.006	C	1.0		
		(LH)	0.268	0.685	1.094	0.003	0.005	0.008	D	1.0		
	C → Y	(HL)	0.281	0.428	0.663	0.003	0.004	0.006	E	1.0		
		(LH)	0.261	0.707	1.143	0.003	0.005	0.008	F	1.0		
	D → Y	(HL)	0.254	0.411	0.663	0.003	0.004	0.006				
		(LH)	0.288	0.770	1.250	0.003	0.005	0.008				
	E → Y	(HL)	0.307	0.450	0.717	0.003	0.004	0.006				
		(LH)	0.282	0.751	1.220	0.003	0.005	0.008				
	F → Y	(HL)	0.278	0.435	0.717	0.003	0.004	0.006				
		(LH)	0.311	0.818	1.326	0.003	0.005	0.008				
F425T	A → Y	(HL)	0.097	0.151	0.188	0.002	0.003	0.006	A	10.7	Y	66
		(LH)	0.082	0.254	0.402	0.003	0.008	0.013	B	10.4		
	B → Y	(HL)	0.081	0.135	0.185	0.002	0.003	0.006	C	10.5		
		(LH)	0.103	0.307	0.489	0.003	0.008	0.013	D	10.5		
	C → Y	(HL)	0.140	0.191	0.269	0.002	0.003	0.006	E	11.0		
		(LH)	0.101	0.349	0.573	0.003	0.008	0.013	F	10.4		
	D → Y	(HL)	0.117	0.174	0.267	0.002	0.003	0.006				
		(LH)	0.123	0.405	0.663	0.003	0.008	0.013				
	E → Y	(HL)	0.158	0.218	0.320	0.002	0.003	0.006				
		(LH)	0.119	0.393	0.646	0.003	0.008	0.013				
	F → Y	(HL)	0.130	0.200	0.319	0.002	0.003	0.006				
		(LH)	0.142	0.448	0.736	0.003	0.008	0.013				

Function	3-3-Input AND-NOR										SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	L426	5										
x1	F426	6										
x2	F426NP	6										
x4	F426T	24										
x8												
Block type	with inv. F		with inv. G		with inv. H		-		-		-	
Drivability	Name	cells	Name	cells	Name	cells						
Low Power												
x1												
x2												
x4												
x8												

Logic Diagram for "Normal"



Logic Diagram for "with inv. A type"

Logic Diagram for "with inv. B type"

Logic Diagram for "with inv. C type"

Logic Diagram for "with inv. D type"

Logic Diagram for "with inv. E type"

Logic Diagram for "with inv. F type"

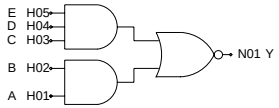
Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L426	A → Y	(HL)	0.216	0.311	0.470	0.010	0.016	0.025	A	1.2	Y	35
		(LH)	0.148	0.247	0.396	0.013	0.021	0.034	B	1.3		
	B → Y	(HL)	0.209	0.310	0.492	0.010	0.016	0.025	C	1.2		
		(LH)	0.168	0.273	0.431	0.013	0.021	0.034	D	1.3		
	C → Y	(HL)	0.198	0.311	0.515	0.010	0.016	0.025	E	1.3		
		(LH)	0.186	0.296	0.464	0.013	0.021	0.034	F	1.3		
	D → Y	(HL)	0.233	0.340	0.518	0.010	0.016	0.025				
		(LH)	0.147	0.251	0.408	0.013	0.021	0.034				
	E → Y	(HL)	0.230	0.340	0.540	0.010	0.016	0.025				
		(LH)	0.166	0.276	0.442	0.013	0.021	0.034				
	F → Y	(HL)	0.215	0.339	0.562	0.010	0.016	0.025				
		(LH)	0.182	0.297	0.470	0.013	0.021	0.034				
F426	A → Y	(HL)	0.101	0.154	0.217	0.011	0.018	0.032	A	2.4	Y	30
		(LH)	0.075	0.192	0.295	0.008	0.021	0.034	B	2.5		
	B → Y	(HL)	0.105	0.159	0.230	0.011	0.018	0.032	C	2.4		
		(LH)	0.079	0.200	0.308	0.008	0.021	0.034	D	2.4		
	C → Y	(HL)	0.100	0.154	0.216	0.011	0.018	0.032	E	2.5		
		(LH)	0.076	0.192	0.294	0.008	0.021	0.034	F	2.3		
	D → Y	(HL)	0.150	0.253	0.412	0.011	0.018	0.032				
		(LH)	0.094	0.248	0.400	0.008	0.021	0.034				
	E → Y	(HL)	0.154	0.260	0.429	0.011	0.018	0.032				
		(LH)	0.097	0.256	0.414	0.008	0.021	0.034				
	F → Y	(HL)	0.150	0.253	0.413	0.011	0.018	0.032				
		(LH)	0.093	0.247	0.399	0.008	0.021	0.034				
F426NP	A → Y	(HL)	0.287	0.459	0.719	0.003	0.004	0.006	A	1.1	Y	143
		(LH)	0.204	0.501	0.792	0.003	0.005	0.008	B	1.0		
	B → Y	(HL)	0.277	0.460	0.741	0.003	0.004	0.006	C	1.0		
		(LH)	0.221	0.545	0.861	0.003	0.005	0.008	D	1.0		
	C → Y	(HL)	0.263	0.461	0.763	0.003	0.004	0.006	E	1.0		
		(LH)	0.240	0.594	0.935	0.003	0.005	0.008	F	1.0		
	D → Y	(HL)	0.346	0.538	0.877	0.003	0.004	0.006				
		(LH)	0.220	0.551	0.884	0.003	0.005	0.008				
	E → Y	(HL)	0.316	0.538	0.903	0.003	0.004	0.006				
		(LH)	0.239	0.597	0.957	0.003	0.005	0.008				
	F → Y	(HL)	0.302	0.538	0.930	0.003	0.004	0.006				
		(LH)	0.259	0.647	1.033	0.003	0.005	0.008				
F426T	A → Y	(HL)	0.120	0.169	0.217	0.003	0.005	0.008	A	10.5	Y	111
		(LH)	0.064	0.204	0.313	0.002	0.005	0.008	B	10.5		
	B → Y	(HL)	0.116	0.176	0.257	0.003	0.005	0.008	C	10.8		
		(LH)	0.085	0.251	0.392	0.002	0.005	0.008	D	10.6		
	C → Y	(HL)	0.100	0.171	0.268	0.003	0.005	0.008	E	10.4		
		(LH)	0.097	0.283	0.441	0.002	0.005	0.008	F	10.6		
	D → Y	(HL)	0.177	0.265	0.404	0.003	0.005	0.008				
		(LH)	0.082	0.254	0.411	0.002	0.005	0.008				
	E → Y	(HL)	0.150	0.270	0.444	0.003	0.005	0.008				
		(LH)	0.101	0.302	0.487	0.002	0.005	0.008				
	F → Y	(HL)	0.132	0.267	0.457	0.003	0.005	0.008				
		(LH)	0.113	0.333	0.537	0.002	0.005	0.008				

Function	2-3-Input AND-NOR										SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	L427	4										
x1	F427	5										
x2	F427NP	6										
x4	F427T	20										
x8												
Block type	with inv. F		with inv. G		with inv. H		-		-		-	
Drivability	Name	cells	Name	cells	Name	cells						
Low Power												
x1												
x2												
x4												
x8												

Logic Diagram for "Normal"



Logic Diagram for "with inv. A type"

Logic Diagram for "with inv. B type"

Logic Diagram for "with inv. C type"

Logic Diagram for "with inv. D type"

Logic Diagram for "with inv. E type"

Logic Diagram for "with inv. F type"

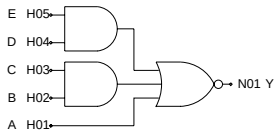
Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L427	A → Y	(HL)	0.175	0.256	0.385	0.010	0.016	0.025	A	1.3	Y	35
		(LH)	0.140	0.231	0.370	0.013	0.021	0.034	B	1.3		
	B → Y	(HL)	0.162	0.245	0.381	0.010	0.016	0.025	C	1.3		
		(LH)	0.161	0.258	0.406	0.013	0.021	0.034	D	1.3		
	C → Y	(HL)	0.233	0.340	0.518	0.010	0.016	0.025	E	1.3		
		(LH)	0.147	0.251	0.410	0.013	0.021	0.034				
	D → Y	(HL)	0.230	0.340	0.539	0.010	0.016	0.025				
		(LH)	0.166	0.276	0.443	0.013	0.021	0.034				
	E → Y	(HL)	0.216	0.340	0.562	0.010	0.016	0.025				
		(LH)	0.182	0.297	0.471	0.013	0.021	0.034				
F427	A → Y	(HL)	0.123	0.200	0.298	0.008	0.013	0.022	A	2.5	Y	32
		(LH)	0.088	0.219	0.356	0.008	0.021	0.034	B	2.3		
	B → Y	(HL)	0.123	0.200	0.298	0.008	0.013	0.022	C	2.5		
		(LH)	0.088	0.219	0.356	0.008	0.021	0.034	D	2.4		
	C → Y	(HL)	0.108	0.157	0.230	0.011	0.018	0.032	E	2.5		
		(LH)	0.087	0.178	0.271	0.009	0.020	0.034				
	D → Y	(HL)	0.111	0.157	0.231	0.011	0.018	0.032				
		(LH)	0.086	0.177	0.271	0.009	0.021	0.033				
	E → Y	(HL)	0.108	0.157	0.232	0.011	0.018	0.032				
		(LH)	0.087	0.178	0.271	0.009	0.020	0.034				
F427NP	A → Y	(HL)	0.271	0.433	0.680	0.003	0.004	0.006	A	1.0	Y	143
		(LH)	0.210	0.486	0.781	0.003	0.005	0.008	B	1.0		
	B → Y	(HL)	0.249	0.419	0.688	0.003	0.004	0.006	C	1.0		
		(LH)	0.234	0.543	0.871	0.003	0.005	0.008	D	1.0		
	C → Y	(HL)	0.279	0.432	0.673	0.003	0.004	0.006	E	1.0		
		(LH)	0.208	0.444	0.699	0.003	0.005	0.008				
	D → Y	(HL)	0.271	0.439	0.714	0.003	0.004	0.006				
		(LH)	0.233	0.500	0.787	0.003	0.005	0.008				
	E → Y	(HL)	0.255	0.434	0.725	0.003	0.004	0.006				
		(LH)	0.251	0.537	0.846	0.003	0.005	0.008				
F427T	A → Y	(HL)	0.102	0.137	0.170	0.002	0.003	0.006	A	10.7	Y	119
		(LH)	0.080	0.202	0.309	0.003	0.005	0.008	B	10.5		
	B → Y	(HL)	0.081	0.123	0.172	0.002	0.003	0.006	C	10.3		
		(LH)	0.100	0.237	0.366	0.003	0.005	0.008	D	10.2		
	C → Y	(HL)	0.155	0.217	0.305	0.003	0.005	0.008	E	10.0		
		(LH)	0.085	0.202	0.328	0.003	0.005	0.008				
	D → Y	(HL)	0.144	0.218	0.334	0.003	0.005	0.008				
		(LH)	0.108	0.238	0.388	0.003	0.005	0.008				
	E → Y	(HL)	0.129	0.219	0.360	0.003	0.005	0.008				
		(LH)	0.131	0.278	0.452	0.003	0.005	0.008				

Function	1-2-2-Input AND-NOR										SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power												
x1	F428	5										
x2	F428NP	6										
x4	F428T	20										
x8												
Block type	with inv. F		with inv. G		with inv. H		-		-		-	
Drivability	Name	cells	Name	cells	Name	cells						
Low Power												
x1												
x2												
x4												
x8												

Logic Diagram for "Normal"



Logic Diagram for "with inv. A type"

Logic Diagram for "with inv. B type"

Logic Diagram for "with inv. C type"

Logic Diagram for "with inv. D type"

Logic Diagram for "with inv. E type"

Logic Diagram for "with inv. F type"

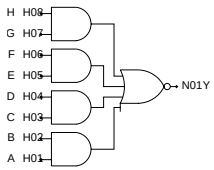
Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F428	A → Y	(HL)	0.072	0.104	0.129	0.005	0.008	0.013	A	2.5	Y	21
		(LH)	0.075	0.174	0.266	0.012	0.031	0.050	B	2.4		
	B → Y	(HL)	0.101	0.146	0.204	0.008	0.013	0.022	C	2.5		
		(LH)	0.100	0.236	0.388	0.015	0.031	0.050	D	2.5		
	C → Y	(HL)	0.101	0.146	0.204	0.008	0.013	0.022	E	2.4		
		(LH)	0.100	0.236	0.388	0.015	0.031	0.050				
	D → Y	(HL)	0.114	0.164	0.236	0.008	0.013	0.022				
		(LH)	0.128	0.283	0.468	0.015	0.031	0.050				
	E → Y	(HL)	0.114	0.164	0.236	0.008	0.013	0.022				
		(LH)	0.128	0.283	0.468	0.015	0.031	0.050				
F428NP	A → Y	(HL)	0.194	0.323	0.477	0.003	0.004	0.006	A	1.0	Y	143
		(LH)	0.239	0.651	1.031	0.003	0.005	0.008	B	1.0		
	B → Y	(HL)	0.261	0.405	0.622	0.003	0.004	0.006	C	1.0		
		(LH)	0.276	0.617	1.004	0.003	0.005	0.008	D	1.0		
	C → Y	(HL)	0.238	0.391	0.632	0.003	0.004	0.006	E	1.0		
		(LH)	0.318	0.699	1.137	0.003	0.005	0.008				
	D → Y	(HL)	0.284	0.427	0.667	0.003	0.004	0.006				
		(LH)	0.300	0.666	1.083	0.003	0.005	0.008				
	E → Y	(HL)	0.258	0.416	0.677	0.003	0.004	0.006				
		(LH)	0.342	0.749	1.220	0.003	0.005	0.008				
F428T	A → Y	(HL)	0.067	0.111	0.135	0.001	0.002	0.003	A	10.3	Y	74
		(LH)	0.093	0.250	0.384	0.005	0.008	0.013	B	10.3		
	B → Y	(HL)	0.115	0.166	0.220	0.002	0.003	0.006	C	10.2		
		(LH)	0.113	0.259	0.425	0.005	0.008	0.013	D	10.4		
	C → Y	(HL)	0.095	0.150	0.218	0.002	0.003	0.006	E	10.3		
		(LH)	0.146	0.313	0.515	0.005	0.008	0.013				
	D → Y	(HL)	0.124	0.181	0.240	0.002	0.003	0.006				
		(LH)	0.127	0.302	0.502	0.005	0.008	0.013				
	E → Y	(HL)	0.101	0.162	0.240	0.002	0.003	0.006				
		(LH)	0.161	0.358	0.593	0.005	0.008	0.013				

Function	2-2-2-2-Input AND-NOR										SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	L429	6										
x1	F429	6										
x2	F429NP	7										
x4												
x8												
Block type	with inv. F		with inv. G		with inv. H		-		-		-	
Drivability	Name	cells	Name	cells	Name	cells						
Low Power												
x1												
x2												
x4												
x8												

Logic Diagram for "Normal"



Logic Diagram for "with inv. A type"

Logic Diagram for "with inv. B type"

Logic Diagram for "with inv. C type"

Logic Diagram for "with inv. D type"

Logic Diagram for "with inv. E type"

Logic Diagram for "with inv. F type"

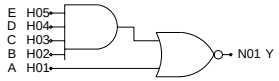
Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

Block type	Path		Switching speed t_{LD0} (ns)			Switching speed t_1			Input		Output	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L429	A → Y	(HL)	0.185	0.292	0.438	0.010	0.016	0.025	A	1.0	Y	35
		(LH)	0.182	0.378	0.601	0.013	0.021	0.034	B	1.0		
	B → Y	(HL)	0.170	0.277	0.437	0.010	0.016	0.025	C	1.0		
		(LH)	0.206	0.423	0.671	0.013	0.021	0.034	D	1.0		
	C → Y	(HL)	0.226	0.332	0.509	0.010	0.016	0.025	E	1.0		
		(LH)	0.187	0.405	0.659	0.013	0.021	0.034	F	1.0		
	D → Y	(HL)	0.204	0.316	0.507	0.010	0.016	0.025	G	1.0		
		(LH)	0.209	0.453	0.732	0.013	0.021	0.034	H	1.0		
	E → Y	(HL)	0.206	0.324	0.492	0.010	0.016	0.025				
		(LH)	0.185	0.380	0.608	0.013	0.021	0.034				
	F → Y	(HL)	0.190	0.310	0.489	0.010	0.016	0.025				
		(LH)	0.205	0.422	0.676	0.013	0.021	0.034				
	G → Y	(HL)	0.248	0.364	0.559	0.010	0.016	0.025				
		(LH)	0.188	0.407	0.668	0.013	0.021	0.034				
	H → Y	(HL)	0.224	0.347	0.558	0.010	0.016	0.025				
		(LH)	0.207	0.451	0.737	0.013	0.021	0.034				
F429	A → Y	(HL)	0.206	0.328	0.498	0.005	0.008	0.013	A	1.0	Y	70
		(LH)	0.205	0.418	0.666	0.006	0.011	0.017	B	1.0		
	B → Y	(HL)	0.191	0.314	0.494	0.005	0.008	0.013	C	1.0		
		(LH)	0.230	0.465	0.737	0.006	0.011	0.017	D	1.0		
	C → Y	(HL)	0.248	0.367	0.563	0.005	0.008	0.013	E	1.0		
		(LH)	0.212	0.447	0.728	0.006	0.011	0.017	F	1.0		
	D → Y	(HL)	0.225	0.351	0.563	0.005	0.008	0.013	G	1.0		
		(LH)	0.236	0.494	0.802	0.006	0.011	0.017	H	1.0		
	E → Y	(HL)	0.226	0.358	0.547	0.005	0.008	0.013				
		(LH)	0.204	0.415	0.668	0.006	0.011	0.017				
	F → Y	(HL)	0.210	0.343	0.543	0.005	0.008	0.013				
		(LH)	0.226	0.458	0.735	0.006	0.011	0.017				
	G → Y	(HL)	0.267	0.398	0.613	0.005	0.008	0.013				
		(LH)	0.209	0.444	0.730	0.006	0.011	0.017				
	H → Y	(HL)	0.243	0.381	0.612	0.005	0.008	0.013				
		(LH)	0.230	0.487	0.799	0.006	0.011	0.017				
F429NP	A → Y	(HL)	0.255	0.405	0.625	0.003	0.004	0.006	A	1.0	Y	141
		(LH)	0.254	0.503	0.812	0.003	0.005	0.009	B	1.0		
	B → Y	(HL)	0.241	0.393	0.622	0.003	0.004	0.006	C	1.0		
		(LH)	0.279	0.551	0.883	0.003	0.005	0.009	D	1.0		
	C → Y	(HL)	0.296	0.446	0.690	0.003	0.004	0.006	E	1.0		
		(LH)	0.263	0.531	0.871	0.003	0.005	0.009	F	1.0		
	D → Y	(HL)	0.275	0.430	0.688	0.003	0.004	0.006	G	1.0		
		(LH)	0.286	0.581	0.948	0.003	0.005	0.009	H	1.0		
	E → Y	(HL)	0.273	0.436	0.672	0.003	0.004	0.006				
		(LH)	0.251	0.496	0.810	0.003	0.005	0.009				
	F → Y	(HL)	0.258	0.421	0.668	0.003	0.004	0.006				
		(LH)	0.272	0.540	0.878	0.003	0.005	0.009				
	G → Y	(HL)	0.315	0.474	0.737	0.003	0.004	0.006				
		(LH)	0.255	0.523	0.873	0.003	0.005	0.009				
	H → Y	(HL)	0.292	0.458	0.734	0.003	0.004	0.006				
		(LH)	0.276	0.568	0.941	0.003	0.005	0.009				

Function	1-4-Input AND-NOR										SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	L440	3										
x1	F440	5										
x2	F440NP	6										
x4												
x8												
Block type	with inv. F		with inv. G		with inv. H		-		-		-	
Drivability	Name	cells	Name	cells	Name	cells						
Low Power												
x1												
x2												
x4												
x8												

Logic Diagram for "Normal"



Logic Diagram for "with inv. A type"

Logic Diagram for "with inv. B type"

Logic Diagram for "with inv. C type"

Logic Diagram for "with inv. D type"

Logic Diagram for "with inv. E type"

Logic Diagram for "with inv. F type"

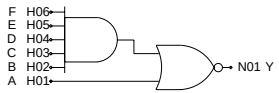
Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L440	A → Y	(HL)	0.076	0.104	0.120	0.010	0.016	0.025	A	1.0	Y	14
		(LH)	0.056	0.210	0.318	0.015	0.041	0.067	B	1.0		
	B → Y	(HL)	0.152	0.193	0.282	0.029	0.048	0.085	C	1.0		
		(LH)	0.069	0.135	0.223	0.024	0.041	0.067	D	1.0		
	C → Y	(HL)	0.155	0.220	0.354	0.029	0.048	0.085	E	1.0		
		(LH)	0.096	0.180	0.292	0.024	0.041	0.067				
	D → Y	(HL)	0.150	0.231	0.392	0.029	0.048	0.085				
		(LH)	0.115	0.211	0.343	0.024	0.041	0.067				
	E → Y	(HL)	0.145	0.238	0.422	0.029	0.048	0.085				
		(LH)	0.135	0.246	0.396	0.024	0.041	0.067				
F440	A → Y	(HL)	0.071	0.100	0.122	0.005	0.008	0.013	A	2.5	Y	29
		(LH)	0.059	0.162	0.236	0.008	0.021	0.034	B	2.3		
	B → Y	(HL)	0.146	0.212	0.345	0.015	0.024	0.042	C	2.4		
		(LH)	0.101	0.187	0.301	0.012	0.021	0.034	D	2.6		
	C → Y	(HL)	0.152	0.219	0.365	0.015	0.024	0.042	E	2.6		
		(LH)	0.105	0.193	0.315	0.012	0.021	0.034				
	D → Y	(HL)	0.152	0.220	0.362	0.015	0.024	0.042				
		(LH)	0.104	0.193	0.315	0.012	0.021	0.034				
	E → Y	(HL)	0.146	0.212	0.346	0.015	0.024	0.042				
		(LH)	0.101	0.186	0.301	0.012	0.021	0.034				
F440NP	A → Y	(HL)	0.187	0.310	0.457	0.003	0.004	0.006	A	1.0	Y	143
		(LH)	0.189	0.516	0.801	0.003	0.005	0.008	B	1.0		
	B → Y	(HL)	0.349	0.509	0.824	0.003	0.004	0.006	C	1.0		
		(LH)	0.237	0.401	0.654	0.003	0.005	0.008	D	1.0		
	C → Y	(HL)	0.353	0.533	0.895	0.003	0.004	0.006	E	1.0		
		(LH)	0.272	0.460	0.748	0.003	0.005	0.008				
	D → Y	(HL)	0.346	0.545	0.934	0.003	0.004	0.006				
		(LH)	0.296	0.499	0.807	0.003	0.005	0.008				
	E → Y	(HL)	0.339	0.552	0.963	0.003	0.004	0.006				
		(LH)	0.323	0.543	0.871	0.003	0.005	0.008				

Function	1-5-Input AND-NOR										SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	L441	5										
x1	F441	7										
x2	F441NP	8										
x4												
x8												
Block type	with inv. F		with inv. G		with inv. H		-		-		-	
Drivability	Name	cells	Name	cells	Name	cells						
Low Power												
x1												
x2												
x4												
x8												

Logic Diagram for "Normal"



Logic Diagram for "with inv. A type"

Logic Diagram for "with inv. B type"

Logic Diagram for "with inv. C type"

Logic Diagram for "with inv. D type"

Logic Diagram for "with inv. E type"

Logic Diagram for "with inv. F type"

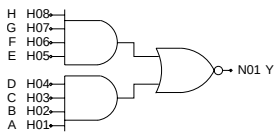
Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

Block type	Path			Switching speed t_{LD0} (ns)			Switching speed t_{1}			Input		Output	
	IN	→	OUT	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L441	A	→	Y (HL)	0.075	0.102	0.120	0.010	0.016	0.025	A	1.0	Y	17
			Y (LH)	0.060	0.140	0.210	0.018	0.041	0.067	B	1.0		
	B	→	Y (HL)	0.201	0.297	0.458	0.016	0.026	0.044	C	1.0		
			Y (LH)	0.158	0.264	0.419	0.024	0.041	0.067	D	1.0		
	C	→	Y (HL)	0.187	0.286	0.453	0.016	0.026	0.044	E	1.0		
			Y (LH)	0.178	0.292	0.452	0.024	0.041	0.067	F	1.0		
	D	→	Y (HL)	0.239	0.353	0.554	0.016	0.026	0.044				
			Y (LH)	0.184	0.314	0.496	0.024	0.041	0.067				
	E	→	Y (HL)	0.235	0.354	0.574	0.016	0.026	0.044				
			Y (LH)	0.204	0.338	0.531	0.024	0.041	0.067				
	F	→	Y (HL)	0.222	0.353	0.595	0.016	0.026	0.044				
			Y (LH)	0.221	0.360	0.561	0.024	0.041	0.067				
F441	A	→	Y (HL)	0.070	0.095	0.119	0.005	0.008	0.013	A	2.5	Y	34
			Y (LH)	0.064	0.119	0.170	0.009	0.021	0.034	B	1.0		
	B	→	Y (HL)	0.219	0.330	0.517	0.008	0.013	0.022	C	1.0		
			Y (LH)	0.183	0.304	0.481	0.012	0.021	0.034	D	1.0		
	C	→	Y (HL)	0.208	0.320	0.513	0.008	0.013	0.022	E	1.0		
			Y (LH)	0.203	0.332	0.517	0.012	0.021	0.034	F	1.0		
	D	→	Y (HL)	0.265	0.392	0.614	0.008	0.013	0.022				
			Y (LH)	0.192	0.322	0.508	0.012	0.021	0.033				
	E	→	Y (HL)	0.259	0.393	0.636	0.008	0.013	0.022				
			Y (LH)	0.212	0.349	0.545	0.012	0.021	0.034				
	F	→	Y (HL)	0.249	0.396	0.664	0.008	0.013	0.022				
			Y (LH)	0.229	0.373	0.579	0.012	0.021	0.034				
F441NP	A	→	Y (HL)	0.184	0.295	0.438	0.003	0.004	0.006	A	1.0	Y	143
			Y (LH)	0.200	0.421	0.655	0.003	0.005	0.008	B	1.0		
	B	→	Y (HL)	0.340	0.521	0.835	0.003	0.004	0.006	C	1.0		
			Y (LH)	0.316	0.521	0.836	0.003	0.005	0.008	D	1.0		
	C	→	Y (HL)	0.326	0.510	0.831	0.003	0.004	0.006	E	1.0		
			Y (LH)	0.336	0.548	0.869	0.003	0.005	0.008	F	1.0		
	D	→	Y (HL)	0.378	0.575	0.926	0.003	0.004	0.006				
			Y (LH)	0.351	0.584	0.934	0.003	0.005	0.008				
	E	→	Y (HL)	0.372	0.574	0.945	0.003	0.004	0.006				
			Y (LH)	0.371	0.610	0.968	0.003	0.005	0.008				
	F	→	Y (HL)	0.360	0.575	0.968	0.003	0.004	0.006				
			Y (LH)	0.388	0.630	0.999	0.003	0.005	0.008				

Function	4-4-Input AND-NOR										SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	L442	6										
x1	F442	11										
x2	F442NP	12										
x4												
x8												
Block type	with inv. F		with inv. G		with inv. H		-		-		-	
Drivability	Name	cells	Name	cells	Name	cells						
Low Power												
x1												
x2												
x4												
x8												

Logic Diagram for "Normal"



Logic Diagram for "with inv. A type"

Logic Diagram for "with inv. B type"

Logic Diagram for "with inv. C type"

Logic Diagram for "with inv. D type"

Logic Diagram for "with inv. E type"

Logic Diagram for "with inv. F type"

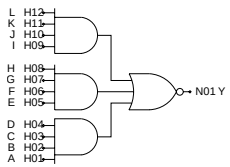
Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L442	A → Y	(HL)	0.245	0.350	0.534	0.010	0.016	0.025	A	1.3	Y	35
		(LH)	0.150	0.254	0.407	0.013	0.021	0.034	B	1.2		
	B → Y	(HL)	0.247	0.360	0.581	0.010	0.016	0.025	C	1.3		
		(LH)	0.170	0.279	0.441	0.013	0.021	0.034	D	1.3		
	C → Y	(HL)	0.245	0.376	0.634	0.010	0.016	0.025	E	1.3		
		(LH)	0.188	0.303	0.476	0.013	0.021	0.034	F	1.2		
	D → Y	(HL)	0.234	0.376	0.646	0.010	0.016	0.025	G	1.3		
		(LH)	0.198	0.316	0.492	0.013	0.021	0.034	H	1.3		
	E → Y	(HL)	0.258	0.372	0.572	0.010	0.016	0.025				
		(LH)	0.145	0.251	0.409	0.013	0.021	0.034				
	F → Y	(HL)	0.261	0.384	0.614	0.010	0.016	0.025				
		(LH)	0.164	0.276	0.444	0.013	0.021	0.034				
	G → Y	(HL)	0.258	0.400	0.670	0.010	0.016	0.025				
		(LH)	0.181	0.298	0.474	0.013	0.021	0.034				
	H → Y	(HL)	0.249	0.401	0.683	0.010	0.016	0.025				
		(LH)	0.190	0.309	0.486	0.013	0.021	0.034				
F442	A → Y	(HL)	0.246	0.376	0.611	0.005	0.008	0.013	A	2.5	Y	71
		(LH)	0.170	0.277	0.439	0.006	0.011	0.017	B	2.4		
	B → Y	(HL)	0.252	0.381	0.627	0.005	0.008	0.013	C	2.4		
		(LH)	0.174	0.284	0.447	0.006	0.011	0.017	D	2.5		
	C → Y	(HL)	0.252	0.382	0.627	0.005	0.008	0.013	E	2.5		
		(LH)	0.175	0.284	0.449	0.006	0.011	0.017	F	2.4		
	D → Y	(HL)	0.246	0.375	0.611	0.005	0.008	0.013	G	2.4		
		(LH)	0.170	0.278	0.438	0.006	0.011	0.017	H	2.5		
	E → Y	(HL)	0.244	0.372	0.604	0.005	0.008	0.013				
		(LH)	0.169	0.277	0.436	0.006	0.011	0.017				
	F → Y	(HL)	0.250	0.379	0.621	0.005	0.008	0.013				
		(LH)	0.173	0.283	0.445	0.006	0.011	0.017				
	G → Y	(HL)	0.251	0.377	0.621	0.005	0.008	0.013				
		(LH)	0.173	0.283	0.447	0.006	0.011	0.017				
	H → Y	(HL)	0.244	0.372	0.606	0.005	0.008	0.013				
		(LH)	0.169	0.277	0.435	0.006	0.011	0.017				
F442NP	A → Y	(HL)	0.274	0.423	0.689	0.003	0.004	0.006	A	2.5	Y	142
		(LH)	0.196	0.321	0.513	0.003	0.005	0.008	B	2.4		
	B → Y	(HL)	0.281	0.428	0.706	0.003	0.004	0.006	C	2.4		
		(LH)	0.200	0.326	0.523	0.003	0.005	0.008	D	2.5		
	C → Y	(HL)	0.280	0.428	0.705	0.003	0.004	0.006	E	2.5		
		(LH)	0.200	0.327	0.523	0.003	0.005	0.008	F	2.4		
	D → Y	(HL)	0.274	0.423	0.691	0.003	0.004	0.006	G	2.4		
		(LH)	0.196	0.321	0.512	0.003	0.005	0.008	H	2.5		
	E → Y	(HL)	0.271	0.417	0.680	0.003	0.004	0.006				
		(LH)	0.194	0.318	0.508	0.003	0.005	0.008				
	F → Y	(HL)	0.277	0.423	0.697	0.003	0.004	0.006				
		(LH)	0.198	0.324	0.518	0.003	0.005	0.008				
	G → Y	(HL)	0.278	0.422	0.696	0.003	0.004	0.006				
		(LH)	0.198	0.324	0.519	0.003	0.005	0.008				
	H → Y	(HL)	0.272	0.417	0.681	0.003	0.004	0.006				
		(LH)	0.194	0.318	0.508	0.003	0.005	0.008				

Function	4-4-4-Input AND-NOR										SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	L444	8										
x1	F444	8										
x2	F444NP	9										
x4												
x8												
Block type	with inv. F		with inv. G		with inv. H		-		-		-	
Drivability	Name	cells	Name	cells	Name	cells						
Low Power												
x1												
x2												
x4												
x8												

Logic Diagram for "Normal"



Logic Diagram for "with inv. A type"

Logic Diagram for "with inv. B type"

Logic Diagram for "with inv. C type"

Logic Diagram for "with inv. D type"

Logic Diagram for "with inv. E type"

Logic Diagram for "with inv. F type"

Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

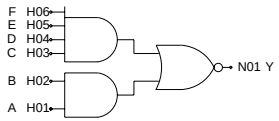
Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L444	A → Y	(HL)	0.244	0.346	0.530	0.010	0.016	0.025	A	1.0	Y	35
		(LH)	0.150	0.252	0.405	0.013	0.021	0.034	B	1.0		
	B → Y	(HL)	0.246	0.357	0.577	0.010	0.016	0.025	C	1.0		
		(LH)	0.170	0.278	0.438	0.013	0.021	0.034	D	1.0		
	C → Y	(HL)	0.243	0.374	0.627	0.010	0.016	0.025	E	1.1		
		(LH)	0.187	0.301	0.473	0.013	0.021	0.034	F	1.0		
	D → Y	(HL)	0.233	0.374	0.643	0.010	0.016	0.025	G	1.0		
		(LH)	0.197	0.314	0.490	0.013	0.021	0.034	H	1.0		
	E → Y	(HL)	0.279	0.465	0.715	0.010	0.016	0.025	I	1.0		
		(LH)	0.175	0.472	0.751	0.013	0.021	0.034	J	1.0		
	F → Y	(HL)	0.280	0.479	0.760	0.010	0.016	0.025	K	1.0		
		(LH)	0.193	0.517	0.823	0.013	0.021	0.034	L	1.0		
	G → Y	(HL)	0.276	0.499	0.808	0.010	0.016	0.025				
		(LH)	0.211	0.570	0.904	0.013	0.021	0.034				
	H → Y	(HL)	0.267	0.500	0.827	0.010	0.016	0.025				
		(LH)	0.221	0.605	0.957	0.013	0.021	0.034				
	I → Y	(HL)	0.412	0.626	1.054	0.010	0.016	0.025				
		(LH)	0.211	0.557	0.895	0.013	0.021	0.034				
	J → Y	(HL)	0.411	0.642	1.108	0.010	0.016	0.025				
		(LH)	0.228	0.604	0.969	0.013	0.021	0.034				
	K → Y	(HL)	0.406	0.660	1.158	0.010	0.016	0.025				
		(LH)	0.246	0.657	1.053	0.013	0.021	0.034				
	L → Y	(HL)	0.394	0.665	1.176	0.010	0.016	0.025				
		(LH)	0.257	0.693	1.103	0.013	0.021	0.034				
F444	A → Y	(HL)	0.270	0.393	0.604	0.005	0.008	0.013	A	1.0	Y	71
		(LH)	0.173	0.291	0.470	0.006	0.011	0.017	B	1.0		
	B → Y	(HL)	0.272	0.404	0.652	0.005	0.008	0.013	C	1.0		
		(LH)	0.194	0.316	0.505	0.006	0.011	0.017	D	1.0		
	C → Y	(HL)	0.270	0.419	0.700	0.005	0.008	0.013	E	1.1		
		(LH)	0.213	0.340	0.541	0.006	0.011	0.017	F	1.0		
	D → Y	(HL)	0.261	0.420	0.717	0.005	0.008	0.013	G	1.0		
		(LH)	0.223	0.355	0.560	0.006	0.010	0.017	H	1.0		
	E → Y	(HL)	0.305	0.518	0.803	0.005	0.008	0.013	I	1.0		
		(LH)	0.196	0.514	0.823	0.006	0.011	0.017	J	1.0		
	F → Y	(HL)	0.305	0.532	0.849	0.005	0.008	0.013	K	1.0		
		(LH)	0.216	0.562	0.894	0.006	0.011	0.017	L	1.0		
	G → Y	(HL)	0.303	0.549	0.899	0.005	0.008	0.013				
		(LH)	0.233	0.616	0.977	0.006	0.010	0.017				
	H → Y	(HL)	0.293	0.551	0.915	0.005	0.008	0.013				
		(LH)	0.245	0.651	1.031	0.006	0.010	0.017				
	I → Y	(HL)	0.442	0.676	1.131	0.005	0.008	0.013				
		(LH)	0.235	0.601	0.969	0.006	0.010	0.017				
	J → Y	(HL)	0.436	0.690	1.185	0.005	0.008	0.013				
		(LH)	0.252	0.646	1.043	0.006	0.010	0.017				
	K → Y	(HL)	0.434	0.706	1.234	0.005	0.008	0.013				
		(LH)	0.271	0.703	1.126	0.006	0.010	0.017				
	L → Y	(HL)	0.426	0.710	1.251	0.005	0.008	0.013				
		(LH)	0.284	0.738	1.178	0.006	0.010	0.017				
F444NP	A → Y	(HL)	0.322	0.473	0.737	0.003	0.004	0.006	A	1.0	Y	141
		(LH)	0.221	0.366	0.598	0.003	0.005	0.009	B	1.0		
	B → Y	(HL)	0.323	0.486	0.786	0.003	0.004	0.006	C	1.0		
		(LH)	0.241	0.391	0.635	0.003	0.005	0.009	D	1.0		
	C → Y	(HL)	0.321	0.500	0.835	0.003	0.004	0.006	E	1.1		
		(LH)	0.259	0.417	0.672	0.003	0.005	0.009	F	1.0		
	D → Y	(HL)	0.311	0.500	0.852	0.003	0.004	0.006	G	1.0		
		(LH)	0.271	0.432	0.692	0.003	0.005	0.009	H	1.0		

Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_1						
	IN	→	OUT	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	E	→	Y (HL)	0.354	0.610	0.964	0.003	0.004	0.006	I	1.0		
			Y (LH)	0.241	0.595	0.962	0.003	0.005	0.009	J	1.0		
	F	→	Y (HL)	0.355	0.623	1.007	0.003	0.004	0.006	K	1.0		
			Y (LH)	0.261	0.643	1.036	0.003	0.005	0.009	L	1.0		
	G	→	Y (HL)	0.352	0.640	1.058	0.003	0.004	0.006				
			Y (LH)	0.278	0.696	1.118	0.003	0.005	0.009				
	H	→	Y (HL)	0.343	0.640	1.074	0.003	0.004	0.006				
			Y (LH)	0.289	0.733	1.174	0.003	0.005	0.009				
	I	→	Y (HL)	0.491	0.756	1.273	0.003	0.004	0.006				
			Y (LH)	0.283	0.683	1.108	0.003	0.005	0.009				
	J	→	Y (HL)	0.492	0.771	1.323	0.003	0.004	0.006				
			Y (LH)	0.300	0.730	1.183	0.003	0.005	0.009				
	K	→	Y (HL)	0.486	0.790	1.372	0.003	0.004	0.006				
			Y (LH)	0.319	0.784	1.266	0.003	0.005	0.009				
	L	→	Y (HL)	0.478	0.791	1.391	0.003	0.004	0.006				
			Y (LH)	0.332	0.820	1.322	0.003	0.005	0.009				

[MEMO]

Function	2-4-Input AND-NOR										SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	L445	5										
x1	F445	6										
x2	F445NP	6										
x4												
x8												
Block type	with inv. F		with inv. G		with inv. H		-		-		-	
Drivability	Name	cells	Name	cells	Name	cells						
Low Power												
x1												
x2												
x4												
x8												

Logic Diagram for "Normal"



Logic Diagram for "with inv. A type"

Logic Diagram for "with inv. B type"

Logic Diagram for "with inv. C type"

Logic Diagram for "with inv. D type"

Logic Diagram for "with inv. E type"

Logic Diagram for "with inv. F type"

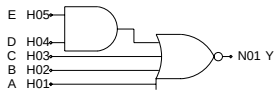
Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

Block type	Switching speed Path		t_{LD0} (ns)			t_{1}			Input		Output	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L445	A → Y	(HL)	0.179	0.261	0.394	0.010	0.016	0.025	A	1.3	Y	35
		(LH)	0.143	0.237	0.381	0.013	0.021	0.034	B	1.2		
	B → Y	(HL)	0.165	0.251	0.391	0.010	0.016	0.025	C	1.3		
		(LH)	0.164	0.263	0.415	0.013	0.021	0.034	D	1.2		
	C → Y	(HL)	0.262	0.377	0.580	0.010	0.016	0.025	E	1.2		
		(LH)	0.148	0.256	0.418	0.013	0.021	0.034	F	1.3		
	D → Y	(HL)	0.264	0.390	0.624	0.010	0.016	0.025				
		(LH)	0.168	0.281	0.453	0.013	0.021	0.034				
	E → Y	(HL)	0.262	0.406	0.678	0.010	0.016	0.025				
		(LH)	0.185	0.303	0.483	0.013	0.021	0.034				
	F → Y	(HL)	0.252	0.407	0.689	0.010	0.016	0.025				
		(LH)	0.193	0.315	0.495	0.013	0.021	0.034				
F445	A → Y	(HL)	0.088	0.122	0.162	0.008	0.013	0.022	A	2.5	Y	26
		(LH)	0.067	0.187	0.284	0.008	0.021	0.034	B	2.4		
	B → Y	(HL)	0.088	0.122	0.162	0.008	0.013	0.022	C	2.5		
		(LH)	0.067	0.187	0.284	0.008	0.021	0.034	D	2.4		
	C → Y	(HL)	0.170	0.272	0.458	0.014	0.024	0.042	E	2.4		
		(LH)	0.100	0.228	0.367	0.009	0.021	0.034	F	2.5		
	D → Y	(HL)	0.174	0.281	0.478	0.015	0.024	0.042				
		(LH)	0.103	0.235	0.379	0.009	0.021	0.034				
	E → Y	(HL)	0.174	0.280	0.477	0.014	0.024	0.042				
		(LH)	0.103	0.235	0.381	0.009	0.021	0.034				
	F → Y	(HL)	0.170	0.273	0.459	0.014	0.024	0.042				
		(LH)	0.100	0.228	0.368	0.009	0.021	0.034				
F445NP	A → Y	(HL)	0.233	0.381	0.578	0.003	0.004	0.006	A	1.0	Y	143
		(LH)	0.189	0.514	0.804	0.003	0.005	0.008	B	1.0		
	B → Y	(HL)	0.215	0.365	0.570	0.003	0.004	0.006	C	1.0		
		(LH)	0.207	0.558	0.874	0.003	0.005	0.008	D	1.0		
	C → Y	(HL)	0.358	0.563	0.926	0.003	0.004	0.006	E	1.0		
		(LH)	0.218	0.474	0.762	0.003	0.005	0.008	F	1.0		
	D → Y	(HL)	0.356	0.578	0.979	0.003	0.004	0.006				
		(LH)	0.239	0.519	0.836	0.003	0.005	0.008				
	E → Y	(HL)	0.354	0.597	1.030	0.003	0.004	0.006				
		(LH)	0.261	0.571	0.916	0.003	0.005	0.008				
	F → Y	(HL)	0.343	0.597	1.047	0.003	0.004	0.006				
		(LH)	0.276	0.605	0.968	0.003	0.005	0.008				

Function	1-1-1-2-Input AND-NOR										SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	L446	4										
x1	F446	5										
x2	F446NP	6										
x4												
x8												
Block type	with inv. F		with inv. G		with inv. H		-		-		-	
Drivability	Name	cells	Name	cells	Name	cells						
Low Power												
x1												
x2												
x4												
x8												

Logic Diagram for "Normal"



Logic Diagram for "with inv. A type"

Logic Diagram for "with inv. B type"

Logic Diagram for "with inv. C type"

Logic Diagram for "with inv. D type"

Logic Diagram for "with inv. E type"

Logic Diagram for "with inv. F type"

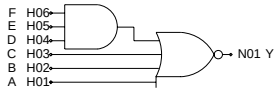
Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

Block type	Switching speed									Input		Output	
	Path		t LD0 (ns)			t 1							
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		Symbol	Fanin	Symbol	Fanout
L446	A → Y	(HL)	0.142	0.222	0.336	0.010	0.016	0.025		A	1.0	Y	35
		(LH)	0.203	0.313	0.493	0.013	0.021	0.034		B	1.0		
	B → Y	(HL)	0.157	0.239	0.359	0.010	0.016	0.025		C	1.0		
		(LH)	0.191	0.312	0.512	0.013	0.021	0.034		D	1.0		
	C → Y	(HL)	0.155	0.259	0.391	0.010	0.016	0.025		E	1.0		
		(LH)	0.174	0.365	0.579	0.013	0.021	0.034					
	D → Y	(HL)	0.215	0.322	0.486	0.010	0.016	0.025					
		(LH)	0.185	0.313	0.527	0.013	0.021	0.034					
	E → Y	(HL)	0.199	0.311	0.493	0.010	0.016	0.025					
		(LH)	0.220	0.370	0.613	0.013	0.021	0.034					
F446	A → Y	(HL)	0.162	0.254	0.388	0.005	0.008	0.013		A	1.0	Y	71
		(LH)	0.224	0.348	0.553	0.006	0.010	0.017		B	1.0		
	B → Y	(HL)	0.177	0.272	0.412	0.005	0.008	0.013		C	1.0		
		(LH)	0.214	0.347	0.573	0.006	0.011	0.017		D	1.0		
	C → Y	(HL)	0.177	0.296	0.448	0.005	0.008	0.013		E	1.0		
		(LH)	0.197	0.406	0.647	0.006	0.011	0.017					
	D → Y	(HL)	0.239	0.357	0.546	0.005	0.008	0.013					
		(LH)	0.208	0.353	0.595	0.006	0.011	0.017					
	E → Y	(HL)	0.224	0.347	0.552	0.005	0.008	0.013					
		(LH)	0.244	0.409	0.681	0.006	0.011	0.017					
F446NP	A → Y	(HL)	0.207	0.325	0.502	0.003	0.004	0.006		A	1.0	Y	141
		(LH)	0.274	0.429	0.690	0.003	0.005	0.009		B	1.0		
	B → Y	(HL)	0.222	0.343	0.526	0.003	0.004	0.006		C	1.0		
		(LH)	0.264	0.427	0.708	0.003	0.005	0.009		D	1.0		
	C → Y	(HL)	0.221	0.366	0.562	0.003	0.004	0.006		E	1.0		
		(LH)	0.243	0.482	0.782	0.003	0.005	0.009					
	D → Y	(HL)	0.285	0.430	0.662	0.003	0.004	0.006					
		(LH)	0.255	0.430	0.727	0.003	0.005	0.009					
	E → Y	(HL)	0.269	0.419	0.668	0.003	0.004	0.006					
		(LH)	0.291	0.487	0.814	0.003	0.005	0.009					

Function	1-1-1-3-Input AND-NOR										SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	L447	5										
x1	F447	5										
x2	F447NP	6										
x4												
x8												
Block type	with inv. F		with inv. G		with inv. H		-		-		-	
Drivability	Name	cells	Name	cells	Name	cells						
Low Power												
x1												
x2												
x4												
x8												

Logic Diagram for "Normal"



Logic Diagram for "with inv. A type"

Logic Diagram for "with inv. B type"

Logic Diagram for "with inv. C type"

Logic Diagram for "with inv. D type"

Logic Diagram for "with inv. E type"

Logic Diagram for "with inv. F type"

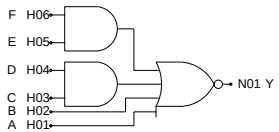
Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

Block type	Switching speed Path		t_{LD0} (ns)			t_1			Input		Output	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L447	A → Y	(HL)	0.140	0.217	0.330	0.010	0.016	0.025	A	1.0	Y	35
		(LH)	0.199	0.307	0.482	0.013	0.021	0.034	B	1.0		
	B → Y	(HL)	0.154	0.235	0.354	0.010	0.016	0.025	C	1.0		
		(LH)	0.188	0.305	0.502	0.013	0.021	0.034	D	1.0		
	C → Y	(HL)	0.155	0.266	0.397	0.010	0.016	0.025	E	1.0		
		(LH)	0.167	0.400	0.637	0.013	0.021	0.034	F	1.0		
	D → Y	(HL)	0.253	0.369	0.572	0.010	0.016	0.025				
		(LH)	0.187	0.320	0.538	0.013	0.021	0.034				
	E → Y	(HL)	0.248	0.375	0.610	0.010	0.016	0.025				
		(LH)	0.220	0.376	0.623	0.013	0.021	0.034				
	F → Y	(HL)	0.231	0.369	0.621	0.010	0.016	0.025				
		(LH)	0.243	0.412	0.677	0.013	0.021	0.034				
F447	A → Y	(HL)	0.162	0.254	0.388	0.005	0.008	0.013	A	1.0	Y	71
		(LH)	0.224	0.348	0.553	0.006	0.010	0.017	B	1.0		
	B → Y	(HL)	0.177	0.272	0.412	0.005	0.008	0.013	C	1.0		
		(LH)	0.214	0.347	0.573	0.006	0.011	0.017	D	1.0		
	C → Y	(HL)	0.177	0.303	0.459	0.005	0.008	0.013	E	1.0		
		(LH)	0.189	0.441	0.706	0.006	0.011	0.017	F	1.0		
	D → Y	(HL)	0.277	0.408	0.638	0.005	0.008	0.013				
		(LH)	0.209	0.359	0.607	0.006	0.011	0.017				
	E → Y	(HL)	0.272	0.414	0.675	0.005	0.008	0.013				
		(LH)	0.245	0.416	0.692	0.006	0.010	0.017				
	F → Y	(HL)	0.256	0.408	0.686	0.005	0.008	0.013				
		(LH)	0.268	0.452	0.745	0.006	0.010	0.017				
F447NP	A → Y	(HL)	0.207	0.325	0.502	0.003	0.004	0.006	A	1.0	Y	141
		(LH)	0.274	0.429	0.690	0.003	0.005	0.009	B	1.0		
	B → Y	(HL)	0.222	0.343	0.526	0.003	0.004	0.006	C	1.0		
		(LH)	0.264	0.427	0.708	0.003	0.005	0.009	D	1.0		
	C → Y	(HL)	0.222	0.375	0.576	0.003	0.004	0.006	E	1.0		
		(LH)	0.236	0.520	0.838	0.003	0.005	0.009	F	1.0		
	D → Y	(HL)	0.325	0.484	0.760	0.003	0.004	0.006				
		(LH)	0.257	0.436	0.739	0.003	0.005	0.009				
	E → Y	(HL)	0.319	0.490	0.795	0.003	0.004	0.006				
		(LH)	0.291	0.493	0.824	0.003	0.005	0.009				
	F → Y	(HL)	0.303	0.484	0.806	0.003	0.004	0.006				
		(LH)	0.315	0.531	0.880	0.003	0.005	0.009				

Function	1-1-2-2-Input AND-NOR										SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	L448	5										
x1	F448	5										
x2	F448NP	6										
x4												
x8												
Block type	with inv. F		with inv. G		with inv. H		-		-		-	
Drivability	Name	cells	Name	cells	Name	cells						
Low Power												
x1												
x2												
x4												
x8												

Logic Diagram for "Normal"



Logic Diagram for "with inv. A type"

Logic Diagram for "with inv. B type"

Logic Diagram for "with inv. C type"

Logic Diagram for "with inv. D type"

Logic Diagram for "with inv. E type"

Logic Diagram for "with inv. F type"

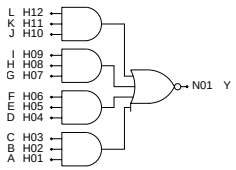
Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L448	A → Y	(HL)	0.140	0.217	0.330	0.010	0.016	0.025	A	1.0	Y	35
		(LH)	0.199	0.307	0.482	0.013	0.021	0.034	B	1.0		
	B → Y	(HL)	0.154	0.235	0.354	0.010	0.016	0.025	C	1.0		
		(LH)	0.187	0.305	0.502	0.013	0.021	0.034	D	1.0		
	C → Y	(HL)	0.197	0.316	0.478	0.010	0.016	0.025	E	1.0		
		(LH)	0.177	0.366	0.587	0.013	0.021	0.034	F	1.0		
	D → Y	(HL)	0.182	0.301	0.475	0.010	0.016	0.025				
		(LH)	0.200	0.410	0.653	0.013	0.021	0.034				
	E → Y	(HL)	0.226	0.356	0.544	0.010	0.016	0.025				
		(LH)	0.181	0.393	0.645	0.013	0.021	0.034				
	F → Y	(HL)	0.206	0.339	0.543	0.010	0.016	0.025				
		(LH)	0.202	0.439	0.714	0.013	0.021	0.034				
F448	A → Y	(HL)	0.162	0.254	0.388	0.005	0.008	0.013	A	1.0	Y	71
		(LH)	0.224	0.348	0.553	0.006	0.010	0.017	B	1.0		
	B → Y	(HL)	0.177	0.272	0.412	0.005	0.008	0.013	C	1.0		
		(LH)	0.214	0.347	0.573	0.006	0.011	0.017	D	1.0		
	C → Y	(HL)	0.221	0.354	0.540	0.005	0.008	0.013	E	1.0		
		(LH)	0.200	0.405	0.657	0.006	0.011	0.017	F	1.0		
	D → Y	(HL)	0.206	0.340	0.537	0.005	0.008	0.013				
		(LH)	0.223	0.451	0.724	0.006	0.011	0.017				
	E → Y	(HL)	0.249	0.393	0.606	0.005	0.008	0.013				
		(LH)	0.205	0.434	0.716	0.006	0.010	0.017				
	F → Y	(HL)	0.229	0.376	0.605	0.005	0.008	0.013				
		(LH)	0.226	0.479	0.784	0.006	0.010	0.017				
F448NP	A → Y	(HL)	0.208	0.325	0.502	0.003	0.004	0.006	A	1.0	Y	141
		(LH)	0.274	0.429	0.690	0.003	0.005	0.009	B	1.0		
	B → Y	(HL)	0.222	0.343	0.526	0.003	0.004	0.006	C	1.0		
		(LH)	0.264	0.427	0.708	0.003	0.005	0.009	D	1.0		
	C → Y	(HL)	0.266	0.426	0.658	0.003	0.004	0.006	E	1.0		
		(LH)	0.246	0.483	0.791	0.003	0.005	0.009	F	1.0		
	D → Y	(HL)	0.252	0.415	0.655	0.003	0.004	0.006				
		(LH)	0.269	0.527	0.858	0.003	0.005	0.009				
	E → Y	(HL)	0.295	0.468	0.723	0.003	0.004	0.006				
		(LH)	0.251	0.512	0.850	0.003	0.005	0.009				
	F → Y	(HL)	0.275	0.451	0.720	0.003	0.004	0.006				
		(LH)	0.272	0.557	0.919	0.003	0.005	0.009				

Function	3-3-3-3-Input AND-NOR										SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power												
x1	F449	8										
x2	F449NP	9										
x4												
x8												
Block type	with inv. F		with inv. G		with inv. H		-		-		-	
Drivability	Name	cells	Name	cells	Name	cells						
Low Power												
x1												
x2												
x4												
x8												

Logic Diagram for "Normal"



Logic Diagram for "with inv. A type"

Logic Diagram for "with inv. B type"

Logic Diagram for "with inv. C type"

Logic Diagram for "with inv. D type"

Logic Diagram for "with inv. E type"

Logic Diagram for "with inv. F type"

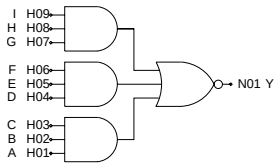
Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F449	A → Y	(HL)	0.244	0.405	0.622	0.005	0.008	0.013	A	1.0	Y	71
		(LH)	0.199	0.482	0.767	0.006	0.011	0.017	B	1.0		
	B → Y	(HL)	0.242	0.413	0.658	0.005	0.008	0.013	C	1.0		
		(LH)	0.225	0.544	0.863	0.006	0.010	0.017	D	1.0		
	C → Y	(HL)	0.227	0.405	0.667	0.005	0.008	0.013	E	1.0		
		(LH)	0.241	0.584	0.922	0.006	0.010	0.017	F	1.0		
	D → Y	(HL)	0.290	0.480	0.773	0.005	0.008	0.013	G	1.0		
		(LH)	0.221	0.531	0.859	0.006	0.010	0.017	H	1.0		
	E → Y	(HL)	0.281	0.487	0.814	0.005	0.008	0.013	I	1.0		
		(LH)	0.246	0.594	0.955	0.006	0.010	0.017	J	1.0		
	F → Y	(HL)	0.266	0.482	0.826	0.005	0.008	0.013	K	1.0		
		(LH)	0.263	0.636	1.020	0.006	0.010	0.017	L	1.0		
	G → Y	(HL)	0.265	0.441	0.680	0.005	0.008	0.013				
		(LH)	0.196	0.471	0.756	0.006	0.011	0.017				
	H → Y	(HL)	0.261	0.448	0.716	0.005	0.008	0.013				
		(LH)	0.221	0.531	0.845	0.006	0.011	0.017				
	I → Y	(HL)	0.247	0.442	0.728	0.005	0.008	0.013				
		(LH)	0.234	0.566	0.904	0.006	0.010	0.017				
	J → Y	(HL)	0.311	0.512	0.827	0.005	0.008	0.013				
		(LH)	0.214	0.522	0.850	0.006	0.010	0.017				
	K → Y	(HL)	0.302	0.521	0.867	0.005	0.008	0.013				
		(LH)	0.237	0.580	0.940	0.006	0.010	0.017				
	L → Y	(HL)	0.285	0.514	0.879	0.005	0.008	0.013				
		(LH)	0.253	0.621	1.000	0.006	0.010	0.017				
F449NP	A → Y	(HL)	0.293	0.493	0.770	0.003	0.004	0.006	A	1.1	Y	141
		(LH)	0.248	0.569	0.914	0.003	0.005	0.009	B	1.0		
	B → Y	(HL)	0.291	0.499	0.803	0.003	0.004	0.006	C	1.0		
		(LH)	0.275	0.631	1.010	0.003	0.005	0.009	D	1.0		
	C → Y	(HL)	0.277	0.491	0.816	0.003	0.004	0.006	E	1.0		
		(LH)	0.290	0.674	1.071	0.003	0.005	0.009	F	1.0		
	D → Y	(HL)	0.341	0.560	0.902	0.003	0.004	0.006	G	1.0		
		(LH)	0.274	0.621	1.007	0.003	0.005	0.009	H	1.0		
	E → Y	(HL)	0.332	0.566	0.945	0.003	0.004	0.006	I	1.0		
		(LH)	0.298	0.680	1.102	0.003	0.005	0.009	J	1.0		
	F → Y	(HL)	0.315	0.562	0.955	0.003	0.004	0.006	K	1.0		
		(LH)	0.317	0.725	1.169	0.003	0.005	0.009	L	1.0		
	G → Y	(HL)	0.312	0.524	0.818	0.003	0.004	0.006				
		(LH)	0.241	0.549	0.892	0.003	0.005	0.009				
	H → Y	(HL)	0.309	0.529	0.852	0.003	0.004	0.006				
		(LH)	0.265	0.608	0.984	0.003	0.005	0.009				
	I → Y	(HL)	0.294	0.524	0.863	0.003	0.004	0.006				
		(LH)	0.280	0.648	1.038	0.003	0.005	0.009				
	J → Y	(HL)	0.359	0.591	0.951	0.003	0.004	0.006				
		(LH)	0.261	0.602	0.984	0.003	0.005	0.009				
	K → Y	(HL)	0.349	0.599	0.991	0.003	0.004	0.006				
		(LH)	0.283	0.658	1.078	0.003	0.005	0.009				
	L → Y	(HL)	0.334	0.593	1.004	0.003	0.004	0.006				
		(LH)	0.300	0.701	1.135	0.003	0.005	0.009				

Function	3-3-3-Input AND-NOR										SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	L460	6										
x1	F460	7										
x2	F460NP	8										
x4												
x8												
Block type	with inv. F		with inv. G		with inv. H		-		-		-	
Drivability	Name	cells	Name	cells	Name	cells						
Low Power												
x1												
x2												
x4												
x8												

Logic Diagram for "Normal"



Logic Diagram for "with inv. A type"

Logic Diagram for "with inv. B type"

Logic Diagram for "with inv. C type"

Logic Diagram for "with inv. D type"

Logic Diagram for "with inv. E type"

Logic Diagram for "with inv. F type"

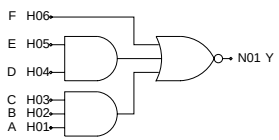
Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L460	A → Y	(HL)	0.214	0.309	0.469	0.010	0.016	0.025	A	1.0	Y	35
		(LH)	0.148	0.247	0.395	0.013	0.021	0.034	B	1.0		
	B → Y	(HL)	0.210	0.309	0.490	0.010	0.016	0.025	C	1.0		
		(LH)	0.168	0.272	0.429	0.013	0.021	0.034	D	1.0		
	C → Y	(HL)	0.197	0.310	0.513	0.010	0.016	0.025	E	1.0		
		(LH)	0.186	0.295	0.462	0.013	0.021	0.034	F	1.0		
	D → Y	(HL)	0.245	0.400	0.613	0.010	0.016	0.025	G	1.0		
		(LH)	0.177	0.437	0.698	0.013	0.021	0.034	H	1.0		
	E → Y	(HL)	0.238	0.401	0.634	0.010	0.016	0.025	I	1.0		
		(LH)	0.197	0.482	0.769	0.013	0.021	0.034				
	F → Y	(HL)	0.225	0.401	0.657	0.010	0.016	0.025				
		(LH)	0.214	0.530	0.839	0.013	0.021	0.034				
	G → Y	(HL)	0.319	0.475	0.768	0.010	0.016	0.025				
		(LH)	0.194	0.484	0.788	0.013	0.021	0.034				
	H → Y	(HL)	0.309	0.476	0.794	0.010	0.016	0.025				
		(LH)	0.211	0.531	0.860	0.013	0.021	0.034				
	I → Y	(HL)	0.294	0.477	0.816	0.010	0.016	0.025				
		(LH)	0.230	0.581	0.935	0.013	0.021	0.034				
F460	A → Y	(HL)	0.242	0.351	0.538	0.005	0.008	0.013	A	1.0	Y	71
		(LH)	0.170	0.283	0.458	0.006	0.011	0.017	B	1.0		
	B → Y	(HL)	0.237	0.352	0.557	0.005	0.008	0.013	C	1.0		
		(LH)	0.191	0.309	0.491	0.006	0.011	0.017	D	1.0		
	C → Y	(HL)	0.224	0.351	0.583	0.005	0.008	0.013	E	1.0		
		(LH)	0.209	0.332	0.527	0.006	0.011	0.017	F	1.0		
	D → Y	(HL)	0.267	0.441	0.683	0.005	0.008	0.013	G	1.0		
		(LH)	0.196	0.472	0.758	0.006	0.011	0.017	H	1.0		
	E → Y	(HL)	0.260	0.441	0.701	0.005	0.008	0.013	I	1.0		
		(LH)	0.216	0.519	0.828	0.006	0.011	0.017				
	F → Y	(HL)	0.247	0.440	0.725	0.005	0.008	0.013				
		(LH)	0.234	0.567	0.902	0.006	0.010	0.017				
	G → Y	(HL)	0.343	0.513	0.830	0.005	0.008	0.013				
		(LH)	0.214	0.522	0.849	0.006	0.010	0.017				
	H → Y	(HL)	0.332	0.511	0.856	0.005	0.008	0.013				
		(LH)	0.232	0.568	0.922	0.006	0.010	0.017				
	I → Y	(HL)	0.317	0.514	0.879	0.005	0.008	0.013				
		(LH)	0.251	0.617	0.996	0.006	0.010	0.017				
F460NP	A → Y	(HL)	0.294	0.435	0.674	0.003	0.004	0.006	A	1.0	Y	141
		(LH)	0.222	0.365	0.598	0.003	0.005	0.009	B	1.0		
	B → Y	(HL)	0.288	0.436	0.693	0.003	0.004	0.006	C	1.0		
		(LH)	0.242	0.391	0.633	0.003	0.005	0.009	D	1.0		
	C → Y	(HL)	0.277	0.435	0.720	0.003	0.004	0.006	E	1.0		
		(LH)	0.260	0.416	0.669	0.003	0.005	0.009	F	1.0		
	D → Y	(HL)	0.317	0.528	0.827	0.003	0.004	0.006	G	1.0		
		(LH)	0.244	0.557	0.906	0.003	0.005	0.009	H	1.0		
	E → Y	(HL)	0.310	0.530	0.848	0.003	0.004	0.006	I	1.0		
		(LH)	0.264	0.603	0.977	0.003	0.005	0.009				
	F → Y	(HL)	0.298	0.529	0.871	0.003	0.004	0.006				
		(LH)	0.281	0.654	1.050	0.003	0.005	0.009				
	G → Y	(HL)	0.394	0.594	0.960	0.003	0.004	0.006				
		(LH)	0.264	0.606	0.994	0.003	0.005	0.009				
	H → Y	(HL)	0.383	0.596	0.986	0.003	0.004	0.006				
		(LH)	0.281	0.653	1.070	0.003	0.005	0.009				
	I → Y	(HL)	0.367	0.595	1.011	0.003	0.004	0.006				
		(LH)	0.300	0.705	1.140	0.003	0.005	0.009				

Function	1-2-3-Input AND-NOR												SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E			
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power	L462	5												
x1	F462	6												
x2	F462NP	6												
x4														
x8														
Block type	with inv. F		with inv. G		with inv. H		-		-		-			
Drivability	Name	cells	Name	cells	Name	cells								
Low Power														
x1														
x2														
x4														
x8														

Logic Diagram for "Normal"



Logic Diagram for "with inv. A type"

Logic Diagram for "with inv. B type"

Logic Diagram for "with inv. C type"

Logic Diagram for "with inv. D type"

Logic Diagram for "with inv. E type"

Logic Diagram for "with inv. F type"

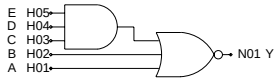
Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

Block type	Switching speed Path		t_{LD0} (ns)			t_1			Input		Output	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L462	A → Y	(HL)	0.230	0.334	0.510	0.010	0.016	0.025	A	1.2	Y	35
		(LH)	0.182	0.305	0.499	0.013	0.021	0.034	B	1.3		
	B → Y	(HL)	0.224	0.333	0.533	0.010	0.016	0.025	C	1.3		
		(LH)	0.203	0.330	0.532	0.013	0.021	0.034	D	1.3		
	C → Y	(HL)	0.212	0.334	0.556	0.010	0.016	0.025	E	1.3		
		(LH)	0.220	0.353	0.566	0.013	0.021	0.034	F	1.3		
	D → Y	(HL)	0.203	0.302	0.459	0.010	0.016	0.025				
		(LH)	0.178	0.303	0.506	0.013	0.021	0.034				
	E → Y	(HL)	0.191	0.291	0.455	0.010	0.016	0.025				
		(LH)	0.200	0.328	0.540	0.013	0.021	0.034				
	F → Y	(HL)	0.182	0.279	0.425	0.010	0.016	0.025				
		(LH)	0.189	0.315	0.534	0.013	0.021	0.034				
F462	A → Y	(HL)	0.146	0.215	0.350	0.011	0.019	0.033	A	2.4	Y	19
		(LH)	0.149	0.327	0.535	0.015	0.031	0.051	B	2.4		
	B → Y	(HL)	0.150	0.223	0.367	0.011	0.019	0.033	C	2.4		
		(LH)	0.154	0.338	0.554	0.015	0.031	0.050	D	2.4		
	C → Y	(HL)	0.146	0.214	0.350	0.011	0.019	0.033	E	2.4		
		(LH)	0.149	0.327	0.536	0.015	0.031	0.051	F	2.4		
	D → Y	(HL)	0.102	0.155	0.213	0.008	0.013	0.022				
		(LH)	0.096	0.289	0.475	0.014	0.031	0.051				
	E → Y	(HL)	0.102	0.155	0.212	0.008	0.013	0.022				
		(LH)	0.097	0.288	0.475	0.014	0.031	0.051				
	F → Y	(HL)	0.073	0.109	0.131	0.005	0.008	0.013				
		(LH)	0.073	0.214	0.332	0.011	0.031	0.051				
F462NP	A → Y	(HL)	0.308	0.514	0.876	0.003	0.004	0.006	A	1.0	Y	143
		(LH)	0.376	0.812	1.314	0.003	0.005	0.008	B	1.0		
	B → Y	(HL)	0.325	0.518	0.864	0.003	0.004	0.006	C	1.0		
		(LH)	0.345	0.751	1.221	0.003	0.005	0.008	D	1.0		
	C → Y	(HL)	0.336	0.511	0.823	0.003	0.004	0.006	E	1.0		
		(LH)	0.301	0.665	1.083	0.003	0.005	0.008	F	1.0		
	D → Y	(HL)	0.259	0.414	0.632	0.003	0.004	0.006				
		(LH)	0.260	0.677	1.095	0.003	0.005	0.008				
	E → Y	(HL)	0.237	0.401	0.643	0.003	0.004	0.006				
		(LH)	0.299	0.758	1.229	0.003	0.005	0.008				
	F → Y	(HL)	0.191	0.326	0.483	0.003	0.004	0.006				
		(LH)	0.227	0.707	1.119	0.003	0.005	0.008				

Function	1-1-3-Input AND-NOR										SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	L463	4										
x1	F463	5										
x2	F463NP	6										
x4												
x8												
Block type	with inv. F		with inv. G		with inv. H		-		-		-	
Drivability	Name	cells	Name	cells	Name	cells						
Low Power												
x1												
x2												
x4												
x8												

Logic Diagram for "Normal"



Logic Diagram for "with inv. A type"

Logic Diagram for "with inv. B type"

Logic Diagram for "with inv. C type"

Logic Diagram for "with inv. D type"

Logic Diagram for "with inv. E type"

Logic Diagram for "with inv. F type"

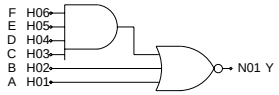
Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

Block type	Switching speed									Input		Output	
	Path		t LD0 (ns)			t 1							
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		Symbol	Fanin	Symbol	Fanout
L463	A → Y	(HL)	0.136	0.214	0.326	0.010	0.016	0.025		A	1.3	Y	35
		(LH)	0.193	0.300	0.471	0.013	0.021	0.034		B	1.3		
	B → Y	(HL)	0.151	0.231	0.349	0.010	0.016	0.025		C	1.3		
		(LH)	0.183	0.297	0.491	0.013	0.021	0.034		D	1.3		
	C → Y	(HL)	0.235	0.338	0.519	0.010	0.016	0.025		E	1.3		
		(LH)	0.146	0.252	0.411	0.013	0.021	0.034					
	D → Y	(HL)	0.229	0.341	0.539	0.010	0.016	0.025					
		(LH)	0.167	0.276	0.444	0.013	0.021	0.034					
	E → Y	(HL)	0.216	0.339	0.563	0.010	0.016	0.025					
		(LH)	0.182	0.296	0.472	0.013	0.021	0.034					
F463	A → Y	(HL)	0.073	0.106	0.131	0.005	0.008	0.013		A	2.5	Y	20
		(LH)	0.086	0.201	0.310	0.014	0.031	0.051		B	2.3		
	B → Y	(HL)	0.086	0.125	0.156	0.005	0.008	0.013		C	2.4		
		(LH)	0.082	0.244	0.399	0.014	0.031	0.051		D	2.4		
	C → Y	(HL)	0.134	0.193	0.308	0.011	0.018	0.032		E	2.4		
		(LH)	0.148	0.277	0.459	0.018	0.031	0.051					
	D → Y	(HL)	0.139	0.201	0.326	0.011	0.018	0.032					
		(LH)	0.154	0.289	0.479	0.018	0.031	0.051					
	E → Y	(HL)	0.134	0.194	0.308	0.011	0.018	0.032					
		(LH)	0.148	0.277	0.458	0.018	0.031	0.051					
F463NP	A → Y	(HL)	0.193	0.315	0.468	0.003	0.004	0.006		A	1.0	Y	143
		(LH)	0.268	0.634	1.004	0.003	0.005	0.008		B	1.0		
	B → Y	(HL)	0.205	0.332	0.491	0.003	0.004	0.006		C	1.0		
		(LH)	0.261	0.669	1.076	0.003	0.005	0.008		D	1.0		
	C → Y	(HL)	0.322	0.473	0.765	0.003	0.004	0.006		E	1.0		
		(LH)	0.327	0.562	0.924	0.003	0.005	0.008					
	D → Y	(HL)	0.310	0.476	0.793	0.003	0.004	0.006					
		(LH)	0.367	0.631	1.033	0.003	0.005	0.008					
	E → Y	(HL)	0.295	0.477	0.816	0.003	0.004	0.006					
		(LH)	0.413	0.709	1.153	0.003	0.005	0.008					

Function	1-1-4-Input AND-NOR										SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	L464	5										
x1	F464	5										
x2	F464NP	6										
x4												
x8												
Block type	with inv. F		with inv. G		with inv. H		-		-		-	
Drivability	Name	cells	Name	cells	Name	cells						
Low Power												
x1												
x2												
x4												
x8												

Logic Diagram for "Normal"



Logic Diagram for "with inv. A type"

Logic Diagram for "with inv. B type"

Logic Diagram for "with inv. C type"

Logic Diagram for "with inv. D type"

Logic Diagram for "with inv. E type"

Logic Diagram for "with inv. F type"

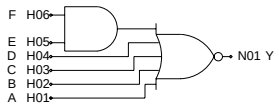
Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L464	A → Y	(HL)	0.140	0.218	0.330	0.010	0.016	0.025	A	1.0	Y	35
		(LH)	0.198	0.307	0.481	0.013	0.021	0.034	B	1.0		
	B → Y	(HL)	0.154	0.235	0.353	0.010	0.016	0.025	C	1.0		
		(LH)	0.187	0.305	0.500	0.013	0.021	0.034	D	1.0		
	C → Y	(HL)	0.261	0.377	0.577	0.010	0.016	0.025	E	1.0		
		(LH)	0.147	0.254	0.416	0.013	0.021	0.034	F	1.0		
	D → Y	(HL)	0.264	0.389	0.625	0.010	0.016	0.025				
		(LH)	0.167	0.279	0.448	0.013	0.021	0.034				
	E → Y	(HL)	0.262	0.404	0.675	0.010	0.016	0.025				
		(LH)	0.183	0.302	0.479	0.013	0.021	0.034				
	F → Y	(HL)	0.252	0.407	0.693	0.010	0.016	0.025				
		(LH)	0.193	0.313	0.493	0.013	0.021	0.034				
F464	A → Y	(HL)	0.162	0.254	0.388	0.005	0.008	0.013	A	1.0	Y	71
		(LH)	0.224	0.349	0.553	0.006	0.010	0.017	B	1.0		
	B → Y	(HL)	0.177	0.272	0.412	0.005	0.008	0.013	C	1.0		
		(LH)	0.214	0.347	0.573	0.006	0.011	0.017	D	1.0		
	C → Y	(HL)	0.288	0.419	0.649	0.005	0.008	0.013	E	1.0		
		(LH)	0.169	0.292	0.482	0.006	0.011	0.017	F	1.0		
	D → Y	(HL)	0.290	0.432	0.697	0.005	0.008	0.013				
		(LH)	0.189	0.316	0.514	0.006	0.011	0.017				
	E → Y	(HL)	0.288	0.447	0.745	0.005	0.008	0.013				
		(LH)	0.206	0.339	0.545	0.006	0.011	0.017				
	F → Y	(HL)	0.278	0.448	0.762	0.005	0.008	0.013				
		(LH)	0.216	0.350	0.560	0.006	0.011	0.017				
F464NP	A → Y	(HL)	0.207	0.325	0.502	0.003	0.004	0.006	A	1.0	Y	141
		(LH)	0.274	0.428	0.688	0.003	0.005	0.009	B	1.0		
	B → Y	(HL)	0.222	0.342	0.526	0.003	0.004	0.006	C	1.0		
		(LH)	0.263	0.427	0.707	0.003	0.005	0.009	D	1.0		
	C → Y	(HL)	0.337	0.499	0.777	0.003	0.004	0.006	E	1.0		
		(LH)	0.216	0.367	0.612	0.003	0.005	0.009	F	1.0		
	D → Y	(HL)	0.338	0.510	0.825	0.003	0.004	0.006				
		(LH)	0.235	0.391	0.644	0.003	0.005	0.009				
	E → Y	(HL)	0.336	0.524	0.873	0.003	0.004	0.006				
		(LH)	0.251	0.414	0.675	0.003	0.005	0.009				
	F → Y	(HL)	0.327	0.525	0.892	0.003	0.004	0.006				
		(LH)	0.261	0.426	0.690	0.003	0.005	0.009				

Function	1-1-1-1-2-Input AND-NOR										SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power												
x1	F465	5										
x2	F465NP	6										
x4												
x8												
Block type	with inv. F		with inv. G		with inv. H		-		-		-	
Drivability	Name	cells	Name	cells	Name	cells						
Low Power												
x1												
x2												
x4												
x8												

Logic Diagram for "Normal"



Logic Diagram for "with inv. A type"

Logic Diagram for "with inv. B type"

Logic Diagram for "with inv. C type"

Logic Diagram for "with inv. D type"

Logic Diagram for "with inv. E type"

Logic Diagram for "with inv. F type"

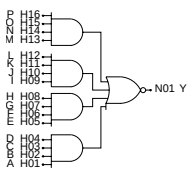
Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F465	A → Y	(HL)	0.174	0.273	0.415	0.005	0.008	0.013	A	1.0	Y	70
		(LH)	0.299	0.462	0.742	0.006	0.010	0.017	B	1.0		
	B → Y	(HL)	0.188	0.291	0.438	0.005	0.008	0.013	C	1.0		
		(LH)	0.304	0.491	0.806	0.006	0.010	0.017	D	1.0		
	C → Y	(HL)	0.194	0.300	0.451	0.005	0.008	0.013	E	1.0		
		(LH)	0.302	0.509	0.857	0.006	0.010	0.017	F	1.0		
	D → Y	(HL)	0.178	0.296	0.449	0.005	0.008	0.013				
		(LH)	0.198	0.407	0.650	0.006	0.010	0.017				
	E → Y	(HL)	0.239	0.359	0.547	0.005	0.008	0.013				
		(LH)	0.209	0.355	0.598	0.006	0.010	0.017				
	F → Y	(HL)	0.223	0.348	0.554	0.005	0.008	0.013				
		(LH)	0.245	0.411	0.684	0.006	0.010	0.017				
F465NP	A → Y	(HL)	0.219	0.343	0.527	0.003	0.004	0.006	A	1.0	Y	141
		(LH)	0.353	0.551	0.891	0.003	0.005	0.009	B	1.0		
	B → Y	(HL)	0.232	0.361	0.551	0.003	0.004	0.006	C	1.0		
		(LH)	0.359	0.580	0.956	0.003	0.005	0.009	D	1.0		
	C → Y	(HL)	0.239	0.372	0.565	0.003	0.004	0.006	E	1.0		
		(LH)	0.357	0.599	1.006	0.003	0.005	0.009	F	1.0		
	D → Y	(HL)	0.222	0.366	0.561	0.003	0.004	0.006				
		(LH)	0.243	0.484	0.784	0.003	0.005	0.009				
	E → Y	(HL)	0.285	0.430	0.661	0.003	0.004	0.006				
		(LH)	0.256	0.431	0.729	0.003	0.005	0.009				
	F → Y	(HL)	0.268	0.420	0.667	0.003	0.004	0.006				
		(LH)	0.291	0.488	0.816	0.003	0.005	0.009				

Function	4-4-4-4-Input AND-NOR										SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power												
x1	F466	10										
x2	F466NP	11										
x4												
x8												
Block type	with inv. F		with inv. G		with inv. H		-		-		-	
Drivability	Name	cells	Name	cells	Name	cells						
Low Power												
x1												
x2												
x4												
x8												

Logic Diagram for "Normal"



Logic Diagram for "with inv. A type"

Logic Diagram for "with inv. B type"

Logic Diagram for "with inv. C type"

Logic Diagram for "with inv. D type"

Logic Diagram for "with inv. E type"

Logic Diagram for "with inv. F type"

Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F466	A → Y	(HL)	0.285	0.477	0.740	0.005	0.008	0.013	A	1.0	Y	71
		(LH)	0.202	0.536	0.852	0.006	0.011	0.017	B	1.0		
	B → Y	(HL)	0.285	0.494	0.786	0.005	0.008	0.013	C	1.0		
		(LH)	0.222	0.585	0.928	0.006	0.010	0.017	D	1.0		
	C → Y	(HL)	0.283	0.509	0.836	0.005	0.008	0.013	E	1.0		
		(LH)	0.241	0.642	1.014	0.006	0.010	0.017	F	1.0		
	D → Y	(HL)	0.274	0.511	0.852	0.005	0.008	0.013	G	1.0		
		(LH)	0.252	0.678	1.067	0.006	0.010	0.017	H	1.0		
	E → Y	(HL)	0.408	0.629	1.051	0.005	0.008	0.013	I	1.0		
		(LH)	0.242	0.610	0.982	0.006	0.010	0.017	J	1.0		
	F → Y	(HL)	0.405	0.645	1.103	0.005	0.008	0.013	K	1.0		
		(LH)	0.260	0.661	1.060	0.006	0.010	0.017	L	1.0		
	G → Y	(HL)	0.403	0.662	1.157	0.005	0.008	0.013	M	1.0		
		(LH)	0.280	0.718	1.145	0.006	0.010	0.017	N	1.0		
	H → Y	(HL)	0.392	0.664	1.172	0.005	0.008	0.013	O	1.0		
		(LH)	0.293	0.756	1.202	0.006	0.010	0.017	P	1.0		
	I → Y	(HL)	0.309	0.525	0.812	0.005	0.008	0.013				
		(LH)	0.199	0.522	0.835	0.006	0.011	0.017				
	J → Y	(HL)	0.309	0.537	0.858	0.005	0.008	0.013				
		(LH)	0.218	0.568	0.908	0.006	0.011	0.017				
	K → Y	(HL)	0.307	0.554	0.907	0.005	0.008	0.013				
		(LH)	0.235	0.623	0.989	0.006	0.010	0.017				
	L → Y	(HL)	0.296	0.555	0.924	0.005	0.008	0.013				
		(LH)	0.246	0.657	1.045	0.006	0.010	0.017				
	M → Y	(HL)	0.439	0.670	1.116	0.005	0.008	0.013				
		(LH)	0.233	0.597	0.964	0.006	0.010	0.017				
	N → Y	(HL)	0.433	0.684	1.173	0.005	0.008	0.013				
		(LH)	0.250	0.646	1.040	0.006	0.010	0.017				
	O → Y	(HL)	0.434	0.699	1.221	0.005	0.008	0.013				
		(LH)	0.268	0.701	1.122	0.006	0.010	0.017				
	P → Y	(HL)	0.423	0.704	1.237	0.005	0.008	0.013				
		(LH)	0.281	0.735	1.172	0.006	0.010	0.017				
F466NP	A → Y	(HL)	0.333	0.570	0.901	0.003	0.004	0.006	A	1.1	Y	141
		(LH)	0.248	0.622	0.996	0.003	0.005	0.009	B	1.0		
	B → Y	(HL)	0.335	0.582	0.943	0.003	0.004	0.006	C	1.0		
		(LH)	0.269	0.674	1.073	0.003	0.005	0.009	D	1.0		
	C → Y	(HL)	0.332	0.598	0.995	0.003	0.004	0.006	E	1.0		
		(LH)	0.287	0.730	1.159	0.003	0.005	0.009	F	1.0		
	D → Y	(HL)	0.323	0.603	1.012	0.003	0.004	0.006	G	1.0		
		(LH)	0.301	0.768	1.217	0.003	0.005	0.009	H	1.0		
	E → Y	(HL)	0.462	0.708	1.186	0.003	0.004	0.006	I	1.0		
		(LH)	0.293	0.697	1.125	0.003	0.005	0.009	J	1.0		
	F → Y	(HL)	0.459	0.726	1.240	0.003	0.004	0.006	K	1.0		
		(LH)	0.312	0.748	1.205	0.003	0.005	0.009	L	1.0		
	G → Y	(HL)	0.456	0.743	1.290	0.003	0.004	0.006	M	1.0		
		(LH)	0.333	0.805	1.296	0.003	0.005	0.009	N	1.0		
	H → Y	(HL)	0.445	0.747	1.309	0.003	0.004	0.006	O	1.0		
		(LH)	0.346	0.846	1.352	0.003	0.005	0.009	P	1.0		
	I → Y	(HL)	0.358	0.615	0.970	0.003	0.004	0.006				
		(LH)	0.244	0.603	0.972	0.003	0.005	0.009				
	J → Y	(HL)	0.358	0.628	1.017	0.003	0.004	0.006				
		(LH)	0.263	0.650	1.046	0.003	0.005	0.009				
	K → Y	(HL)	0.355	0.646	1.067	0.003	0.004	0.006				
		(LH)	0.281	0.706	1.127	0.003	0.005	0.009				
	L → Y	(HL)	0.346	0.646	1.084	0.003	0.004	0.006				
		(LH)	0.291	0.740	1.182	0.003	0.005	0.009				

Block type	Switching speed										
	Path		t LD0 (ns)			t 1			Input		Output	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	M → Y	(HL)	0.488	0.748	1.256	0.003	0.004	0.006				
		(LH)	0.279	0.678	1.103	0.003	0.005	0.009				
	N → Y	(HL)	0.487	0.764	1.308	0.003	0.004	0.006				
		(LH)	0.298	0.724	1.182	0.003	0.005	0.009				
	O → Y	(HL)	0.485	0.782	1.357	0.003	0.004	0.006				
		(LH)	0.315	0.783	1.262	0.003	0.005	0.009				
	P → Y	(HL)	0.473	0.784	1.376	0.003	0.004	0.006				
		(LH)	0.328	0.819	1.315	0.003	0.005	0.009				

[MEMO]

[MEMO]

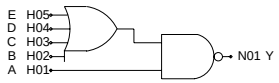
[MEMO]

2.5 OR-NAND

[MEMO]

Function	1-4-Input OR-NAND										SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	L430	4										
x1	F430	5										
x2	F430NP	7										
x4												
x8												
Block type	with inv. F		with inv. G		with inv. H		-		-		-	
Drivability	Name	cells	Name	cells	Name	cells						
Low Power												
x1												
x2												
x4												
x8												

Logic Diagram for "Normal"



Logic Diagram for "with inv. A type"

Logic Diagram for "with inv. B type"

Logic Diagram for "with inv. C type"

Logic Diagram for "with inv. D type"

Logic Diagram for "with inv. E type"

Logic Diagram for "with inv. F type"

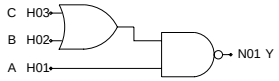
Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

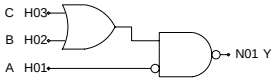
Block type	Switching speed									Input		Output	
	Path		t_{LD0} (ns)			t_1							
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		Symbol	Fanin	Symbol	Fanout
L430	A → Y	(HL)	0.095	0.110	0.136	0.016	0.026	0.044		A	1.0	Y	32
		(LH)	0.046	0.076	0.103	0.013	0.021	0.034		B	1.0		
	B → Y	(HL)	0.143	0.230	0.359	0.016	0.026	0.044		C	1.0		
		(LH)	0.210	0.327	0.512	0.013	0.021	0.034		D	1.0		
	C → Y	(HL)	0.159	0.248	0.382	0.016	0.026	0.044		E	1.0		
		(LH)	0.199	0.326	0.531	0.013	0.021	0.034					
	D → Y	(HL)	0.155	0.251	0.390	0.016	0.026	0.044					
		(LH)	0.206	0.324	0.514	0.013	0.021	0.034					
	E → Y	(HL)	0.172	0.266	0.414	0.016	0.026	0.044					
		(LH)	0.195	0.321	0.533	0.013	0.021	0.034					
F430	A → Y	(HL)	0.082	0.103	0.138	0.008	0.013	0.022		A	2.5	Y	64
		(LH)	0.053	0.085	0.121	0.006	0.010	0.017		B	1.0		
	B → Y	(HL)	0.170	0.264	0.411	0.008	0.013	0.022		C	1.0		
		(LH)	0.233	0.363	0.576	0.006	0.010	0.017		D	1.0		
	C → Y	(HL)	0.181	0.283	0.436	0.008	0.013	0.022		E	1.0		
		(LH)	0.222	0.362	0.594	0.006	0.010	0.017					
	D → Y	(HL)	0.182	0.285	0.443	0.008	0.013	0.022					
		(LH)	0.226	0.357	0.573	0.006	0.010	0.017					
	E → Y	(HL)	0.196	0.303	0.469	0.008	0.013	0.022					
		(LH)	0.214	0.354	0.592	0.006	0.010	0.017					
F430NP	A → Y	(HL)	0.082	0.103	0.139	0.004	0.006	0.011		A	4.8	Y	128
		(LH)	0.052	0.083	0.118	0.003	0.005	0.008		B	1.0		
	B → Y	(HL)	0.214	0.337	0.526	0.004	0.007	0.011		C	1.0		
		(LH)	0.284	0.447	0.719	0.003	0.005	0.008		D	1.0		
	C → Y	(HL)	0.227	0.355	0.550	0.004	0.007	0.011		E	1.0		
		(LH)	0.273	0.445	0.738	0.003	0.005	0.008					
	D → Y	(HL)	0.225	0.359	0.559	0.004	0.007	0.011					
		(LH)	0.274	0.437	0.713	0.003	0.005	0.008					
	E → Y	(HL)	0.240	0.375	0.583	0.004	0.007	0.011					
		(LH)	0.262	0.435	0.732	0.003	0.005	0.008					

Function	1-2-Input OR-NAND												SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E			
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power	L431	2	L431NA	2	L431NB	3	L431NC	3	L431ND	2	L431NE	3		
x1	F431	3	F431NA	4	F431NB	4	F431NC	5	F431ND	4	F431NE	4		
x2	F431NP	5	F431NAP	5	F431NBP	6	F431NCP	6	F431NDP	5	F431NEP	6		
x4	F431T	12	F431NAT	14	F431NBT	16	F431NCT	14	F431NDT	14	F431NET	12		
x8														
Block type	with inv. F		with inv. G		with inv. H		-		-		-			
Drivability	Name	cells	Name	cells	Name	cells								
Low Power														
x1														
x2														
x4														
x8														

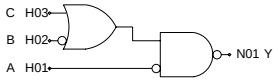
Logic Diagram for "Normal"



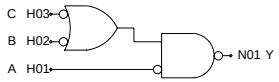
Logic Diagram for "with inv. A type"



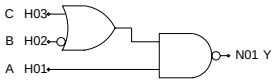
Logic Diagram for "with inv. B type"



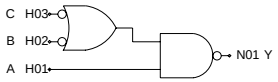
Logic Diagram for "with inv. C type"



Logic Diagram for "with inv. D type"



Logic Diagram for "with inv. E type"



Logic Diagram for "with inv. F type"

Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

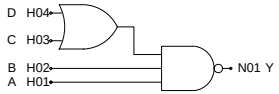
Block type	Switching speed									Input		Output	
	Path		t_{LD0} (ns)			t_1							
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		Symbol	Fanin	Symbol	Fanout
L431	A → Y	(HL)	0.088	0.141	0.182	0.013	0.026	0.044		A	1.0	Y	17
		(LH)	0.045	0.075	0.108	0.013	0.021	0.034		B	1.0		
	B → Y	(HL)	0.074	0.104	0.151	0.016	0.026	0.044		C	1.0		
		(LH)	0.092	0.142	0.211	0.024	0.041	0.067					
	C → Y	(HL)	0.089	0.128	0.191	0.016	0.026	0.044					
		(LH)	0.082	0.151	0.247	0.024	0.041	0.067					
F431	A → Y	(HL)	0.087	0.122	0.153	0.007	0.013	0.022		A	2.5	Y	33
		(LH)	0.044	0.072	0.103	0.006	0.011	0.017		B	2.5		
	B → Y	(HL)	0.083	0.120	0.176	0.008	0.013	0.022		C	2.4		
		(LH)	0.095	0.156	0.242	0.012	0.020	0.033					
	C → Y	(HL)	0.083	0.120	0.176	0.008	0.013	0.022					
		(LH)	0.095	0.156	0.242	0.012	0.020	0.033					
F431NP	A → Y	(HL)	0.206	0.363	0.555	0.003	0.004	0.006		A	1.0	Y	143
		(LH)	0.162	0.273	0.426	0.003	0.005	0.008		B	1.0		
	B → Y	(HL)	0.209	0.323	0.511	0.003	0.004	0.006		C	1.0		
		(LH)	0.263	0.412	0.646	0.003	0.005	0.008					
	C → Y	(HL)	0.227	0.349	0.560	0.003	0.004	0.006					
		(LH)	0.254	0.421	0.680	0.003	0.005	0.008					
F431T	A → Y	(HL)	0.089	0.138	0.181	0.002	0.003	0.006		A	9.9	Y	134
		(LH)	0.045	0.077	0.110	0.002	0.003	0.004		B	9.9		
	B → Y	(HL)	0.079	0.112	0.167	0.002	0.003	0.006		C	9.8		
		(LH)	0.102	0.160	0.239	0.003	0.005	0.008					
	C → Y	(HL)	0.093	0.135	0.199	0.002	0.003	0.006					
		(LH)	0.091	0.162	0.262	0.003	0.005	0.008					
L431NA	A → Y	(HH)	0.097	0.144	0.213	0.013	0.021	0.034		A	1.0	Y	17
		(LL)	0.103	0.186	0.288	0.013	0.026	0.044		B	1.0		
	B → Y	(HL)	0.075	0.106	0.156	0.016	0.026	0.044		C	1.0		
		(LH)	0.092	0.142	0.211	0.024	0.041	0.067					
	C → Y	(HL)	0.089	0.131	0.196	0.016	0.026	0.044					
		(LH)	0.082	0.151	0.247	0.024	0.041	0.067					
F431NA	A → Y	(HH)	0.121	0.175	0.253	0.006	0.011	0.017		A	1.0	Y	33
		(LL)	0.130	0.212	0.318	0.007	0.013	0.022		B	2.5		
	B → Y	(HL)	0.084	0.123	0.185	0.008	0.013	0.022		C	2.4		
		(LH)	0.094	0.155	0.242	0.012	0.020	0.033					
	C → Y	(HL)	0.084	0.123	0.184	0.008	0.013	0.022					
		(LH)	0.094	0.155	0.242	0.012	0.020	0.033					
F431NAP	A → Y	(HH)	0.209	0.337	0.529	0.003	0.005	0.008		A	1.0	Y	143
		(LL)	0.224	0.408	0.657	0.003	0.004	0.006		B	1.0		
	B → Y	(HL)	0.210	0.324	0.515	0.003	0.004	0.006		C	1.0		
		(LH)	0.262	0.412	0.644	0.003	0.005	0.008					
	C → Y	(HL)	0.227	0.350	0.563	0.003	0.004	0.006					
		(LH)	0.253	0.419	0.679	0.003	0.005	0.008					
F431NAT	A → Y	(HH)	0.123	0.180	0.258	0.002	0.003	0.004		A	4.8	Y	133
		(LL)	0.133	0.228	0.348	0.002	0.003	0.006		B	9.8		
	B → Y	(HL)	0.081	0.116	0.174	0.002	0.003	0.006		C	9.8		
		(LH)	0.101	0.159	0.238	0.003	0.005	0.008					
	C → Y	(HL)	0.094	0.138	0.207	0.002	0.003	0.006					
		(LH)	0.090	0.161	0.261	0.003	0.005	0.008					
L431NB	A → Y	(HH)	0.097	0.144	0.212	0.013	0.021	0.034		A	1.0	Y	17
		(LL)	0.103	0.186	0.288	0.013	0.026	0.044		B	1.0		
	B → Y	(HH)	0.133	0.209	0.318	0.024	0.041	0.067		C	1.0		
		(LL)	0.108	0.173	0.274	0.016	0.026	0.044					
	C → Y	(HL)	0.089	0.131	0.196	0.016	0.026	0.044					
		(LH)	0.083	0.151	0.249	0.024	0.041	0.067					

Block type	Path		Switching speed t_{LD0} (ns)			Switching speed t_1			Input		Output	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F431NB	A → Y	(HH)	0.120	0.174	0.251	0.006	0.010	0.017	A	1.0	Y	33
		(LL)	0.129	0.211	0.318	0.007	0.013	0.022	B	1.0		
	B → Y	(HH)	0.171	0.263	0.397	0.012	0.020	0.033	C	2.4		
		(LL)	0.144	0.228	0.356	0.008	0.013	0.022				
	C → Y	(HL)	0.084	0.123	0.185	0.008	0.013	0.022				
		(LH)	0.094	0.156	0.244	0.012	0.020	0.033				
F431NBP	A → Y	(HH)	0.210	0.338	0.531	0.003	0.005	0.008	A	1.0	Y	143
		(LL)	0.225	0.411	0.661	0.003	0.004	0.006	B	1.0		
	B → Y	(HH)	0.303	0.480	0.757	0.003	0.005	0.008	C	1.0		
		(LL)	0.241	0.392	0.636	0.003	0.004	0.006				
	C → Y	(HL)	0.228	0.352	0.567	0.003	0.004	0.006				
		(LH)	0.256	0.424	0.686	0.003	0.005	0.008				
F431NBT	A → Y	(HH)	0.123	0.179	0.258	0.002	0.003	0.004	A	4.8	Y	133
		(LL)	0.133	0.227	0.347	0.002	0.003	0.006	B	4.8		
	B → Y	(HH)	0.167	0.255	0.384	0.003	0.005	0.008	C	9.8		
		(LL)	0.140	0.221	0.343	0.002	0.003	0.006				
	C → Y	(HL)	0.094	0.138	0.206	0.002	0.003	0.006				
		(LH)	0.091	0.163	0.265	0.003	0.005	0.008				
L431NC	A → Y	(HH)	0.097	0.144	0.212	0.013	0.021	0.034	A	1.0	Y	17
		(LL)	0.103	0.186	0.288	0.013	0.026	0.044	B	1.0		
	B → Y	(HH)	0.133	0.208	0.317	0.024	0.041	0.067	C	1.0		
		(LL)	0.108	0.171	0.271	0.016	0.026	0.044				
	C → Y	(HH)	0.149	0.240	0.371	0.024	0.041	0.067				
		(LL)	0.120	0.195	0.310	0.016	0.026	0.044				
F431NC	A → Y	(HH)	0.120	0.174	0.251	0.006	0.010	0.017	A	1.0	Y	33
		(LL)	0.129	0.211	0.316	0.007	0.013	0.022	B	1.0		
	B → Y	(HH)	0.171	0.264	0.399	0.012	0.020	0.033	C	1.0		
		(LL)	0.144	0.228	0.356	0.008	0.013	0.022				
	C → Y	(HH)	0.168	0.261	0.393	0.012	0.020	0.033				
		(LL)	0.139	0.223	0.349	0.008	0.013	0.022				
F431NCP	A → Y	(HH)	0.210	0.337	0.529	0.003	0.005	0.008	A	1.0	Y	143
		(LL)	0.223	0.408	0.659	0.003	0.004	0.006	B	1.0		
	B → Y	(HH)	0.302	0.480	0.753	0.003	0.005	0.008	C	1.0		
		(LL)	0.242	0.390	0.633	0.003	0.004	0.006				
	C → Y	(HH)	0.318	0.512	0.809	0.003	0.005	0.008				
		(LL)	0.258	0.418	0.683	0.003	0.004	0.006				
F431NCT	A → Y	(HH)	0.124	0.179	0.254	0.002	0.003	0.004	A	4.8	Y	256
		(LL)	0.135	0.204	0.306	0.002	0.003	0.006	B	4.9		
	B → Y	(HH)	0.178	0.256	0.385	0.002	0.003	0.004	C	4.8		
		(LL)	0.130	0.209	0.329	0.002	0.003	0.006				
	C → Y	(HH)	0.158	0.240	0.382	0.002	0.003	0.004				
		(LL)	0.146	0.234	0.359	0.002	0.003	0.006				
L431ND	A → Y	(HL)	0.088	0.140	0.182	0.013	0.026	0.044	A	1.0	Y	17
		(LH)	0.045	0.075	0.108	0.013	0.021	0.034	B	1.0		
	B → Y	(HH)	0.132	0.206	0.316	0.024	0.041	0.067	C	1.0		
		(LL)	0.104	0.167	0.264	0.016	0.026	0.044				
	C → Y	(HL)	0.089	0.127	0.191	0.016	0.026	0.044				
		(LH)	0.084	0.151	0.249	0.024	0.041	0.067				
F431ND	A → Y	(HL)	0.087	0.123	0.153	0.007	0.013	0.022	A	2.5	Y	33
		(LH)	0.044	0.072	0.104	0.006	0.011	0.017	B	1.0		
	B → Y	(HH)	0.171	0.264	0.397	0.012	0.020	0.033	C	2.4		
		(LL)	0.141	0.222	0.347	0.008	0.013	0.022				
	C → Y	(HL)	0.083	0.120	0.176	0.008	0.013	0.022				
		(LH)	0.095	0.157	0.243	0.012	0.020	0.033				

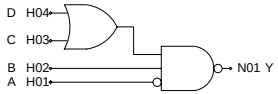
Block type	Path		Switching speed t_{LD0} (ns)			Switching speed t_1			Input		Output	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F431NDP	A → Y	(HL)	0.206	0.363	0.555	0.003	0.004	0.006	A	1.0	Y	143
		(LH)	0.162	0.272	0.425	0.003	0.005	0.008	B	1.0		
	B → Y	(HH)	0.300	0.476	0.750	0.003	0.005	0.008	C	1.0		
		(LL)	0.236	0.385	0.623	0.003	0.004	0.006				
	C → Y	(HL)	0.227	0.350	0.561	0.003	0.004	0.006				
		(LH)	0.254	0.421	0.681	0.003	0.005	0.008				
F431NDT	A → Y	(HL)	0.089	0.137	0.181	0.002	0.003	0.006	A	9.9	Y	133
		(LH)	0.045	0.077	0.111	0.002	0.003	0.004	B	4.8		
	B → Y	(HH)	0.168	0.257	0.385	0.003	0.005	0.008	C	9.8		
		(LL)	0.138	0.216	0.334	0.002	0.003	0.006				
	C → Y	(HL)	0.093	0.134	0.198	0.002	0.003	0.006				
		(LH)	0.092	0.164	0.266	0.003	0.005	0.008				
L431NE	A → Y	(HL)	0.088	0.140	0.182	0.013	0.026	0.044	A	1.0	Y	17
		(LH)	0.045	0.075	0.108	0.013	0.021	0.034	B	1.0		
	B → Y	(HH)	0.133	0.209	0.318	0.024	0.041	0.067	C	1.0		
		(LL)	0.106	0.169	0.267	0.016	0.026	0.044				
	C → Y	(HH)	0.147	0.237	0.366	0.024	0.041	0.067				
		(LL)	0.115	0.189	0.303	0.016	0.026	0.044				
F431NE	A → Y	(HL)	0.087	0.122	0.153	0.007	0.013	0.022	A	2.5	Y	33
		(LH)	0.045	0.072	0.104	0.006	0.011	0.017	B	1.0		
	B → Y	(HH)	0.172	0.265	0.400	0.012	0.020	0.033	C	1.0		
		(LL)	0.140	0.222	0.346	0.008	0.013	0.022				
	C → Y	(HH)	0.172	0.265	0.398	0.012	0.020	0.033				
		(LL)	0.140	0.222	0.346	0.008	0.013	0.022				
F431NEP	A → Y	(HL)	0.206	0.363	0.555	0.003	0.004	0.006	A	1.0	Y	143
		(LH)	0.162	0.272	0.425	0.003	0.005	0.008	B	1.0		
	B → Y	(HH)	0.302	0.478	0.753	0.003	0.005	0.008	C	1.0		
		(LL)	0.239	0.387	0.629	0.003	0.004	0.006				
	C → Y	(HH)	0.315	0.506	0.801	0.003	0.005	0.008				
		(LL)	0.252	0.409	0.673	0.003	0.004	0.006				
F431NET	A → Y	(HL)	0.097	0.112	0.142	0.002	0.003	0.006	A	9.6	Y	254
		(LH)	0.047	0.077	0.110	0.002	0.003	0.004	B	4.9		
	B → Y	(HH)	0.179	0.257	0.386	0.002	0.003	0.004	C	4.8		
		(LL)	0.129	0.206	0.321	0.002	0.003	0.006				
	C → Y	(HH)	0.160	0.241	0.383	0.002	0.003	0.004				
		(LL)	0.145	0.229	0.352	0.002	0.003	0.006				

Function	1-1-2-Input OR-NAND												SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E			
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power	L432	2	L432NA	3	L432NB	3	L432NC	4	L432ND	4	L432NE	3		
x1	F432	4	F432NA	5	F432NB	5	F432NC	6	F432ND	6	F432NE	5		
x2	F432NP	5	F432NAP	6	F432NBP	6	F432NCP	7	F432NDP	7	F432NEP	6		
x4	F432T	16	F432NAT	18	F432NBT	20	F432NCT	22	F432NDT	20	F432NET	20		
x8														
Block type	with inv. F		with inv. G		with inv. H		-		-		-			
Drivability	Name	cells	Name	cells	Name	cells								
Low Power	L432NF	4	L432NG	3	L432NH	3								
x1	F432NF	6	F432NG	5	F432NH	5								
x2	F432NFP	7	F432NGP	6	F432NHP	6								
x4	F432NFT	18	F432NGT	18	F432NHT	16								
x8														

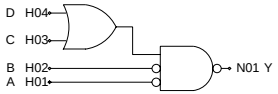
Logic Diagram for "Normal"



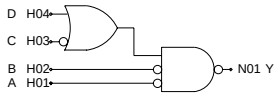
Logic Diagram for "with inv. A type"



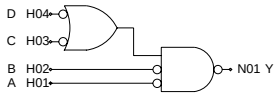
Logic Diagram for "with inv. B type"



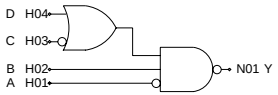
Logic Diagram for "with inv. C type"



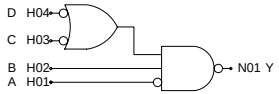
Logic Diagram for "with inv. D type"



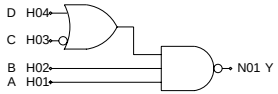
Logic Diagram for "with inv. E type"



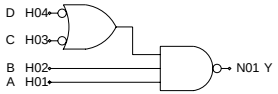
Logic Diagram for "with inv. F type"



Logic Diagram for "with inv. G type"



Logic Diagram for "with inv. H type"



Block type	Switching speed									Input		Output	
	Path		t_{LD0} (ns)			t_1							
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		Symbol	Fanin	Symbol	Fanout
L432	A → Y	(HL)	0.110	0.168	0.232	0.019	0.037	0.064		A	1.0	Y	16
		(LH)	0.050	0.087	0.122	0.013	0.021	0.034		B	1.0		
	B → Y	(HL)	0.093	0.168	0.256	0.019	0.037	0.064		C	1.0		
		(LH)	0.063	0.105	0.151	0.013	0.021	0.034		D	1.0		
	C → Y	(HL)	0.090	0.145	0.236	0.023	0.037	0.064					
		(LH)	0.119	0.192	0.292	0.024	0.041	0.067					
	D → Y	(HL)	0.110	0.172	0.285	0.022	0.037	0.064					
		(LH)	0.107	0.195	0.318	0.024	0.041	0.067					
F432	A → Y	(HL)	0.104	0.143	0.188	0.010	0.018	0.032		A	2.5	Y	31
		(LH)	0.046	0.079	0.115	0.006	0.011	0.017		B	2.4		
	B → Y	(HL)	0.091	0.152	0.230	0.010	0.018	0.032		C	2.4		
		(LH)	0.063	0.105	0.154	0.006	0.010	0.017		D	2.4		
	C → Y	(HL)	0.102	0.160	0.266	0.011	0.018	0.032					
		(LH)	0.119	0.201	0.316	0.012	0.020	0.033					
	D → Y	(HL)	0.103	0.161	0.266	0.011	0.018	0.032					
		(LH)	0.119	0.201	0.316	0.012	0.020	0.033					
F432NP	A → Y	(HL)	0.256	0.431	0.680	0.003	0.004	0.006		A	1.1	Y	143
		(LH)	0.169	0.283	0.445	0.003	0.005	0.008		B	1.0		
	B → Y	(HL)	0.241	0.430	0.702	0.003	0.004	0.006		C	1.0		
		(LH)	0.186	0.307	0.479	0.003	0.005	0.008		D	1.0		
	C → Y	(HL)	0.252	0.400	0.670	0.003	0.004	0.006					
		(LH)	0.297	0.474	0.745	0.003	0.005	0.008					
	D → Y	(HL)	0.271	0.433	0.733	0.003	0.004	0.006					
		(LH)	0.286	0.477	0.770	0.003	0.005	0.008					
F432T	A → Y	(HL)	0.113	0.175	0.242	0.002	0.005	0.008		A	10.1	Y	125
		(LH)	0.051	0.088	0.129	0.002	0.003	0.004		B	10.1		
	B → Y	(HL)	0.096	0.174	0.269	0.002	0.005	0.008		C	10.1		
		(LH)	0.064	0.108	0.158	0.002	0.003	0.004		D	10.0		
	C → Y	(HL)	0.102	0.159	0.254	0.003	0.005	0.008					
		(LH)	0.129	0.208	0.318	0.003	0.005	0.008					
	D → Y	(HL)	0.119	0.187	0.304	0.003	0.005	0.008					
		(LH)	0.117	0.210	0.342	0.003	0.005	0.008					
L432NA	A → Y	(HH)	0.103	0.152	0.226	0.013	0.021	0.034		A	1.0	Y	16
		(LL)	0.116	0.215	0.341	0.019	0.037	0.064		B	1.0		
	B → Y	(HL)	0.094	0.168	0.259	0.019	0.037	0.064		C	1.0		
		(LH)	0.062	0.104	0.150	0.013	0.021	0.034		D	1.0		
	C → Y	(HL)	0.092	0.146	0.241	0.023	0.037	0.064					
		(LH)	0.118	0.190	0.290	0.024	0.041	0.067					
	D → Y	(HL)	0.110	0.173	0.287	0.022	0.037	0.064					
		(LH)	0.106	0.193	0.316	0.024	0.041	0.067					
F432NA	A → Y	(HH)	0.124	0.181	0.260	0.006	0.010	0.017		A	1.0	Y	31
		(LL)	0.139	0.229	0.350	0.010	0.018	0.032		B	2.4		
	B → Y	(HL)	0.092	0.155	0.237	0.010	0.018	0.032		C	2.4		
		(LH)	0.063	0.105	0.153	0.006	0.010	0.017		D	2.4		
	C → Y	(HL)	0.104	0.165	0.275	0.011	0.018	0.032					
		(LH)	0.118	0.200	0.316	0.012	0.020	0.033					
	D → Y	(HL)	0.104	0.165	0.274	0.011	0.018	0.032					
		(LH)	0.118	0.200	0.316	0.012	0.020	0.033					
F432NAP	A → Y	(HH)	0.217	0.348	0.546	0.003	0.005	0.008		A	1.0	Y	143
		(LL)	0.261	0.474	0.783	0.003	0.004	0.006		B	1.0		
	B → Y	(HL)	0.241	0.428	0.700	0.003	0.004	0.006		C	1.0		
		(LH)	0.185	0.305	0.477	0.003	0.005	0.008		D	1.0		
	C → Y	(HL)	0.251	0.400	0.671	0.003	0.004	0.006					
		(LH)	0.296	0.472	0.742	0.003	0.005	0.008					
	D → Y	(HL)	0.271	0.435	0.732	0.003	0.004	0.006					
		(LH)	0.284	0.474	0.767	0.003	0.005	0.008					

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F432NAT	A → Y	(HH)	0.131	0.192	0.275	0.002	0.003	0.004	A	4.8	Y	125
		(LL)	0.149	0.263	0.412	0.002	0.005	0.008	B	10.1		
	B → Y	(HL)	0.097	0.177	0.276	0.002	0.005	0.008	C	10.1		
		(LH)	0.063	0.107	0.157	0.002	0.003	0.004	D	10.0		
	C → Y	(HL)	0.105	0.164	0.266	0.003	0.005	0.008				
		(LH)	0.129	0.207	0.317	0.003	0.005	0.008				
	D → Y	(HL)	0.120	0.190	0.313	0.003	0.005	0.008				
		(LH)	0.116	0.210	0.342	0.003	0.005	0.008				
L432NB	A → Y	(HH)	0.103	0.152	0.226	0.013	0.021	0.034	A	1.0	Y	16
		(LL)	0.116	0.215	0.341	0.019	0.037	0.064	B	1.0		
	B → Y	(HH)	0.113	0.170	0.252	0.013	0.021	0.034	C	1.0		
		(LL)	0.120	0.229	0.375	0.019	0.037	0.064	D	1.0		
	C → Y	(HL)	0.094	0.147	0.240	0.022	0.037	0.064				
		(LH)	0.117	0.190	0.289	0.024	0.041	0.067				
	D → Y	(HL)	0.111	0.173	0.290	0.022	0.037	0.064				
		(LH)	0.106	0.193	0.315	0.024	0.041	0.067				
F432NB	A → Y	(HH)	0.124	0.182	0.259	0.006	0.010	0.017	A	1.0	Y	31
		(LL)	0.138	0.229	0.347	0.010	0.019	0.032	B	1.0		
	B → Y	(HH)	0.137	0.203	0.296	0.006	0.010	0.017	C	2.4		
		(LL)	0.142	0.252	0.399	0.010	0.019	0.032	D	2.4		
	C → Y	(HL)	0.104	0.165	0.276	0.011	0.019	0.032				
		(LH)	0.117	0.198	0.311	0.012	0.020	0.034				
	D → Y	(HL)	0.104	0.165	0.277	0.011	0.019	0.032				
		(LH)	0.117	0.198	0.311	0.012	0.020	0.034				
F432NBP	A → Y	(HH)	0.218	0.349	0.548	0.003	0.005	0.008	A	1.0	Y	143
		(LL)	0.262	0.477	0.787	0.003	0.004	0.006	B	1.0		
	B → Y	(HH)	0.234	0.374	0.586	0.003	0.005	0.008	C	1.0		
		(LL)	0.264	0.494	0.826	0.003	0.004	0.006	D	1.0		
	C → Y	(HL)	0.253	0.403	0.677	0.003	0.004	0.006				
		(LH)	0.296	0.473	0.745	0.003	0.005	0.008				
	D → Y	(HL)	0.272	0.435	0.738	0.003	0.004	0.006				
		(LH)	0.285	0.476	0.770	0.003	0.005	0.008				
F432NBT	A → Y	(HH)	0.131	0.193	0.275	0.002	0.003	0.004	A	4.8	Y	125
		(LL)	0.149	0.263	0.414	0.002	0.005	0.008	B	4.8		
	B → Y	(HH)	0.140	0.208	0.304	0.002	0.003	0.004	C	10.1		
		(LL)	0.149	0.276	0.448	0.002	0.005	0.008	D	10.0		
	C → Y	(HL)	0.102	0.165	0.271	0.003	0.005	0.008				
		(LH)	0.128	0.207	0.316	0.003	0.005	0.008				
	D → Y	(HL)	0.120	0.193	0.317	0.003	0.005	0.008				
		(LH)	0.116	0.209	0.341	0.003	0.005	0.008				
L432NC	A → Y	(HH)	0.104	0.152	0.226	0.013	0.021	0.034	A	1.0	Y	16
		(LL)	0.116	0.215	0.340	0.019	0.037	0.064	B	1.0		
	B → Y	(HH)	0.114	0.172	0.255	0.013	0.021	0.034	C	1.0		
		(LL)	0.121	0.231	0.378	0.019	0.037	0.064	D	1.0		
	C → Y	(HH)	0.164	0.260	0.400	0.024	0.041	0.067				
		(LL)	0.135	0.222	0.361	0.023	0.037	0.064				
	D → Y	(HL)	0.111	0.173	0.290	0.022	0.037	0.064				
		(LH)	0.107	0.194	0.318	0.024	0.041	0.067				
F432NC	A → Y	(HH)	0.125	0.182	0.261	0.006	0.010	0.017	A	1.0	Y	31
		(LL)	0.139	0.230	0.351	0.010	0.019	0.032	B	1.0		
	B → Y	(HH)	0.137	0.203	0.296	0.006	0.010	0.017	C	1.0		
		(LL)	0.143	0.252	0.399	0.010	0.019	0.032	D	2.4		
	C → Y	(HH)	0.194	0.306	0.464	0.012	0.021	0.034				
		(LL)	0.170	0.274	0.446	0.011	0.019	0.032				
	D → Y	(HL)	0.104	0.165	0.276	0.011	0.019	0.032				
		(LH)	0.117	0.198	0.311	0.012	0.021	0.034				

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F432NCP	A → Y	(HH)	0.219	0.349	0.548	0.003	0.005	0.008	A	1.0	Y	143
		(LL)	0.262	0.477	0.788	0.003	0.004	0.006	B	1.0		
	B → Y	(HH)	0.234	0.373	0.585	0.003	0.005	0.008	C	1.0		
		(LL)	0.265	0.495	0.825	0.003	0.004	0.006	D	1.0		
	C → Y	(HH)	0.341	0.544	0.857	0.003	0.005	0.008				
		(LL)	0.294	0.478	0.801	0.003	0.004	0.006				
	D → Y	(HL)	0.274	0.436	0.739	0.003	0.004	0.006				
		(LH)	0.286	0.479	0.775	0.003	0.005	0.008				
F432NCT	A → Y	(HH)	0.132	0.193	0.275	0.002	0.003	0.004	A	4.8	Y	124
		(LL)	0.150	0.264	0.414	0.002	0.005	0.008	B	4.8		
	B → Y	(HH)	0.140	0.209	0.304	0.002	0.003	0.004	C	4.8		
		(LL)	0.150	0.276	0.447	0.002	0.005	0.008	D	10.0		
	C → Y	(HH)	0.197	0.307	0.464	0.003	0.005	0.008				
		(LL)	0.170	0.271	0.442	0.003	0.005	0.008				
	D → Y	(HL)	0.121	0.193	0.316	0.003	0.005	0.008				
		(LH)	0.117	0.211	0.344	0.003	0.005	0.008				
L432ND	A → Y	(HH)	0.104	0.152	0.226	0.013	0.021	0.034	A	1.0	Y	16
		(LL)	0.116	0.215	0.340	0.019	0.037	0.064	B	1.0		
	B → Y	(HH)	0.113	0.170	0.252	0.013	0.021	0.034	C	1.0		
		(LL)	0.120	0.229	0.375	0.019	0.037	0.064	D	1.0		
	C → Y	(HH)	0.164	0.259	0.400	0.024	0.041	0.067				
		(LL)	0.138	0.221	0.361	0.022	0.037	0.064				
	D → Y	(HH)	0.177	0.284	0.441	0.024	0.041	0.067				
		(LL)	0.154	0.249	0.412	0.022	0.037	0.064				
F432ND	A → Y	(HH)	0.124	0.181	0.259	0.006	0.010	0.017	A	1.0	Y	31
		(LL)	0.138	0.228	0.347	0.010	0.019	0.032	B	1.0		
	B → Y	(HH)	0.137	0.203	0.296	0.006	0.010	0.017	C	1.0		
		(LL)	0.143	0.251	0.399	0.010	0.019	0.032	D	1.0		
	C → Y	(HH)	0.196	0.308	0.465	0.012	0.020	0.034				
		(LL)	0.170	0.275	0.445	0.011	0.019	0.032				
	D → Y	(HH)	0.195	0.306	0.466	0.012	0.021	0.034				
		(LL)	0.169	0.274	0.443	0.011	0.019	0.032				
F432NDP	A → Y	(HH)	0.217	0.348	0.545	0.003	0.005	0.008	A	1.0	Y	143
		(LL)	0.261	0.474	0.785	0.003	0.004	0.006	B	1.0		
	B → Y	(HH)	0.231	0.371	0.581	0.003	0.005	0.008	C	1.0		
		(LL)	0.263	0.491	0.819	0.003	0.004	0.006	D	1.0		
	C → Y	(HH)	0.339	0.540	0.851	0.003	0.005	0.008				
		(LL)	0.293	0.475	0.796	0.003	0.004	0.006				
	D → Y	(HH)	0.351	0.565	0.893	0.003	0.005	0.008				
		(LL)	0.312	0.509	0.854	0.003	0.004	0.006				
F432NDT	A → Y	(HH)	0.129	0.185	0.266	0.002	0.003	0.004	A	4.8	Y	172
		(LL)	0.146	0.222	0.338	0.003	0.005	0.008	B	4.8		
	B → Y	(HH)	0.142	0.209	0.303	0.002	0.003	0.004	C	4.9		
		(LL)	0.156	0.247	0.389	0.003	0.005	0.008	D	4.8		
	C → Y	(HH)	0.195	0.285	0.430	0.002	0.003	0.004				
		(LL)	0.156	0.261	0.422	0.003	0.005	0.008				
	D → Y	(HH)	0.175	0.268	0.427	0.002	0.003	0.004				
		(LL)	0.172	0.281	0.452	0.003	0.005	0.008				
L432NE	A → Y	(HH)	0.103	0.152	0.226	0.013	0.021	0.034	A	1.0	Y	16
		(LL)	0.116	0.215	0.341	0.019	0.037	0.064	B	1.0		
	B → Y	(HL)	0.094	0.168	0.257	0.019	0.037	0.064	C	1.0		
		(LH)	0.062	0.104	0.149	0.013	0.021	0.034	D	1.0		
	C → Y	(HH)	0.162	0.256	0.395	0.024	0.041	0.067				
		(LL)	0.130	0.217	0.358	0.023	0.037	0.064				
	D → Y	(HL)	0.110	0.172	0.287	0.022	0.037	0.064				
		(LH)	0.107	0.194	0.317	0.024	0.041	0.067				

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F432NE	A → Y	(HH)	0.125	0.180	0.262	0.006	0.010	0.017	A	1.0	Y	31
		(LL)	0.139	0.230	0.349	0.010	0.018	0.032	B	2.4		
	B → Y	(HL)	0.092	0.156	0.237	0.010	0.018	0.032	C	1.0		
		(LH)	0.063	0.105	0.153	0.006	0.010	0.017	D	2.4		
	C → Y	(HH)	0.199	0.311	0.471	0.012	0.020	0.033				
		(LL)	0.172	0.276	0.447	0.011	0.018	0.032				
	D → Y	(HL)	0.104	0.165	0.274	0.011	0.018	0.032				
		(LH)	0.119	0.201	0.317	0.012	0.020	0.033				
F432NEP	A → Y	(HH)	0.218	0.349	0.547	0.003	0.005	0.008	A	1.0	Y	143
		(LL)	0.261	0.476	0.786	0.003	0.004	0.006	B	1.0		
	B → Y	(HL)	0.242	0.432	0.706	0.003	0.004	0.006	C	1.0		
		(LH)	0.187	0.307	0.479	0.003	0.005	0.008	D	1.0		
	C → Y	(HH)	0.339	0.542	0.855	0.003	0.005	0.008				
		(LL)	0.290	0.477	0.794	0.003	0.004	0.006				
	D → Y	(HL)	0.273	0.437	0.738	0.003	0.004	0.006				
		(LH)	0.287	0.479	0.775	0.003	0.005	0.008				
F432NET	A → Y	(HH)	0.131	0.192	0.274	0.002	0.003	0.004	A	4.8	Y	124
		(LL)	0.149	0.263	0.412	0.002	0.005	0.008	B	10.1		
	B → Y	(HL)	0.097	0.177	0.275	0.002	0.005	0.008	C	4.8		
		(LH)	0.063	0.106	0.156	0.002	0.003	0.004	D	10.0		
	C → Y	(HH)	0.197	0.308	0.465	0.003	0.005	0.008				
		(LL)	0.168	0.267	0.438	0.003	0.005	0.008				
	D → Y	(HL)	0.120	0.191	0.312	0.003	0.005	0.008				
		(LH)	0.118	0.212	0.344	0.003	0.005	0.008				
L432NF	A → Y	(HH)	0.103	0.152	0.226	0.013	0.021	0.034	A	1.0	Y	16
		(LL)	0.116	0.215	0.341	0.019	0.037	0.064	B	1.0		
	B → Y	(HL)	0.094	0.168	0.257	0.019	0.037	0.064	C	1.0		
		(LH)	0.062	0.104	0.149	0.013	0.021	0.034	D	1.0		
	C → Y	(HH)	0.163	0.258	0.397	0.024	0.041	0.067				
		(LL)	0.134	0.218	0.359	0.023	0.037	0.064				
	D → Y	(HH)	0.177	0.285	0.443	0.024	0.041	0.067				
		(LL)	0.153	0.247	0.409	0.022	0.037	0.064				
F432NF	A → Y	(HH)	0.124	0.178	0.258	0.006	0.010	0.017	A	1.0	Y	31
		(LL)	0.137	0.228	0.347	0.010	0.018	0.032	B	2.4		
	B → Y	(HL)	0.092	0.155	0.236	0.010	0.018	0.032	C	1.0		
		(LH)	0.063	0.105	0.153	0.006	0.010	0.017	D	1.0		
	C → Y	(HH)	0.197	0.309	0.469	0.012	0.020	0.033				
		(LL)	0.168	0.273	0.440	0.011	0.018	0.032				
	D → Y	(HH)	0.197	0.310	0.471	0.012	0.020	0.033				
		(LL)	0.169	0.274	0.441	0.011	0.018	0.032				
F432NFP	A → Y	(HH)	0.218	0.349	0.547	0.003	0.005	0.008	A	1.0	Y	143
		(LL)	0.261	0.476	0.786	0.003	0.004	0.006	B	1.0		
	B → Y	(HL)	0.242	0.432	0.706	0.003	0.004	0.006	C	1.0		
		(LH)	0.187	0.307	0.479	0.003	0.005	0.008	D	1.0		
	C → Y	(HH)	0.340	0.544	0.857	0.003	0.005	0.008				
		(LL)	0.293	0.476	0.797	0.003	0.004	0.006				
	D → Y	(HH)	0.354	0.570	0.901	0.003	0.005	0.008				
		(LL)	0.314	0.511	0.861	0.003	0.004	0.006				
F432NFT	A → Y	(HH)	0.128	0.185	0.264	0.002	0.003	0.004	A	4.8	Y	171
		(LL)	0.146	0.223	0.338	0.003	0.005	0.008	B	9.8		
	B → Y	(HL)	0.106	0.145	0.220	0.003	0.005	0.008	C	4.9		
		(LH)	0.064	0.107	0.157	0.002	0.003	0.004	D	4.8		
	C → Y	(HH)	0.195	0.285	0.431	0.002	0.003	0.004				
		(LL)	0.156	0.258	0.417	0.003	0.005	0.008				
	D → Y	(HH)	0.176	0.269	0.427	0.002	0.003	0.004				
		(LL)	0.171	0.279	0.447	0.003	0.005	0.008				

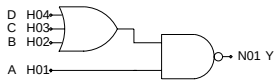
Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L432NG	A → Y	(HL)	0.112	0.168	0.232	0.019	0.037	0.064	A	1.0	Y	16
		(LH)	0.050	0.086	0.122	0.013	0.021	0.034	B	1.0		
	B → Y	(HL)	0.093	0.168	0.256	0.019	0.037	0.064	C	1.0		
		(LH)	0.063	0.105	0.151	0.013	0.021	0.034	D	1.0		
	C → Y	(HH)	0.162	0.257	0.397	0.024	0.041	0.067				
		(LL)	0.130	0.214	0.350	0.022	0.037	0.064				
	D → Y	(HL)	0.111	0.172	0.285	0.022	0.037	0.064				
		(LH)	0.108	0.196	0.320	0.024	0.041	0.067				
F432NG	A → Y	(HL)	0.104	0.144	0.189	0.010	0.018	0.032	A	2.5	Y	31
		(LH)	0.046	0.079	0.115	0.006	0.011	0.017	B	2.4		
	B → Y	(HL)	0.091	0.152	0.230	0.010	0.018	0.032	C	1.0		
		(LH)	0.064	0.106	0.154	0.006	0.010	0.017	D	2.4		
	C → Y	(HH)	0.198	0.309	0.468	0.012	0.020	0.033				
		(LL)	0.165	0.268	0.434	0.011	0.018	0.032				
	D → Y	(HL)	0.102	0.160	0.265	0.011	0.018	0.032				
		(LH)	0.119	0.202	0.317	0.012	0.020	0.033				
F432NGP	A → Y	(HL)	0.257	0.433	0.682	0.003	0.004	0.006	A	1.1	Y	143
		(LH)	0.169	0.284	0.445	0.003	0.005	0.008	B	1.0		
	B → Y	(HL)	0.242	0.430	0.703	0.003	0.004	0.006	C	1.0		
		(LH)	0.187	0.307	0.480	0.003	0.005	0.008	D	1.0		
	C → Y	(HH)	0.337	0.539	0.851	0.003	0.005	0.008				
		(LL)	0.285	0.468	0.785	0.003	0.004	0.006				
	D → Y	(HL)	0.273	0.434	0.734	0.003	0.004	0.006				
		(LH)	0.287	0.479	0.775	0.003	0.005	0.008				
F432NGT	A → Y	(HL)	0.113	0.174	0.240	0.002	0.005	0.008	A	10.1	Y	125
		(LH)	0.051	0.088	0.128	0.002	0.003	0.004	B	10.1		
	B → Y	(HL)	0.096	0.174	0.267	0.002	0.005	0.008	C	4.8		
		(LH)	0.064	0.107	0.157	0.002	0.003	0.004	D	10.0		
	C → Y	(HH)	0.198	0.309	0.466	0.003	0.005	0.008				
		(LL)	0.165	0.261	0.430	0.003	0.005	0.008				
	D → Y	(HL)	0.118	0.186	0.303	0.003	0.005	0.008				
		(LH)	0.118	0.212	0.345	0.003	0.005	0.008				
L432NH	A → Y	(HL)	0.112	0.169	0.234	0.019	0.037	0.064	A	1.0	Y	16
		(LH)	0.050	0.087	0.123	0.013	0.021	0.034	B	1.0		
	B → Y	(HL)	0.094	0.169	0.257	0.019	0.037	0.064	C	1.0		
		(LH)	0.063	0.106	0.152	0.013	0.021	0.034	D	1.0		
	C → Y	(HH)	0.162	0.258	0.398	0.024	0.041	0.067				
		(LL)	0.127	0.214	0.354	0.023	0.037	0.064				
	D → Y	(HH)	0.178	0.287	0.445	0.024	0.041	0.067				
		(LL)	0.150	0.244	0.406	0.022	0.037	0.064				
F432NH	A → Y	(HL)	0.102	0.143	0.185	0.010	0.018	0.032	A	2.5	Y	31
		(LH)	0.043	0.079	0.114	0.006	0.010	0.017	B	2.4		
	B → Y	(HL)	0.091	0.151	0.227	0.010	0.019	0.032	C	1.0		
		(LH)	0.062	0.106	0.152	0.006	0.010	0.017	D	1.0		
	C → Y	(HH)	0.196	0.307	0.465	0.012	0.020	0.034				
		(LL)	0.164	0.266	0.429	0.011	0.019	0.032				
	D → Y	(HH)	0.197	0.308	0.467	0.012	0.021	0.034				
		(LL)	0.165	0.267	0.430	0.011	0.019	0.032				
F432NHP	A → Y	(HL)	0.257	0.432	0.682	0.003	0.004	0.006	A	1.1	Y	143
		(LH)	0.169	0.284	0.445	0.003	0.005	0.008	B	1.0		
	B → Y	(HL)	0.242	0.429	0.703	0.003	0.004	0.006	C	1.0		
		(LH)	0.186	0.307	0.480	0.003	0.005	0.008	D	1.0		
	C → Y	(HH)	0.337	0.539	0.850	0.003	0.005	0.008				
		(LL)	0.285	0.468	0.785	0.003	0.004	0.006				
	D → Y	(HH)	0.353	0.568	0.898	0.003	0.005	0.008				
		(LL)	0.310	0.507	0.853	0.003	0.004	0.006				

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F432NHT	A → Y	(HL)	0.113	0.135	0.178	0.003	0.005	0.008	A	9.8	Y	171
		(LH)	0.047	0.082	0.121	0.002	0.003	0.004	B	9.9		
	B → Y	(HL)	0.105	0.143	0.213	0.003	0.005	0.008	C	4.9		
		(LH)	0.065	0.108	0.158	0.002	0.003	0.004	D	4.8		
	C → Y	(HH)	0.196	0.287	0.432	0.002	0.003	0.004				
		(LL)	0.153	0.254	0.408	0.003	0.005	0.008				
	D → Y	(HH)	0.177	0.270	0.428	0.002	0.003	0.004				
		(LL)	0.169	0.275	0.440	0.003	0.005	0.008				

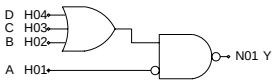
[MEMO]

Function	1-3-Input OR-NAND												SSI Family
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E		
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	
Low Power													
x1	F433	4	F433NA	5	F433NB	5	F433NC	6	F433ND	6	F433NE	5	
x2	F433NP	5	F433NAP	6	F433NBP	6	F433NCP	7	F433NDP	7	F433NEP	6	
x4	F433T	16	F433NAT	18	F433NBT	20	F433NCT	18	F433NDT	16	F433NET	18	
x8													
Block type	with inv. F		with inv. G		with inv. H		-		-		-		
Drivability	Name	cells	Name	cells	Name	cells							
Low Power													
x1	F433NF	5	F433NG	6									
x2	F433NFP	6	F433NGP	7									
x4	F433NFT	16	F433NGT	14									
x8													

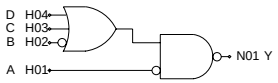
Logic Diagram for "Normal"



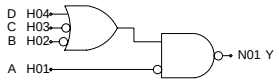
Logic Diagram for "with inv. A type"



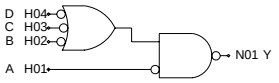
Logic Diagram for "with inv. B type"



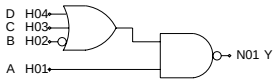
Logic Diagram for "with inv. C type"



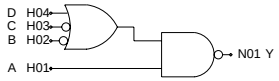
Logic Diagram for "with inv. D type"



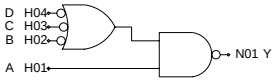
Logic Diagram for "with inv. E type"



Logic Diagram for "with inv. F type"



Logic Diagram for "with inv. G type"



Logic Diagram for "with inv. H type"

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F433	A → Y	(HL)	0.082	0.138	0.180	0.006	0.013	0.022	A	2.5	Y	20
		(LH)	0.043	0.071	0.102	0.006	0.011	0.017	B	2.4		
	B → Y	(HL)	0.089	0.132	0.200	0.008	0.013	0.022	C	2.6		
		(LH)	0.138	0.239	0.387	0.018	0.031	0.050	D	2.4		
	C → Y	(HL)	0.095	0.141	0.214	0.008	0.013	0.022				
		(LH)	0.148	0.256	0.418	0.018	0.031	0.050				
	D → Y	(HL)	0.089	0.133	0.201	0.008	0.013	0.022				
		(LH)	0.139	0.240	0.388	0.018	0.031	0.050				
F433NP	A → Y	(HL)	0.200	0.380	0.584	0.003	0.004	0.006	A	1.0	Y	143
		(LH)	0.162	0.274	0.429	0.003	0.005	0.008	B	1.0		
	B → Y	(HL)	0.211	0.328	0.521	0.003	0.004	0.006	C	1.0		
		(LH)	0.338	0.532	0.842	0.003	0.005	0.008	D	1.0		
	C → Y	(HL)	0.229	0.354	0.571	0.003	0.004	0.006				
		(LH)	0.351	0.579	0.936	0.003	0.005	0.008				
	D → Y	(HL)	0.238	0.369	0.597	0.003	0.004	0.006				
		(LH)	0.348	0.593	0.971	0.003	0.005	0.008				
F433T	A → Y	(HL)	0.090	0.158	0.217	0.001	0.003	0.006	A	10.2	Y	79
		(LH)	0.048	0.082	0.117	0.002	0.003	0.004	B	10.0		
	B → Y	(HL)	0.083	0.122	0.180	0.002	0.003	0.006	C	10.0		
		(LH)	0.139	0.220	0.345	0.005	0.008	0.013	D	9.9		
	C → Y	(HL)	0.098	0.145	0.217	0.002	0.003	0.006				
		(LH)	0.149	0.256	0.420	0.005	0.008	0.013				
	D → Y	(HL)	0.105	0.156	0.240	0.002	0.003	0.006				
		(LH)	0.151	0.278	0.467	0.005	0.008	0.013				
F433NA	A → Y	(HH)	0.117	0.172	0.245	0.006	0.010	0.017	A	1.0	Y	20
		(LL)	0.123	0.221	0.337	0.006	0.013	0.022	B	2.4		
	B → Y	(HL)	0.088	0.133	0.206	0.008	0.013	0.022	C	2.6		
		(LH)	0.139	0.237	0.383	0.018	0.031	0.050	D	2.4		
	C → Y	(HL)	0.095	0.143	0.220	0.008	0.013	0.022				
		(LH)	0.147	0.253	0.414	0.018	0.031	0.050				
	D → Y	(HL)	0.088	0.133	0.206	0.008	0.013	0.022				
		(LH)	0.139	0.238	0.384	0.018	0.031	0.050				
F433NAP	A → Y	(HH)	0.210	0.339	0.533	0.003	0.005	0.008	A	1.0	Y	143
		(LL)	0.220	0.424	0.689	0.003	0.004	0.006	B	1.0		
	B → Y	(HL)	0.211	0.329	0.524	0.003	0.004	0.006	C	1.0		
		(LH)	0.337	0.532	0.842	0.003	0.005	0.008	D	1.0		
	C → Y	(HL)	0.229	0.358	0.575	0.003	0.004	0.006				
		(LH)	0.351	0.578	0.936	0.003	0.005	0.008				
	D → Y	(HL)	0.238	0.371	0.601	0.003	0.004	0.006				
		(LH)	0.347	0.593	0.971	0.003	0.005	0.008				
F433NAT	A → Y	(HH)	0.126	0.186	0.266	0.002	0.003	0.004	A	4.8	Y	79
		(LL)	0.135	0.246	0.384	0.001	0.003	0.006	B	10.0		
	B → Y	(HL)	0.086	0.125	0.190	0.002	0.003	0.006	C	10.0		
		(LH)	0.138	0.219	0.344	0.005	0.008	0.013	D	10.0		
	C → Y	(HL)	0.099	0.148	0.224	0.002	0.003	0.006				
		(LH)	0.148	0.255	0.418	0.005	0.008	0.013				
	D → Y	(HL)	0.108	0.161	0.249	0.002	0.003	0.006				
		(LH)	0.150	0.279	0.468	0.005	0.008	0.013				
F433NB	A → Y	(HH)	0.119	0.174	0.248	0.006	0.010	0.017	A	1.0	Y	20
		(LL)	0.125	0.223	0.339	0.006	0.013	0.022	B	1.0		
	B → Y	(HH)	0.220	0.350	0.539	0.018	0.031	0.050	C	2.6		
		(LL)	0.150	0.237	0.376	0.008	0.013	0.022	D	2.4		
	C → Y	(HL)	0.095	0.143	0.220	0.008	0.013	0.022				
		(LH)	0.147	0.253	0.415	0.018	0.031	0.050				
	D → Y	(HL)	0.088	0.133	0.206	0.008	0.013	0.022				
		(LH)	0.139	0.239	0.385	0.018	0.031	0.050				

Block type	Path		Switching speed t LD0 (ns) MIN.	TYP.	MAX.	t 1 MIN.	TYP.	MAX.	Input Symbol	Fanin	Output Symbol	Fanout
F433NBP	A → Y	(HH)	0.210	0.339	0.534	0.003	0.005	0.008	A	1.0	Y	143
		(LL)	0.220	0.424	0.691	0.003	0.004	0.006	B	1.0		
	B → Y	(HH)	0.377	0.607	0.964	0.003	0.005	0.008	C	1.0		
		(LL)	0.245	0.396	0.644	0.003	0.004	0.006	D	1.0		
	C → Y	(HL)	0.231	0.361	0.580	0.003	0.004	0.006				
		(LH)	0.356	0.586	0.949	0.003	0.005	0.008				
	D → Y	(HL)	0.240	0.374	0.605	0.003	0.004	0.006				
		(LH)	0.352	0.600	0.984	0.003	0.005	0.008				
F433NBT	A → Y	(HH)	0.126	0.186	0.265	0.002	0.003	0.004	A	4.8	Y	79
		(LL)	0.135	0.247	0.384	0.001	0.003	0.006	B	4.8		
	B → Y	(HH)	0.201	0.320	0.493	0.005	0.008	0.013	C	10.0		
		(LL)	0.147	0.227	0.359	0.002	0.003	0.006	D	10.0		
	C → Y	(HL)	0.099	0.148	0.224	0.002	0.003	0.006				
		(LH)	0.149	0.256	0.420	0.005	0.008	0.013				
	D → Y	(HL)	0.108	0.161	0.249	0.002	0.003	0.006				
		(LH)	0.151	0.283	0.473	0.005	0.008	0.013				
F433NC	A → Y	(HH)	0.119	0.175	0.249	0.006	0.010	0.017	A	1.0	Y	20
		(LL)	0.125	0.223	0.340	0.006	0.013	0.022	B	1.0		
	B → Y	(HH)	0.221	0.351	0.542	0.018	0.031	0.050	C	1.0		
		(LL)	0.150	0.237	0.376	0.008	0.013	0.022	D	2.4		
	C → Y	(HH)	0.231	0.372	0.577	0.018	0.031	0.050				
		(LL)	0.152	0.245	0.385	0.008	0.013	0.022				
	D → Y	(HL)	0.089	0.134	0.207	0.008	0.013	0.022				
		(LH)	0.140	0.241	0.388	0.018	0.031	0.050				
F433NCP	A → Y	(HH)	0.210	0.339	0.534	0.003	0.005	0.008	A	1.0	Y	143
		(LL)	0.220	0.424	0.691	0.003	0.004	0.006	B	1.0		
	B → Y	(HH)	0.377	0.607	0.963	0.003	0.005	0.008	C	1.0		
		(LL)	0.245	0.396	0.644	0.003	0.004	0.006	D	1.0		
	C → Y	(HH)	0.418	0.677	1.076	0.003	0.005	0.008				
		(LL)	0.264	0.428	0.698	0.003	0.004	0.006				
	D → Y	(HL)	0.240	0.374	0.605	0.003	0.004	0.006				
		(LH)	0.352	0.601	0.987	0.003	0.005	0.008				
F433NCT	A → Y	(HH)	0.123	0.179	0.258	0.002	0.003	0.004	A	4.8	Y	133
		(LL)	0.133	0.227	0.346	0.002	0.003	0.006	B	4.9		
	B → Y	(HH)	0.214	0.319	0.485	0.003	0.005	0.008	C	4.8		
		(LL)	0.140	0.229	0.357	0.002	0.003	0.006	D	9.8		
	C → Y	(HH)	0.195	0.303	0.483	0.003	0.005	0.008				
		(LL)	0.156	0.250	0.390	0.002	0.003	0.006				
	D → Y	(HL)	0.094	0.138	0.206	0.002	0.003	0.006				
		(LH)	0.091	0.165	0.271	0.003	0.005	0.008				
F433ND	A → Y	(HH)	0.119	0.174	0.248	0.006	0.010	0.017	A	1.0	Y	20
		(LL)	0.125	0.223	0.339	0.006	0.013	0.022	B	1.0		
	B → Y	(HH)	0.222	0.352	0.542	0.018	0.031	0.050	C	1.0		
		(LL)	0.150	0.237	0.375	0.008	0.013	0.022	D	1.0		
	C → Y	(HH)	0.232	0.372	0.578	0.018	0.031	0.050				
		(LL)	0.153	0.244	0.387	0.008	0.013	0.022				
	D → Y	(HH)	0.222	0.353	0.542	0.018	0.031	0.050				
		(LL)	0.149	0.236	0.374	0.008	0.013	0.022				
F433NDP	A → Y	(HH)	0.210	0.339	0.534	0.003	0.005	0.008	A	1.0	Y	143
		(LL)	0.220	0.424	0.691	0.003	0.004	0.006	B	1.0		
	B → Y	(HH)	0.377	0.607	0.963	0.003	0.005	0.008	C	1.0		
		(LL)	0.245	0.396	0.644	0.003	0.004	0.006	D	1.0		
	C → Y	(HH)	0.418	0.677	1.076	0.003	0.005	0.008				
		(LL)	0.264	0.428	0.698	0.003	0.004	0.006				
	D → Y	(HH)	0.433	0.702	1.114	0.003	0.005	0.008				
		(LL)	0.271	0.441	0.725	0.003	0.004	0.006				

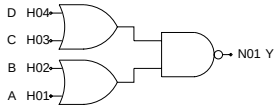
Block type	Path		Switching speed t LD0 (ns) MIN.	TYP.	MAX.	t 1 MIN.	TYP.	MAX.	Input Symbol	Fanin	Output Symbol	Fanout
F433NDT	A → Y	(HH)	0.124	0.179	0.254	0.002	0.003	0.004	A	4.8	Y	256
		(LL)	0.135	0.204	0.306	0.002	0.003	0.006	B	5.0		
	B → Y	(HH)	0.223	0.320	0.495	0.002	0.003	0.004	C	5.0		
		(LL)	0.134	0.220	0.342	0.002	0.003	0.006	D	4.9		
	C → Y	(HH)	0.216	0.325	0.531	0.002	0.003	0.004				
		(LL)	0.153	0.247	0.383	0.002	0.003	0.006				
	D → Y	(HH)	0.200	0.319	0.543	0.002	0.003	0.004				
		(LL)	0.163	0.259	0.404	0.002	0.003	0.006				
F433NE	A → Y	(HL)	0.076	0.136	0.178	0.006	0.013	0.022	A	2.5	Y	20
		(LH)	0.040	0.071	0.101	0.006	0.010	0.017	B	1.0		
	B → Y	(HH)	0.222	0.352	0.540	0.018	0.031	0.050	C	2.4		
		(LL)	0.147	0.232	0.366	0.008	0.013	0.022	D	2.4		
	C → Y	(HL)	0.094	0.138	0.212	0.008	0.013	0.022				
		(LH)	0.148	0.254	0.415	0.018	0.031	0.050				
	D → Y	(HL)	0.088	0.129	0.197	0.008	0.013	0.022				
		(LH)	0.140	0.240	0.386	0.018	0.031	0.050				
F433NEP	A → Y	(HL)	0.200	0.380	0.585	0.003	0.004	0.006	A	1.0	Y	143
		(LH)	0.162	0.273	0.428	0.003	0.005	0.008	B	1.0		
	B → Y	(HH)	0.373	0.600	0.951	0.003	0.005	0.008	C	1.0		
		(LL)	0.243	0.391	0.634	0.003	0.004	0.006	D	1.0		
	C → Y	(HL)	0.229	0.354	0.572	0.003	0.004	0.006				
		(LH)	0.352	0.580	0.937	0.003	0.005	0.008				
	D → Y	(HL)	0.238	0.370	0.597	0.003	0.004	0.006				
		(LH)	0.348	0.593	0.973	0.003	0.005	0.008				
F433NET	A → Y	(HL)	0.089	0.157	0.216	0.001	0.003	0.006	A	10.1	Y	80
		(LH)	0.048	0.082	0.117	0.002	0.003	0.004	B	4.8		
	B → Y	(HH)	0.202	0.321	0.494	0.005	0.008	0.013	C	9.9		
		(LL)	0.143	0.223	0.350	0.002	0.003	0.006	D	10.0		
	C → Y	(HL)	0.098	0.144	0.215	0.002	0.003	0.006				
		(LH)	0.150	0.257	0.420	0.005	0.008	0.013				
	D → Y	(HL)	0.106	0.157	0.240	0.002	0.003	0.006				
		(LH)	0.152	0.283	0.473	0.005	0.008	0.013				
F433NF	A → Y	(HL)	0.076	0.135	0.177	0.006	0.013	0.022	A	2.5	Y	20
		(LH)	0.040	0.071	0.101	0.006	0.010	0.017	B	1.0		
	B → Y	(HH)	0.223	0.352	0.543	0.018	0.031	0.050	C	1.0		
		(LL)	0.148	0.232	0.366	0.008	0.013	0.022	D	2.4		
	C → Y	(HH)	0.232	0.372	0.575	0.018	0.031	0.050				
		(LL)	0.148	0.236	0.373	0.008	0.013	0.022				
	D → Y	(HL)	0.088	0.129	0.197	0.008	0.013	0.022				
		(LH)	0.141	0.239	0.387	0.018	0.031	0.050				
F433NFP	A → Y	(HL)	0.202	0.382	0.587	0.003	0.004	0.006	A	1.1	Y	143
		(LH)	0.162	0.275	0.431	0.003	0.005	0.008	B	1.0		
	B → Y	(HH)	0.377	0.606	0.957	0.003	0.005	0.008	C	1.0		
		(LL)	0.243	0.393	0.638	0.003	0.004	0.006	D	1.0		
	C → Y	(HH)	0.417	0.675	1.072	0.003	0.005	0.008				
		(LL)	0.261	0.423	0.692	0.003	0.004	0.006				
	D → Y	(HL)	0.239	0.372	0.601	0.003	0.004	0.006				
		(LH)	0.352	0.600	0.987	0.003	0.005	0.008				
F433NFT	A → Y	(HL)	0.088	0.137	0.181	0.002	0.003	0.006	A	9.8	Y	133
		(LH)	0.045	0.077	0.110	0.002	0.003	0.004	B	4.9		
	B → Y	(HH)	0.215	0.320	0.487	0.003	0.005	0.008	C	4.8		
		(LL)	0.138	0.224	0.349	0.002	0.003	0.006	D	9.8		
	C → Y	(HH)	0.196	0.304	0.484	0.003	0.005	0.008				
		(LL)	0.154	0.245	0.383	0.002	0.003	0.006				
	D → Y	(HL)	0.093	0.134	0.198	0.002	0.003	0.006				
		(LH)	0.092	0.166	0.272	0.003	0.005	0.008				

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F433NG	A → Y	(HL)	0.076	0.136	0.177	0.006	0.013	0.022	A	2.5	Y	20
		(LH)	0.040	0.071	0.101	0.006	0.010	0.017	B	1.0		
	B → Y	(HH)	0.223	0.353	0.543	0.018	0.031	0.050	C	1.0		
		(LL)	0.147	0.231	0.367	0.008	0.013	0.022	D	1.0		
	C → Y	(HH)	0.232	0.373	0.576	0.018	0.031	0.050				
		(LL)	0.148	0.236	0.373	0.008	0.013	0.022				
	D → Y	(HH)	0.224	0.354	0.545	0.018	0.031	0.050				
		(LL)	0.148	0.233	0.367	0.008	0.013	0.022				
F433NGP	A → Y	(HL)	0.202	0.382	0.587	0.003	0.004	0.006	A	1.0	Y	143
		(LH)	0.163	0.275	0.431	0.003	0.005	0.008	B	1.0		
	B → Y	(HH)	0.378	0.606	0.958	0.003	0.005	0.008	C	1.0		
		(LL)	0.244	0.393	0.640	0.003	0.004	0.006	D	1.0		
	C → Y	(HH)	0.418	0.676	1.074	0.003	0.005	0.008				
		(LL)	0.262	0.424	0.693	0.003	0.004	0.006				
	D → Y	(HH)	0.430	0.697	1.108	0.003	0.005	0.008				
		(LL)	0.264	0.430	0.708	0.003	0.004	0.006				
F433NGT	A → Y	(HL)	0.097	0.112	0.142	0.002	0.003	0.006	A	9.6	Y	254
		(LH)	0.047	0.077	0.110	0.002	0.003	0.004	B	5.0		
	B → Y	(HH)	0.224	0.321	0.496	0.002	0.003	0.004	C	5.0		
		(LL)	0.130	0.216	0.333	0.002	0.003	0.006	D	4.9		
	C → Y	(HH)	0.216	0.325	0.533	0.002	0.003	0.004				
		(LL)	0.150	0.243	0.376	0.002	0.003	0.006				
	D → Y	(HH)	0.200	0.320	0.544	0.002	0.003	0.004				
		(LL)	0.161	0.259	0.398	0.002	0.003	0.006				

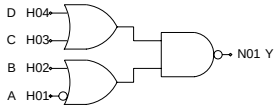
[MEMO]

Function	2-2-Input OR-NAND												SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E			
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power	L434	2	L434NA	3	L434NB	3	L434NC	4	L434ND	3	L434NE	4		
x1	F434	4	F434NA	5	F434NB	5	F434NC	6	F434ND	5	F434NE	6		
x2	F434NP	5	F434NAP	6	F434NBP	6	F434NCP	7	F434NDP	6	F434NEP	7		
x4	F434T	16	F434NAT	18	F434NBT	16	F434NCT	16	F434NDT	20	F434NET	18		
x8														
Block type	with inv. F		with inv. G		with inv. H		-		-		-			
Drivability	Name	cells	Name	cells	Name	cells								
Low Power														
x1														
x2														
x4														
x8														

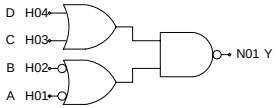
Logic Diagram for "Normal"



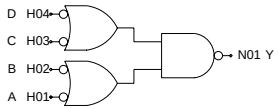
Logic Diagram for "with inv. A type"



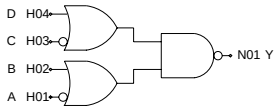
Logic Diagram for "with inv. B type"



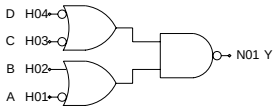
Logic Diagram for "with inv. C type"



Logic Diagram for "with inv. D type"



Logic Diagram for "with inv. E type"



Logic Diagram for "with inv. F type"

Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

Block type	Path		Switching speed t_{LD0} (ns)			Switching speed t_{1}			Input		Output	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L434	A → Y	(HL)	0.093	0.146	0.195	0.013	0.026	0.044	A	1.0	Y	15
		(LH)	0.073	0.117	0.177	0.024	0.041	0.067	B	1.0		
	B → Y	(HL)	0.106	0.167	0.229	0.013	0.026	0.044	C	1.0		
		(LH)	0.060	0.119	0.199	0.024	0.041	0.067	D	1.0		
	C → Y	(HL)	0.097	0.146	0.223	0.012	0.026	0.044				
		(LH)	0.113	0.197	0.304	0.024	0.041	0.067				
	D → Y	(HL)	0.107	0.168	0.257	0.012	0.026	0.044				
		(LH)	0.101	0.200	0.330	0.024	0.041	0.067				
F434	A → Y	(HL)	0.093	0.143	0.189	0.007	0.013	0.022	A	2.5	Y	31
		(LH)	0.069	0.113	0.178	0.012	0.021	0.033	B	2.3		
	B → Y	(HL)	0.093	0.143	0.189	0.007	0.013	0.022	C	2.5		
		(LH)	0.069	0.113	0.178	0.012	0.021	0.033	D	2.4		
	C → Y	(HL)	0.098	0.149	0.226	0.006	0.013	0.022				
		(LH)	0.114	0.210	0.332	0.012	0.020	0.034				
	D → Y	(HL)	0.098	0.149	0.226	0.006	0.013	0.022				
		(LH)	0.114	0.210	0.332	0.012	0.020	0.034				
F434NP	A → Y	(HL)	0.214	0.373	0.573	0.003	0.004	0.006	A	1.0	Y	143
		(LH)	0.239	0.393	0.622	0.003	0.005	0.008	B	1.0		
	B → Y	(HL)	0.229	0.397	0.614	0.003	0.004	0.006	C	1.0		
		(LH)	0.227	0.392	0.642	0.003	0.005	0.008	D	1.0		
	C → Y	(HL)	0.210	0.385	0.606	0.003	0.004	0.006				
		(LH)	0.298	0.482	0.758	0.003	0.005	0.008				
	D → Y	(HL)	0.220	0.409	0.647	0.003	0.004	0.006				
		(LH)	0.286	0.482	0.781	0.003	0.005	0.008				
F434T	A → Y	(HL)	0.096	0.152	0.203	0.002	0.003	0.006	A	10.1	Y	122
		(LH)	0.080	0.128	0.192	0.003	0.005	0.008	B	10.1		
	B → Y	(HL)	0.108	0.172	0.237	0.002	0.003	0.006	C	10.1		
		(LH)	0.067	0.128	0.215	0.003	0.005	0.008	D	10.0		
	C → Y	(HL)	0.099	0.154	0.232	0.001	0.003	0.006				
		(LH)	0.122	0.211	0.329	0.003	0.005	0.008				
	D → Y	(HL)	0.109	0.177	0.270	0.001	0.003	0.006				
		(LH)	0.110	0.214	0.352	0.003	0.005	0.008				
L434NA	A → Y	(HH)	0.114	0.183	0.278	0.024	0.041	0.067	A	1.0	Y	15
		(LL)	0.108	0.192	0.298	0.013	0.026	0.044	B	1.0		
	B → Y	(HL)	0.105	0.166	0.227	0.013	0.026	0.044	C	1.0		
		(LH)	0.060	0.116	0.199	0.024	0.041	0.067	D	1.0		
	C → Y	(HL)	0.097	0.146	0.221	0.012	0.026	0.044				
		(LH)	0.113	0.196	0.302	0.024	0.041	0.067				
	D → Y	(HL)	0.107	0.166	0.255	0.012	0.026	0.044				
		(LH)	0.101	0.198	0.328	0.024	0.041	0.067				
F434NA	A → Y	(HH)	0.144	0.221	0.328	0.012	0.021	0.033	A	1.0	Y	31
		(LL)	0.140	0.232	0.355	0.007	0.013	0.022	B	2.3		
	B → Y	(HL)	0.092	0.141	0.186	0.007	0.013	0.022	C	2.5		
		(LH)	0.068	0.113	0.177	0.012	0.021	0.033	D	2.4		
	C → Y	(HL)	0.098	0.147	0.224	0.006	0.013	0.022				
		(LH)	0.113	0.207	0.328	0.012	0.020	0.034				
	D → Y	(HL)	0.098	0.147	0.224	0.006	0.013	0.022				
		(LH)	0.113	0.207	0.328	0.012	0.020	0.034				
F434NAP	A → Y	(HH)	0.277	0.457	0.728	0.003	0.005	0.008	A	1.0	Y	143
		(LL)	0.233	0.421	0.677	0.003	0.004	0.006	B	1.0		
	B → Y	(HL)	0.229	0.396	0.614	0.003	0.004	0.006	C	1.0		
		(LH)	0.227	0.394	0.646	0.003	0.005	0.008	D	1.0		
	C → Y	(HL)	0.210	0.385	0.606	0.003	0.004	0.006				
		(LH)	0.298	0.480	0.758	0.003	0.005	0.008				
	D → Y	(HL)	0.221	0.409	0.647	0.003	0.004	0.006				
		(LH)	0.286	0.482	0.782	0.003	0.005	0.008				

Block type	Path IN → OUT		Switching speed t LD0 (ns) MIN.	TYP.	MAX.	t 1 MIN.	TYP.	MAX.	Input Symbol	Fanin	Output Symbol	Fanout
F434NAT	A → Y	(HH)	0.146	0.227	0.339	0.003	0.005	0.008	A	4.8	Y	122
		(LL)	0.141	0.243	0.372	0.002	0.003	0.006	B	10.1		
	B → Y	(HL)	0.108	0.172	0.236	0.002	0.003	0.006	C	10.1		
		(LH)	0.068	0.130	0.220	0.003	0.005	0.008	D	10.0		
	C → Y	(HL)	0.098	0.153	0.231	0.001	0.003	0.006				
		(LH)	0.121	0.209	0.328	0.003	0.005	0.008				
	D → Y	(HL)	0.110	0.175	0.268	0.001	0.003	0.006				
		(LH)	0.109	0.212	0.351	0.003	0.005	0.008				
L434NB	A → Y	(HH)	0.115	0.185	0.279	0.024	0.041	0.067	A	1.0	Y	15
		(LL)	0.109	0.194	0.301	0.013	0.026	0.044	B	1.0		
	B → Y	(HH)	0.128	0.208	0.321	0.024	0.041	0.067	C	1.0		
		(LL)	0.117	0.214	0.336	0.013	0.026	0.044	D	1.0		
	C → Y	(HL)	0.096	0.148	0.225	0.012	0.026	0.044				
		(LH)	0.113	0.195	0.302	0.024	0.041	0.067				
	D → Y	(HL)	0.106	0.170	0.260	0.012	0.026	0.044				
		(LH)	0.101	0.198	0.327	0.024	0.041	0.067				
F434NB	A → Y	(HH)	0.144	0.221	0.329	0.012	0.021	0.033	A	1.0	Y	31
		(LL)	0.139	0.231	0.353	0.006	0.013	0.022	B	1.0		
	B → Y	(HH)	0.142	0.217	0.325	0.012	0.021	0.033	C	2.5		
		(LL)	0.135	0.227	0.347	0.006	0.013	0.022	D	2.3		
	C → Y	(HL)	0.096	0.152	0.233	0.006	0.013	0.022				
		(LH)	0.112	0.206	0.327	0.012	0.020	0.034				
	D → Y	(HL)	0.096	0.152	0.233	0.006	0.013	0.022				
		(LH)	0.112	0.206	0.327	0.012	0.020	0.034				
F434NBP	A → Y	(HH)	0.276	0.456	0.726	0.003	0.005	0.008	A	1.0	Y	143
		(LL)	0.234	0.420	0.679	0.003	0.004	0.006	B	1.0		
	B → Y	(HH)	0.288	0.479	0.767	0.003	0.005	0.008	C	1.0		
		(LL)	0.243	0.441	0.717	0.003	0.004	0.006	D	1.0		
	C → Y	(HL)	0.206	0.386	0.608	0.003	0.004	0.006				
		(LH)	0.297	0.477	0.755	0.003	0.005	0.008				
	D → Y	(HL)	0.219	0.410	0.650	0.003	0.004	0.006				
		(LH)	0.285	0.480	0.779	0.003	0.005	0.008				
F434NBT	A → Y	(HH)	0.169	0.241	0.359	0.002	0.003	0.004	A	4.9	Y	133
		(LL)	0.134	0.236	0.363	0.002	0.003	0.006	B	4.8		
	B → Y	(HH)	0.149	0.225	0.357	0.002	0.003	0.004	C	9.8		
		(LL)	0.150	0.260	0.397	0.002	0.003	0.006	D	9.8		
	C → Y	(HL)	0.079	0.117	0.176	0.002	0.003	0.006				
		(LH)	0.101	0.160	0.239	0.003	0.005	0.008				
	D → Y	(HL)	0.093	0.139	0.208	0.002	0.003	0.006				
		(LH)	0.090	0.162	0.263	0.003	0.005	0.008				
L434NC	A → Y	(HH)	0.115	0.185	0.278	0.024	0.041	0.067	A	1.0	Y	15
		(LL)	0.109	0.194	0.301	0.013	0.026	0.044	B	1.0		
	B → Y	(HH)	0.128	0.209	0.321	0.024	0.041	0.067	C	1.0		
		(LL)	0.117	0.214	0.336	0.013	0.026	0.044	D	1.0		
	C → Y	(HH)	0.155	0.264	0.411	0.024	0.041	0.067				
		(LL)	0.119	0.213	0.341	0.012	0.026	0.044				
	D → Y	(HH)	0.168	0.289	0.454	0.024	0.041	0.067				
		(LL)	0.128	0.235	0.378	0.012	0.026	0.044				
F434NC	A → Y	(HH)	0.145	0.222	0.331	0.012	0.021	0.033	A	1.0	Y	31
		(LL)	0.140	0.231	0.354	0.006	0.013	0.022	B	1.0		
	B → Y	(HH)	0.143	0.218	0.328	0.012	0.021	0.033	C	1.0		
		(LL)	0.136	0.227	0.348	0.007	0.013	0.022	D	1.0		
	C → Y	(HH)	0.189	0.316	0.485	0.012	0.020	0.034				
		(LL)	0.151	0.254	0.404	0.006	0.013	0.022				
	D → Y	(HH)	0.186	0.313	0.480	0.012	0.020	0.034				
		(LL)	0.148	0.251	0.395	0.006	0.013	0.022				

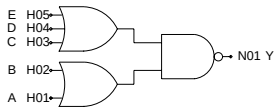
Block type	Path IN → OUT		Switching speed t LD0 (ns) MIN.	TYP.	MAX.	t 1 MIN.	TYP.	MAX.	Input Symbol	Fanin	Output Symbol	Fanout
F434NCP	A → Y	(HH)	0.276	0.456	0.725	0.003	0.005	0.008	A	1.0	Y	143
		(LL)	0.233	0.419	0.679	0.003	0.004	0.006	B	1.0		
	B → Y	(HH)	0.288	0.479	0.766	0.003	0.005	0.008	C	1.0		
		(LL)	0.243	0.442	0.718	0.003	0.004	0.006	D	1.0		
	C → Y	(HH)	0.336	0.546	0.864	0.003	0.005	0.008				
		(LL)	0.242	0.440	0.718	0.003	0.004	0.006				
	D → Y	(HH)	0.349	0.571	0.907	0.003	0.005	0.008				
		(LL)	0.251	0.462	0.759	0.003	0.004	0.006				
F434NCT	A → Y	(HH)	0.169	0.242	0.358	0.002	0.003	0.004	A	4.9	Y	256
		(LL)	0.137	0.212	0.324	0.002	0.003	0.006	B	4.8		
	B → Y	(HH)	0.149	0.225	0.353	0.002	0.003	0.004	C	4.9		
		(LL)	0.155	0.237	0.359	0.002	0.003	0.006	D	4.8		
	C → Y	(HH)	0.178	0.257	0.386	0.002	0.003	0.004				
		(LL)	0.130	0.210	0.329	0.002	0.003	0.006				
	D → Y	(HH)	0.158	0.241	0.383	0.002	0.003	0.004				
		(LL)	0.145	0.234	0.360	0.002	0.003	0.006				
L434ND	A → Y	(HH)	0.117	0.187	0.286	0.024	0.041	0.067	A	1.0	Y	15
		(LL)	0.110	0.197	0.306	0.013	0.026	0.044	B	1.0		
	B → Y	(HL)	0.106	0.166	0.228	0.013	0.026	0.044	C	1.0		
		(LH)	0.061	0.121	0.201	0.024	0.041	0.067	D	1.0		
	C → Y	(HH)	0.152	0.261	0.407	0.024	0.041	0.067				
		(LL)	0.113	0.205	0.330	0.012	0.026	0.044				
	D → Y	(HL)	0.107	0.167	0.257	0.012	0.026	0.044				
		(LH)	0.101	0.201	0.332	0.024	0.041	0.067				
F434ND	A → Y	(HH)	0.143	0.220	0.327	0.012	0.021	0.033	A	1.0	Y	31
		(LL)	0.140	0.231	0.353	0.006	0.013	0.022	B	2.3		
	B → Y	(HL)	0.091	0.141	0.186	0.007	0.013	0.022	C	1.0		
		(LH)	0.068	0.112	0.176	0.012	0.021	0.033	D	2.4		
	C → Y	(HH)	0.189	0.316	0.484	0.012	0.020	0.034				
		(LL)	0.153	0.249	0.396	0.006	0.013	0.022				
	D → Y	(HL)	0.098	0.147	0.223	0.006	0.013	0.022				
		(LH)	0.113	0.207	0.328	0.012	0.020	0.034				
F434NDP	A → Y	(HH)	0.278	0.459	0.731	0.003	0.005	0.008	A	1.0	Y	143
		(LL)	0.235	0.424	0.684	0.003	0.004	0.006	B	1.0		
	B → Y	(HL)	0.229	0.396	0.614	0.003	0.004	0.006	C	1.0		
		(LH)	0.227	0.393	0.644	0.003	0.005	0.008	D	1.0		
	C → Y	(HH)	0.333	0.543	0.861	0.003	0.005	0.008				
		(LL)	0.237	0.429	0.705	0.003	0.004	0.006				
	D → Y	(HL)	0.220	0.408	0.647	0.003	0.004	0.006				
		(LH)	0.286	0.483	0.783	0.003	0.005	0.008				
F434NDT	A → Y	(HH)	0.147	0.226	0.339	0.003	0.005	0.008	A	4.8	Y	123
		(LL)	0.141	0.242	0.372	0.002	0.003	0.006	B	10.1		
	B → Y	(HL)	0.108	0.172	0.237	0.002	0.003	0.006	C	4.8		
		(LH)	0.068	0.131	0.218	0.003	0.005	0.008	D	10.0		
	C → Y	(HH)	0.188	0.309	0.475	0.003	0.005	0.008				
		(LL)	0.151	0.255	0.404	0.001	0.003	0.006				
	D → Y	(HL)	0.110	0.175	0.267	0.001	0.003	0.006				
		(LH)	0.111	0.214	0.354	0.003	0.005	0.008				
L434NE	A → Y	(HH)	0.114	0.183	0.278	0.024	0.041	0.067	A	1.0	Y	15
		(LL)	0.108	0.192	0.297	0.013	0.026	0.044	B	1.0		
	B → Y	(HL)	0.105	0.165	0.226	0.013	0.026	0.044	C	1.0		
		(LH)	0.060	0.117	0.199	0.024	0.041	0.067	D	1.0		
	C → Y	(HH)	0.154	0.263	0.409	0.024	0.041	0.067				
		(LL)	0.116	0.208	0.333	0.012	0.026	0.044				
	D → Y	(HH)	0.167	0.290	0.455	0.024	0.041	0.067				
		(LL)	0.128	0.232	0.372	0.012	0.026	0.044				

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F434NE	A → Y	(HH)	0.144	0.222	0.329	0.012	0.021	0.033	A	1.0	Y	31
		(LL)	0.140	0.232	0.355	0.007	0.013	0.022	B	2.3		
	B → Y	(HL)	0.092	0.142	0.187	0.007	0.013	0.022	C	1.0		
		(LH)	0.069	0.113	0.178	0.012	0.021	0.033	D	1.0		
	C → Y	(HH)	0.190	0.317	0.485	0.012	0.020	0.034				
		(LL)	0.151	0.248	0.394	0.006	0.013	0.022				
	D → Y	(HH)	0.187	0.314	0.481	0.012	0.020	0.034				
		(LL)	0.147	0.244	0.386	0.006	0.013	0.022				
F434NEP	A → Y	(HH)	0.278	0.458	0.729	0.003	0.005	0.008	A	1.0	Y	143
		(LL)	0.233	0.420	0.679	0.003	0.004	0.006	B	1.0		
	B → Y	(HL)	0.230	0.397	0.615	0.003	0.004	0.006	C	1.0		
		(LH)	0.228	0.394	0.647	0.003	0.005	0.008	D	1.0		
	C → Y	(HH)	0.338	0.549	0.870	0.003	0.005	0.008				
		(LL)	0.242	0.437	0.715	0.003	0.004	0.006				
	D → Y	(HH)	0.351	0.575	0.915	0.003	0.005	0.008				
		(LL)	0.253	0.461	0.758	0.003	0.004	0.006				
F434NET	A → Y	(HH)	0.141	0.212	0.314	0.003	0.005	0.008	A	4.9	Y	139
		(LL)	0.141	0.213	0.320	0.002	0.003	0.006	B	9.9		
	B → Y	(HL)	0.113	0.143	0.187	0.002	0.003	0.006	C	4.9		
		(LH)	0.061	0.113	0.192	0.003	0.005	0.008	D	4.8		
	C → Y	(HH)	0.192	0.291	0.442	0.002	0.003	0.004				
		(LL)	0.144	0.251	0.397	0.001	0.003	0.006				
	D → Y	(HH)	0.172	0.274	0.438	0.002	0.003	0.004				
		(LL)	0.162	0.274	0.429	0.001	0.003	0.006				

[MEMO]

Function	2-3-Input OR-NAND										SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	L435	4										
x1	F435	8										
x2	F435NP	9										
x4	F435T	20										
x8												
Block type	with inv. F		with inv. G		with inv. H		-		-		-	
Drivability	Name	cells	Name	cells	Name	cells						
Low Power												
x1												
x2												
x4												
x8												

Logic Diagram for "Normal"



Logic Diagram for "with inv. A type"

Logic Diagram for "with inv. B type"

Logic Diagram for "with inv. C type"

Logic Diagram for "with inv. D type"

Logic Diagram for "with inv. E type"

Logic Diagram for "with inv. F type"

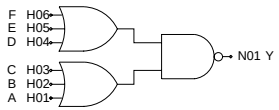
Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L435	A → Y	(HL)	0.195	0.309	0.483	0.010	0.016	0.025	A	1.2	Y	35
		(LH)	0.186	0.291	0.454	0.013	0.021	0.034	B	1.2		
	B → Y	(HL)	0.209	0.328	0.506	0.010	0.016	0.025	C	1.2		
		(LH)	0.176	0.288	0.472	0.013	0.021	0.034	D	1.2		
	C → Y	(HL)	0.207	0.339	0.529	0.010	0.016	0.026	E	1.2		
		(LH)	0.247	0.382	0.604	0.013	0.021	0.034				
	D → Y	(HL)	0.220	0.356	0.554	0.010	0.016	0.025				
		(LH)	0.250	0.411	0.667	0.013	0.021	0.034				
	E → Y	(HL)	0.226	0.364	0.563	0.010	0.016	0.026				
		(LH)	0.250	0.428	0.718	0.013	0.021	0.034				
F435	A → Y	(HL)	0.199	0.316	0.491	0.005	0.008	0.013	A	2.5	Y	71
		(LH)	0.186	0.296	0.471	0.006	0.010	0.017	B	2.4		
	B → Y	(HL)	0.199	0.317	0.491	0.005	0.008	0.013	C	2.4		
		(LH)	0.186	0.296	0.471	0.006	0.010	0.017	D	2.5		
	C → Y	(HL)	0.207	0.331	0.508	0.005	0.008	0.013	E	2.4		
		(LH)	0.249	0.408	0.660	0.006	0.010	0.017				
	D → Y	(HL)	0.211	0.335	0.517	0.005	0.008	0.013				
		(LH)	0.251	0.411	0.668	0.006	0.010	0.017				
	E → Y	(HL)	0.207	0.331	0.509	0.005	0.008	0.013				
		(LH)	0.249	0.408	0.662	0.006	0.010	0.017				
F435NP	A → Y	(HL)	0.245	0.391	0.609	0.003	0.004	0.007	A	2.5	Y	143
		(LH)	0.206	0.328	0.524	0.003	0.005	0.008	B	2.4		
	B → Y	(HL)	0.244	0.391	0.608	0.003	0.004	0.007	C	2.4		
		(LH)	0.206	0.328	0.524	0.003	0.005	0.008	D	2.5		
	C → Y	(HL)	0.252	0.404	0.625	0.003	0.004	0.007	E	2.4		
		(LH)	0.272	0.443	0.719	0.003	0.005	0.008				
	D → Y	(HL)	0.256	0.409	0.633	0.003	0.004	0.007				
		(LH)	0.274	0.446	0.727	0.003	0.005	0.008				
	E → Y	(HL)	0.252	0.405	0.624	0.003	0.004	0.007				
		(LH)	0.272	0.445	0.721	0.003	0.005	0.008				
F435T	A → Y	(HL)	0.092	0.173	0.237	0.002	0.003	0.006	A	10.5	Y	66
		(LH)	0.081	0.130	0.197	0.003	0.005	0.008	B	10.4		
	B → Y	(HL)	0.105	0.194	0.272	0.001	0.003	0.006	C	10.2		
		(LH)	0.070	0.132	0.217	0.003	0.005	0.008	D	10.2		
	C → Y	(HL)	0.103	0.165	0.248	0.001	0.003	0.006	E	10.1		
		(LH)	0.171	0.307	0.490	0.005	0.008	0.013				
	D → Y	(HL)	0.114	0.189	0.286	0.001	0.003	0.006				
		(LH)	0.183	0.341	0.565	0.005	0.008	0.013				
	E → Y	(HL)	0.120	0.206	0.319	0.002	0.003	0.006				
		(LH)	0.183	0.370	0.618	0.005	0.008	0.013				

Function	3-3-Input OR-NAND										SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	L436	5										
x1	F436	9										
x2	F436NP	10										
x4	F436T	24										
x8												
Block type	with inv. F		with inv. G		with inv. H		-		-		-	
Drivability	Name	cells	Name	cells	Name	cells						
Low Power												
x1												
x2												
x4												
x8												

Logic Diagram for "Normal"



Logic Diagram for "with inv. A type"

Logic Diagram for "with inv. B type"

Logic Diagram for "with inv. C type"

Logic Diagram for "with inv. D type"

Logic Diagram for "with inv. E type"

Logic Diagram for "with inv. F type"

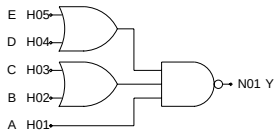
Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L436	A → Y	(HL)	0.202	0.322	0.499	0.010	0.016	0.026	A	1.2	Y	36
		(LH)	0.243	0.376	0.593	0.013	0.021	0.034	B	1.3		
	B → Y	(HL)	0.216	0.340	0.523	0.010	0.016	0.026	C	1.2		
		(LH)	0.247	0.406	0.658	0.013	0.021	0.034	D	1.2		
	C → Y	(HL)	0.223	0.351	0.535	0.010	0.016	0.026	E	1.2		
		(LH)	0.246	0.423	0.708	0.013	0.021	0.034	F	1.2		
	D → Y	(HL)	0.207	0.339	0.529	0.010	0.016	0.025				
		(LH)	0.245	0.382	0.603	0.013	0.021	0.034				
	E → Y	(HL)	0.220	0.356	0.556	0.010	0.016	0.025				
		(LH)	0.250	0.411	0.667	0.013	0.021	0.034				
	F → Y	(HL)	0.226	0.364	0.563	0.010	0.016	0.026				
		(LH)	0.249	0.428	0.718	0.013	0.021	0.034				
F436	A → Y	(HL)	0.208	0.332	0.512	0.005	0.008	0.013	A	2.4	Y	71
		(LH)	0.250	0.410	0.664	0.006	0.010	0.017	B	2.5		
	B → Y	(HL)	0.211	0.336	0.518	0.005	0.008	0.013	C	2.4		
		(LH)	0.252	0.412	0.673	0.006	0.010	0.017	D	2.4		
	C → Y	(HL)	0.208	0.333	0.510	0.005	0.008	0.013	E	2.5		
		(LH)	0.251	0.412	0.668	0.006	0.010	0.017	F	2.4		
	D → Y	(HL)	0.207	0.332	0.509	0.005	0.008	0.013				
		(LH)	0.249	0.408	0.660	0.006	0.010	0.017				
	E → Y	(HL)	0.211	0.335	0.517	0.005	0.008	0.013				
		(LH)	0.251	0.411	0.668	0.006	0.010	0.017				
	F → Y	(HL)	0.207	0.331	0.509	0.005	0.008	0.013				
		(LH)	0.249	0.408	0.662	0.006	0.010	0.017				
F436NP	A → Y	(HL)	0.253	0.407	0.628	0.003	0.004	0.007	A	2.4	Y	144
		(LH)	0.274	0.448	0.727	0.003	0.005	0.008	B	2.5		
	B → Y	(HL)	0.256	0.410	0.635	0.003	0.004	0.007	C	2.4		
		(LH)	0.276	0.450	0.735	0.003	0.005	0.008	D	2.4		
	C → Y	(HL)	0.253	0.407	0.628	0.003	0.004	0.007	E	2.5		
		(LH)	0.276	0.449	0.730	0.003	0.005	0.008	F	2.4		
	D → Y	(HL)	0.252	0.404	0.626	0.003	0.004	0.007				
		(LH)	0.272	0.443	0.719	0.003	0.005	0.008				
	E → Y	(HL)	0.256	0.409	0.633	0.003	0.004	0.007				
		(LH)	0.274	0.446	0.727	0.003	0.005	0.008				
	F → Y	(HL)	0.252	0.405	0.624	0.003	0.004	0.007				
		(LH)	0.272	0.445	0.721	0.003	0.005	0.008				
F436T	A → Y	(HL)	0.095	0.178	0.243	0.001	0.003	0.006	A	10.8	Y	61
		(LH)	0.105	0.170	0.268	0.005	0.008	0.013	B	10.5		
	B → Y	(HL)	0.111	0.205	0.291	0.001	0.003	0.006	C	10.9		
		(LH)	0.119	0.218	0.359	0.005	0.008	0.013	D	10.5		
	C → Y	(HL)	0.115	0.218	0.316	0.001	0.003	0.006	E	10.5		
		(LH)	0.117	0.229	0.392	0.005	0.008	0.013	F	10.3		
	D → Y	(HL)	0.110	0.190	0.296	0.001	0.003	0.006				
		(LH)	0.178	0.360	0.578	0.005	0.008	0.013				
	E → Y	(HL)	0.120	0.220	0.345	0.001	0.003	0.006				
		(LH)	0.196	0.412	0.685	0.005	0.008	0.013				
	F → Y	(HL)	0.126	0.235	0.373	0.001	0.003	0.006				
		(LH)	0.193	0.427	0.717	0.005	0.008	0.013				

Function	1-2-2-Input OR-NAND										SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power												
x1	F437	5										
x2	F437NP	6										
x4	F437T	20										
x8												
Block type	with inv. F		with inv. G		with inv. H		-		-		-	
Drivability	Name	cells	Name	cells	Name	cells						
Low Power												
x1												
x2												
x4												
x8												

Logic Diagram for "Normal"



Logic Diagram for "with inv. A type"

Logic Diagram for "with inv. B type"

Logic Diagram for "with inv. C type"

Logic Diagram for "with inv. D type"

Logic Diagram for "with inv. E type"

Logic Diagram for "with inv. F type"

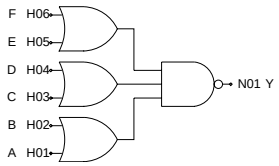
Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

Block type	Switching speed									Input		Output	
	Path		t LD0 (ns)			t 1							
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		Symbol	Fanin	Symbol	Fanout
F437	A → Y	(HL)	0.100	0.163	0.222	0.008	0.018	0.032		A	2.4	Y	29
		(LH)	0.047	0.085	0.122	0.006	0.011	0.017		B	2.4		
	B → Y	(HL)	0.107	0.184	0.289	0.010	0.018	0.032		C	2.5		
		(LH)	0.103	0.176	0.277	0.012	0.020	0.034		D	2.4		
	C → Y	(HL)	0.107	0.184	0.289	0.010	0.018	0.032		E	2.4		
		(LH)	0.103	0.176	0.277	0.012	0.020	0.034					
	D → Y	(HL)	0.113	0.200	0.333	0.010	0.018	0.032					
		(LH)	0.137	0.247	0.387	0.012	0.021	0.034					
	E → Y	(HL)	0.113	0.200	0.333	0.010	0.018	0.032					
		(LH)	0.137	0.247	0.387	0.012	0.021	0.034					
F437NP	A → Y	(HL)	0.236	0.478	0.767	0.003	0.004	0.006		A	1.0	Y	143
		(LH)	0.170	0.296	0.469	0.003	0.005	0.008		B	1.0		
	B → Y	(HL)	0.243	0.449	0.740	0.003	0.004	0.006		C	1.0		
		(LH)	0.274	0.455	0.723	0.003	0.005	0.008		D	1.0		
	C → Y	(HL)	0.264	0.485	0.810	0.003	0.004	0.006		E	1.0		
		(LH)	0.265	0.463	0.759	0.003	0.005	0.008					
	D → Y	(HL)	0.246	0.472	0.786	0.003	0.004	0.006					
		(LH)	0.329	0.524	0.832	0.003	0.005	0.008					
	E → Y	(HL)	0.265	0.508	0.858	0.003	0.004	0.006					
		(LH)	0.321	0.535	0.866	0.003	0.005	0.008					
F437T	A → Y	(HL)	0.114	0.205	0.295	0.003	0.005	0.008		A	10.2	Y	113
		(LH)	0.050	0.089	0.128	0.002	0.003	0.004		B	10.3		
	B → Y	(HL)	0.114	0.190	0.299	0.003	0.005	0.008		C	10.2		
		(LH)	0.111	0.181	0.277	0.003	0.005	0.008		D	10.3		
	C → Y	(HL)	0.133	0.222	0.353	0.003	0.005	0.008		E	10.2		
		(LH)	0.099	0.182	0.300	0.003	0.005	0.008					
	D → Y	(HL)	0.110	0.208	0.343	0.003	0.005	0.008					
		(LH)	0.143	0.235	0.367	0.003	0.005	0.008					
	E → Y	(HL)	0.128	0.237	0.397	0.003	0.005	0.008					
		(LH)	0.131	0.240	0.391	0.003	0.005	0.008					

Function	2-2-2-Input OR-NAND										SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	L438	5										
x1	F438	6										
x2	F438NP	6										
x4												
x8												
Block type	with inv. F		with inv. G		with inv. H		-		-		-	
Drivability	Name	cells	Name	cells	Name	cells						
Low Power												
x1												
x2												
x4												
x8												

Logic Diagram for "Normal"



Logic Diagram for "with inv. A type"

Logic Diagram for "with inv. B type"

Logic Diagram for "with inv. C type"

Logic Diagram for "with inv. D type"

Logic Diagram for "with inv. E type"

Logic Diagram for "with inv. F type"

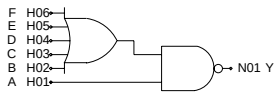
Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L438	A → Y	(HL)	0.235	0.379	0.599	0.010	0.016	0.026	A	1.3	Y	35
		(LH)	0.183	0.283	0.440	0.013	0.021	0.034	B	1.3		
	B → Y	(HL)	0.250	0.397	0.623	0.010	0.016	0.026	C	1.3		
		(LH)	0.171	0.283	0.460	0.013	0.021	0.034	D	1.2		
	C → Y	(HL)	0.269	0.441	0.695	0.010	0.016	0.026	E	1.2		
		(LH)	0.201	0.316	0.497	0.013	0.021	0.034	F	1.3		
	D → Y	(HL)	0.282	0.457	0.722	0.010	0.016	0.026				
		(LH)	0.191	0.314	0.517	0.013	0.021	0.034				
	E → Y	(HL)	0.290	0.477	0.757	0.010	0.016	0.026				
		(LH)	0.210	0.330	0.520	0.013	0.021	0.034				
	F → Y	(HL)	0.303	0.493	0.778	0.010	0.016	0.026				
		(LH)	0.198	0.329	0.540	0.013	0.021	0.034				
F438	A → Y	(HL)	0.108	0.187	0.263	0.008	0.018	0.032	A	2.5	Y	27
		(LH)	0.074	0.129	0.204	0.012	0.021	0.034	B	2.3		
	B → Y	(HL)	0.108	0.187	0.264	0.008	0.018	0.032	C	2.4		
		(LH)	0.074	0.129	0.202	0.012	0.021	0.034	D	2.5		
	C → Y	(HL)	0.119	0.214	0.340	0.008	0.018	0.032	E	2.4		
		(LH)	0.116	0.215	0.342	0.012	0.020	0.034	F	2.5		
	D → Y	(HL)	0.119	0.214	0.340	0.008	0.018	0.032				
		(LH)	0.116	0.215	0.342	0.012	0.020	0.034				
	E → Y	(HL)	0.120	0.234	0.393	0.008	0.018	0.032				
		(LH)	0.152	0.304	0.484	0.012	0.021	0.034				
	F → Y	(HL)	0.120	0.234	0.393	0.008	0.018	0.032				
		(LH)	0.152	0.304	0.484	0.012	0.021	0.034				
F438NP	A → Y	(HL)	0.243	0.483	0.775	0.003	0.004	0.006	A	1.0	Y	143
		(LH)	0.249	0.429	0.687	0.003	0.005	0.008	B	1.0		
	B → Y	(HL)	0.261	0.518	0.835	0.003	0.004	0.006	C	1.0		
		(LH)	0.237	0.431	0.710	0.003	0.005	0.008	D	1.0		
	C → Y	(HL)	0.248	0.518	0.852	0.003	0.004	0.006	E	1.0		
		(LH)	0.313	0.510	0.816	0.003	0.005	0.008	F	1.0		
	D → Y	(HL)	0.258	0.552	0.913	0.003	0.004	0.006				
		(LH)	0.300	0.512	0.841	0.003	0.005	0.008				
	E → Y	(HL)	0.247	0.538	0.902	0.003	0.004	0.006				
		(LH)	0.364	0.606	0.956	0.003	0.005	0.008				
	F → Y	(HL)	0.259	0.572	0.966	0.003	0.004	0.006				
		(LH)	0.353	0.610	0.984	0.003	0.005	0.008				

Function	1-5-Input OR-NAND										SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	L439	5										
x1	F439	6										
x2	F439NP	8										
x4												
x8												
Block type	with inv. F		with inv. G		with inv. H		-		-		-	
Drivability	Name	cells	Name	cells	Name	cells						
Low Power												
x1												
x2												
x4												
x8												

Logic Diagram for "Normal"



Logic Diagram for "with inv. A type"

Logic Diagram for "with inv. B type"

Logic Diagram for "with inv. C type"

Logic Diagram for "with inv. D type"

Logic Diagram for "with inv. E type"

Logic Diagram for "with inv. F type"

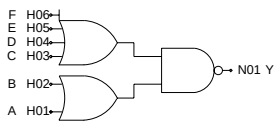
Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

Block type	Path		Switching speed t_{LD0} (ns)			Switching speed t_{1}			Input		Output	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L439	A → Y	(HL)	0.095	0.111	0.136	0.016	0.026	0.044	A	1.0	Y	32
		(LH)	0.046	0.076	0.103	0.013	0.021	0.034	B	1.0		
	B → Y	(HL)	0.150	0.239	0.369	0.016	0.026	0.044	C	1.0		
		(LH)	0.219	0.342	0.537	0.013	0.021	0.034	D	1.0		
	C → Y	(HL)	0.163	0.256	0.392	0.016	0.026	0.044	E	1.0		
		(LH)	0.208	0.339	0.557	0.013	0.021	0.034	F	1.0		
	D → Y	(HL)	0.169	0.271	0.419	0.016	0.026	0.044				
		(LH)	0.272	0.423	0.676	0.013	0.021	0.034				
	E → Y	(HL)	0.183	0.288	0.442	0.016	0.026	0.044				
		(LH)	0.277	0.452	0.740	0.013	0.021	0.034				
	F → Y	(HL)	0.190	0.298	0.454	0.016	0.026	0.044				
		(LH)	0.276	0.470	0.790	0.013	0.021	0.034				
F439	A → Y	(HL)	0.081	0.102	0.137	0.008	0.013	0.022	A	2.5	Y	63
		(LH)	0.052	0.084	0.119	0.006	0.010	0.017	B	1.0		
	B → Y	(HL)	0.174	0.273	0.423	0.008	0.013	0.022	C	1.0		
		(LH)	0.243	0.380	0.604	0.006	0.010	0.017	D	1.0		
	C → Y	(HL)	0.187	0.290	0.448	0.008	0.013	0.022	E	1.0		
		(LH)	0.231	0.378	0.624	0.006	0.010	0.017	F	1.0		
	D → Y	(HL)	0.193	0.305	0.470	0.008	0.013	0.022				
		(LH)	0.293	0.457	0.737	0.006	0.010	0.017				
	E → Y	(HL)	0.205	0.323	0.495	0.008	0.013	0.022				
		(LH)	0.298	0.487	0.802	0.006	0.010	0.017				
	F → Y	(HL)	0.212	0.333	0.509	0.008	0.013	0.022				
		(LH)	0.297	0.505	0.852	0.006	0.010	0.017				
F439NP	A → Y	(HL)	0.082	0.103	0.139	0.004	0.006	0.011	A	4.8	Y	128
		(LH)	0.052	0.083	0.118	0.003	0.005	0.008	B	1.0		
	B → Y	(HL)	0.217	0.346	0.538	0.004	0.007	0.011	C	1.0		
		(LH)	0.295	0.465	0.750	0.003	0.005	0.008	D	1.0		
	C → Y	(HL)	0.234	0.363	0.562	0.004	0.007	0.011	E	1.0		
		(LH)	0.283	0.463	0.769	0.003	0.005	0.008	F	1.0		
	D → Y	(HL)	0.239	0.378	0.585	0.004	0.007	0.011				
		(LH)	0.343	0.543	0.886	0.003	0.005	0.008				
	E → Y	(HL)	0.253	0.396	0.610	0.004	0.007	0.011				
		(LH)	0.349	0.573	0.951	0.003	0.005	0.008				
	F → Y	(HL)	0.258	0.406	0.624	0.004	0.007	0.011				
		(LH)	0.347	0.591	1.001	0.003	0.005	0.008				

Function	2-4-Input OR-NAND										SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	L450	5										
x1	F450	6										
x2	F450NP	8										
x4												
x8												
Block type	with inv. F		with inv. G		with inv. H		-		-		-	
Drivability	Name	cells	Name	cells	Name	cells						
Low Power												
x1												
x2												
x4												
x8												

Logic Diagram for "Normal"



Logic Diagram for "with inv. A type"

Logic Diagram for "with inv. B type"

Logic Diagram for "with inv. C type"

Logic Diagram for "with inv. D type"

Logic Diagram for "with inv. E type"

Logic Diagram for "with inv. F type"

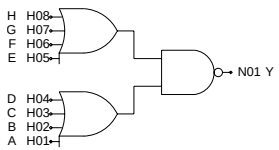
Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

Block type	Switching speed Path		t LD0 (ns)			t 1			Input		Output	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L450	A → Y	(HL)	0.088	0.131	0.196	0.016	0.026	0.044	A	1.0	Y	17
		(LH)	0.082	0.151	0.247	0.024	0.041	0.067	B	1.0		
	B → Y	(HL)	0.074	0.107	0.156	0.016	0.026	0.044	C	1.0		
		(LH)	0.091	0.142	0.211	0.024	0.041	0.067	D	1.0		
	C → Y	(HL)	0.147	0.259	0.404	0.013	0.026	0.044	E	1.0		
		(LH)	0.204	0.317	0.498	0.013	0.021	0.034	F	1.0		
	D → Y	(HL)	0.160	0.277	0.427	0.013	0.026	0.044				
		(LH)	0.193	0.316	0.519	0.013	0.021	0.034				
	E → Y	(HL)	0.161	0.282	0.438	0.013	0.026	0.044				
		(LH)	0.199	0.314	0.501	0.013	0.021	0.034				
	F → Y	(HL)	0.175	0.300	0.462	0.013	0.026	0.044				
		(LH)	0.187	0.311	0.519	0.013	0.021	0.034				
F450	A → Y	(HL)	0.081	0.121	0.184	0.008	0.013	0.022	A	2.4	Y	33
		(LH)	0.094	0.156	0.240	0.012	0.020	0.034	B	2.5		
	B → Y	(HL)	0.081	0.121	0.184	0.008	0.013	0.022	C	1.0		
		(LH)	0.094	0.156	0.240	0.012	0.020	0.034	D	1.0		
	C → Y	(HL)	0.169	0.281	0.434	0.007	0.013	0.022	E	1.0		
		(LH)	0.229	0.357	0.564	0.006	0.011	0.017	F	1.0		
	D → Y	(HL)	0.184	0.299	0.459	0.007	0.013	0.022				
		(LH)	0.218	0.355	0.584	0.006	0.011	0.017				
	E → Y	(HL)	0.183	0.302	0.468	0.007	0.013	0.022				
		(LH)	0.222	0.350	0.562	0.006	0.011	0.017				
	F → Y	(HL)	0.197	0.321	0.492	0.007	0.013	0.022				
		(LH)	0.210	0.347	0.581	0.006	0.011	0.017				
F450NP	A → Y	(HL)	0.226	0.352	0.565	0.003	0.004	0.006	A	1.0	Y	143
		(LH)	0.253	0.421	0.681	0.003	0.005	0.008	B	1.0		
	B → Y	(HL)	0.209	0.325	0.516	0.003	0.004	0.006	C	1.0		
		(LH)	0.263	0.413	0.646	0.003	0.005	0.008	D	1.0		
	C → Y	(HL)	0.269	0.481	0.773	0.003	0.004	0.006	E	1.0		
		(LH)	0.317	0.511	0.816	0.003	0.005	0.008	F	1.0		
	D → Y	(HL)	0.283	0.498	0.797	0.003	0.004	0.006				
		(LH)	0.306	0.509	0.836	0.003	0.005	0.008				
	E → Y	(HL)	0.283	0.502	0.808	0.003	0.004	0.006				
		(LH)	0.312	0.508	0.818	0.003	0.005	0.008				
	F → Y	(HL)	0.297	0.520	0.832	0.003	0.004	0.006				
		(LH)	0.300	0.504	0.836	0.003	0.005	0.008				

Function	4-4-Input OR-NAND										SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	L451	7										
x1	F451	8										
x2	F451NP	10										
x4												
x8												
Block type	with inv. F		with inv. G		with inv. H		-		-		-	
Drivability	Name	cells	Name	cells	Name	cells						
Low Power												
x1												
x2												
x4												
x8												

Logic Diagram for "Normal"



Logic Diagram for "with inv. A type"

Logic Diagram for "with inv. B type"

Logic Diagram for "with inv. C type"

Logic Diagram for "with inv. D type"

Logic Diagram for "with inv. E type"

Logic Diagram for "with inv. F type"

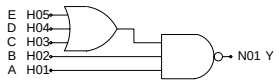
Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

Block type	Switching speed									Input		Output	
	Path		t LD0 (ns)			t 1							
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		Symbol	Fanin	Symbol	Fanout
L451	A → Y	(HL)	0.154	0.239	0.367	0.016	0.026	0.044		A	1.0	Y	32
		(LH)	0.210	0.323	0.511	0.013	0.021	0.034		B	1.0		
	B → Y	(HL)	0.167	0.258	0.393	0.016	0.026	0.044		C	1.0		
		(LH)	0.198	0.322	0.530	0.013	0.021	0.034		D	1.0		
	C → Y	(HL)	0.162	0.256	0.395	0.016	0.026	0.044		E	1.0		
		(LH)	0.199	0.311	0.496	0.013	0.021	0.034		F	1.0		
	D → Y	(HL)	0.178	0.274	0.421	0.016	0.026	0.044		G	1.0		
		(LH)	0.189	0.309	0.516	0.013	0.021	0.034		H	1.0		
	E → Y	(HL)	0.145	0.235	0.364	0.016	0.026	0.044					
		(LH)	0.213	0.330	0.516	0.013	0.021	0.034					
	F → Y	(HL)	0.161	0.253	0.388	0.016	0.026	0.044					
		(LH)	0.200	0.328	0.536	0.013	0.021	0.034					
	G → Y	(HL)	0.153	0.248	0.391	0.016	0.026	0.044					
		(LH)	0.202	0.318	0.504	0.013	0.021	0.034					
	H → Y	(HL)	0.170	0.267	0.415	0.016	0.026	0.044					
		(LH)	0.191	0.316	0.522	0.013	0.021	0.034					
F451	A → Y	(HL)	0.177	0.279	0.434	0.008	0.013	0.022		A	1.0	Y	64
		(LH)	0.243	0.380	0.603	0.006	0.010	0.017		B	1.0		
	B → Y	(HL)	0.192	0.297	0.458	0.008	0.013	0.022		C	1.0		
		(LH)	0.231	0.378	0.623	0.006	0.010	0.017		D	1.0		
	C → Y	(HL)	0.185	0.295	0.459	0.008	0.013	0.022		E	1.0		
		(LH)	0.229	0.364	0.585	0.006	0.010	0.017		F	1.0		
	D → Y	(HL)	0.200	0.313	0.483	0.008	0.013	0.022		G	1.0		
		(LH)	0.218	0.361	0.604	0.006	0.010	0.017		H	1.0		
	E → Y	(HL)	0.172	0.272	0.423	0.008	0.013	0.022					
		(LH)	0.237	0.370	0.587	0.006	0.010	0.017					
	F → Y	(HL)	0.187	0.289	0.445	0.008	0.013	0.022					
		(LH)	0.226	0.368	0.607	0.006	0.010	0.017					
	G → Y	(HL)	0.180	0.287	0.448	0.008	0.013	0.022					
		(LH)	0.224	0.355	0.570	0.006	0.010	0.017					
	H → Y	(HL)	0.197	0.304	0.471	0.008	0.013	0.022					
		(LH)	0.214	0.352	0.589	0.006	0.010	0.017					
F451NP	A → Y	(HL)	0.217	0.346	0.539	0.004	0.007	0.011		A	1.0	Y	128
		(LH)	0.289	0.455	0.734	0.003	0.005	0.008		B	1.0		
	B → Y	(HL)	0.231	0.364	0.563	0.004	0.007	0.011		C	1.0		
		(LH)	0.278	0.454	0.754	0.003	0.005	0.008		D	1.0		
	C → Y	(HL)	0.226	0.361	0.564	0.004	0.007	0.011		E	1.0		
		(LH)	0.272	0.436	0.713	0.003	0.005	0.008		F	1.0		
	D → Y	(HL)	0.242	0.379	0.589	0.004	0.007	0.011		G	1.0		
		(LH)	0.261	0.433	0.731	0.003	0.005	0.008		H	1.0		
	E → Y	(HL)	0.217	0.345	0.536	0.004	0.007	0.011					
		(LH)	0.288	0.453	0.731	0.003	0.005	0.008					
	F → Y	(HL)	0.230	0.362	0.560	0.004	0.007	0.011					
		(LH)	0.277	0.451	0.750	0.003	0.005	0.008					
	G → Y	(HL)	0.227	0.360	0.561	0.004	0.007	0.011					
		(LH)	0.271	0.435	0.709	0.003	0.005	0.008					
	H → Y	(HL)	0.240	0.377	0.586	0.004	0.007	0.011					
		(LH)	0.260	0.432	0.728	0.003	0.005	0.008					

Function	1-1-3-Input OR-NAND										SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	L452	4										
x1	F452	5										
x2	F452NP	6										
x4												
x8												
Block type	with inv. F		with inv. G		with inv. H		-		-		-	
Drivability	Name	cells	Name	cells	Name	cells						
Low Power												
x1												
x2												
x4												
x8												

Logic Diagram for "Normal"



Logic Diagram for "with inv. A type"

Logic Diagram for "with inv. B type"

Logic Diagram for "with inv. C type"

Logic Diagram for "with inv. D type"

Logic Diagram for "with inv. E type"

Logic Diagram for "with inv. F type"

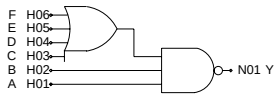
Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L452	A → Y	(HL)	0.187	0.287	0.443	0.010	0.016	0.025	A	1.0	Y	35
		(LH)	0.132	0.206	0.320	0.013	0.021	0.034	B	1.0		
	B → Y	(HL)	0.207	0.396	0.606	0.010	0.016	0.025	C	1.0		
		(LH)	0.131	0.233	0.371	0.013	0.021	0.034	D	1.0		
	C → Y	(HL)	0.215	0.347	0.558	0.010	0.016	0.025	E	1.0		
		(LH)	0.275	0.436	0.689	0.013	0.021	0.034				
	D → Y	(HL)	0.233	0.374	0.601	0.010	0.016	0.025				
		(LH)	0.287	0.481	0.782	0.013	0.021	0.034				
	E → Y	(HL)	0.239	0.383	0.620	0.010	0.016	0.025				
		(LH)	0.282	0.494	0.818	0.013	0.021	0.034				
F452	A → Y	(HL)	0.232	0.364	0.566	0.005	0.008	0.013	A	1.0	Y	71
		(LH)	0.149	0.235	0.365	0.006	0.010	0.017	B	1.0		
	B → Y	(HL)	0.254	0.475	0.732	0.005	0.008	0.013	C	1.0		
		(LH)	0.148	0.266	0.425	0.006	0.010	0.017	D	1.0		
	C → Y	(HL)	0.263	0.426	0.684	0.005	0.008	0.013	E	1.0		
		(LH)	0.303	0.477	0.754	0.006	0.010	0.017				
	D → Y	(HL)	0.280	0.453	0.729	0.005	0.008	0.013				
		(LH)	0.314	0.521	0.847	0.006	0.010	0.017				
	E → Y	(HL)	0.286	0.463	0.746	0.005	0.008	0.013				
		(LH)	0.310	0.534	0.882	0.006	0.010	0.017				
F452NP	A → Y	(HL)	0.314	0.498	0.779	0.003	0.004	0.007	A	1.0	Y	142
		(LH)	0.179	0.284	0.443	0.003	0.005	0.008	B	1.0		
	B → Y	(HL)	0.337	0.609	0.948	0.003	0.004	0.007	C	1.0		
		(LH)	0.178	0.321	0.516	0.003	0.005	0.008	D	1.0		
	C → Y	(HL)	0.346	0.560	0.897	0.003	0.004	0.007	E	1.0		
		(LH)	0.344	0.541	0.856	0.003	0.005	0.008				
	D → Y	(HL)	0.362	0.587	0.944	0.003	0.004	0.007				
		(LH)	0.357	0.586	0.949	0.003	0.005	0.008				
	E → Y	(HL)	0.369	0.597	0.961	0.003	0.004	0.007				
		(LH)	0.352	0.599	0.984	0.003	0.005	0.008				

Function	1-1-4-Input OR-NAND										SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	L453	5										
x1	F453	6										
x2	F453NP	9										
x4												
x8												
Block type	with inv. F		with inv. G		with inv. H		-		-		-	
Drivability	Name	cells	Name	cells	Name	cells						
Low Power												
x1												
x2												
x4												
x8												

Logic Diagram for "Normal"



Logic Diagram for "with inv. A type"

Logic Diagram for "with inv. B type"

Logic Diagram for "with inv. C type"

Logic Diagram for "with inv. D type"

Logic Diagram for "with inv. E type"

Logic Diagram for "with inv. F type"

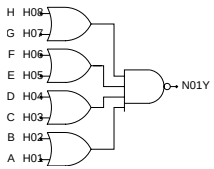
Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L453	A → Y	(HL)	0.118	0.140	0.182	0.022	0.037	0.064	A	1.0	Y	21
		(LH)	0.052	0.089	0.125	0.013	0.021	0.034	B	1.0		
	B → Y	(HL)	0.104	0.140	0.210	0.023	0.037	0.064	C	1.0		
		(LH)	0.065	0.107	0.154	0.013	0.021	0.033	D	1.0		
	C → Y	(HL)	0.178	0.285	0.466	0.023	0.037	0.064	E	1.0		
		(LH)	0.231	0.361	0.566	0.013	0.021	0.034	F	1.0		
	D → Y	(HL)	0.193	0.305	0.488	0.023	0.037	0.064				
		(LH)	0.219	0.359	0.586	0.013	0.021	0.034				
	E → Y	(HL)	0.189	0.305	0.496	0.023	0.037	0.064				
		(LH)	0.227	0.357	0.568	0.013	0.021	0.034				
	F → Y	(HL)	0.202	0.324	0.519	0.023	0.037	0.064				
		(LH)	0.215	0.355	0.587	0.013	0.021	0.034				
F453	A → Y	(HL)	0.095	0.125	0.183	0.011	0.018	0.032	A	2.4	Y	43
		(LH)	0.058	0.097	0.139	0.006	0.010	0.017	B	2.4		
	B → Y	(HL)	0.099	0.130	0.197	0.011	0.018	0.032	C	1.0		
		(LH)	0.062	0.103	0.148	0.006	0.010	0.017	D	1.0		
	C → Y	(HL)	0.184	0.293	0.462	0.011	0.018	0.032	E	1.0		
		(LH)	0.243	0.379	0.602	0.006	0.010	0.017	F	1.0		
	D → Y	(HL)	0.199	0.311	0.485	0.011	0.018	0.032				
		(LH)	0.232	0.378	0.622	0.006	0.010	0.017				
	E → Y	(HL)	0.197	0.314	0.495	0.011	0.018	0.032				
		(LH)	0.235	0.373	0.599	0.006	0.010	0.017				
	F → Y	(HL)	0.211	0.332	0.519	0.011	0.018	0.032				
		(LH)	0.224	0.370	0.619	0.006	0.010	0.017				
F453NP	A → Y	(HL)	0.096	0.128	0.188	0.006	0.009	0.016	A	4.9	Y	86
		(LH)	0.059	0.097	0.140	0.003	0.005	0.008	B	4.9		
	B → Y	(HL)	0.100	0.132	0.198	0.006	0.009	0.016	C	1.0		
		(LH)	0.062	0.103	0.149	0.003	0.005	0.008	D	1.0		
	C → Y	(HL)	0.229	0.362	0.574	0.006	0.009	0.016	E	1.0		
		(LH)	0.293	0.462	0.745	0.003	0.005	0.008	F	1.0		
	D → Y	(HL)	0.243	0.380	0.599	0.006	0.009	0.016				
		(LH)	0.283	0.461	0.764	0.003	0.005	0.008				
	E → Y	(HL)	0.242	0.383	0.606	0.006	0.009	0.016				
		(LH)	0.284	0.455	0.744	0.003	0.005	0.008				
	F → Y	(HL)	0.256	0.402	0.631	0.006	0.009	0.016				
		(LH)	0.273	0.454	0.762	0.003	0.005	0.008				

Function	2-2-2-2-Input OR-NAND										SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power												
x1	F454	13										
x2	F454NP	14										
x4												
x8												
Block type	with inv. F		with inv. G		with inv. H		-		-		-	
Drivability	Name	cells	Name	cells	Name	cells						
Low Power												
x1												
x2												
x4												
x8												

Logic Diagram for "Normal"



Logic Diagram for "with inv. A type"

Logic Diagram for "with inv. B type"

Logic Diagram for "with inv. C type"

Logic Diagram for "with inv. D type"

Logic Diagram for "with inv. E type"

Logic Diagram for "with inv. F type"

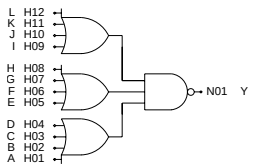
Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F454	A → Y	(HL)	0.307	0.492	0.791	0.005	0.008	0.013	A	2.4	Y	71
		(LH)	0.268	0.429	0.684	0.006	0.010	0.017	B	2.4		
	B → Y	(HL)	0.307	0.492	0.789	0.005	0.008	0.013	C	2.5		
		(LH)	0.267	0.428	0.684	0.006	0.010	0.017	D	2.4		
	C → Y	(HL)	0.314	0.512	0.827	0.005	0.008	0.013	E	2.4		
		(LH)	0.274	0.439	0.705	0.006	0.010	0.017	F	2.4		
	D → Y	(HL)	0.314	0.511	0.827	0.005	0.008	0.013	G	2.4		
		(LH)	0.274	0.439	0.704	0.006	0.010	0.017	H	2.4		
	E → Y	(HL)	0.298	0.484	0.785	0.005	0.008	0.013				
		(LH)	0.275	0.440	0.704	0.006	0.010	0.017				
	F → Y	(HL)	0.298	0.484	0.785	0.005	0.008	0.013				
		(LH)	0.275	0.441	0.704	0.006	0.010	0.017				
	G → Y	(HL)	0.310	0.510	0.828	0.005	0.008	0.013				
		(LH)	0.287	0.461	0.734	0.006	0.010	0.017				
	H → Y	(HL)	0.309	0.510	0.829	0.005	0.008	0.013				
		(LH)	0.286	0.460	0.734	0.006	0.010	0.017				
F454NP	A → Y	(HL)	0.332	0.533	0.856	0.003	0.004	0.006	A	2.4	Y	143
		(LH)	0.285	0.456	0.730	0.003	0.005	0.008	B	2.4		
	B → Y	(HL)	0.333	0.533	0.856	0.003	0.004	0.006	C	2.5		
		(LH)	0.286	0.456	0.730	0.003	0.005	0.008	D	2.4		
	C → Y	(HL)	0.341	0.553	0.895	0.003	0.004	0.006	E	2.4		
		(LH)	0.293	0.468	0.754	0.003	0.005	0.008	F	2.4		
	D → Y	(HL)	0.340	0.552	0.895	0.003	0.004	0.006	G	2.4		
		(LH)	0.293	0.469	0.753	0.003	0.005	0.008	H	2.4		
	E → Y	(HL)	0.325	0.525	0.852	0.003	0.004	0.006				
		(LH)	0.294	0.469	0.752	0.003	0.005	0.008				
	F → Y	(HL)	0.324	0.525	0.852	0.003	0.004	0.006				
		(LH)	0.294	0.469	0.751	0.003	0.005	0.008				
	G → Y	(HL)	0.336	0.551	0.895	0.003	0.004	0.006				
		(LH)	0.306	0.491	0.782	0.003	0.005	0.008				
	H → Y	(HL)	0.336	0.551	0.895	0.003	0.004	0.006				
		(LH)	0.305	0.489	0.782	0.003	0.005	0.008				

Function	4-4-4-Input OR-NAND										SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power												
x1	F457	10										
x2	F457NP	11										
x4												
x8												
Block type	with inv. F		with inv. G		with inv. H		-		-		-	
Drivability	Name	cells	Name	cells	Name	cells						
Low Power												
x1												
x2												
x4												
x8												

Logic Diagram for "Normal"



Logic Diagram for "with inv. A type"

Logic Diagram for "with inv. B type"

Logic Diagram for "with inv. C type"

Logic Diagram for "with inv. D type"

Logic Diagram for "with inv. E type"

Logic Diagram for "with inv. F type"

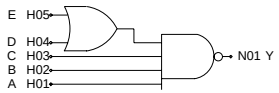
Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

Block type	Switching speed									Input		Output	
	Path		t_{LD0} (ns)			t_1							
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		Symbol	Fanin	Symbol	Fanout
F457	A → Y	(HL)	0.247	0.394	0.615	0.005	0.008	0.013		A	1.0	Y	69
		(LH)	0.254	0.397	0.638	0.006	0.011	0.017		B	1.0		
	B → Y	(HL)	0.262	0.411	0.636	0.005	0.008	0.013		C	1.0		
		(LH)	0.242	0.396	0.658	0.006	0.011	0.017		D	1.0		
	C → Y	(HL)	0.268	0.430	0.674	0.005	0.008	0.013		E	1.0		
		(LH)	0.240	0.376	0.611	0.006	0.011	0.017		F	1.0		
	D → Y	(HL)	0.282	0.447	0.698	0.005	0.008	0.013		G	1.0		
		(LH)	0.226	0.375	0.630	0.006	0.011	0.017		H	1.0		
	E → Y	(HL)	0.293	0.670	1.060	0.005	0.009	0.014		I	1.0		
		(LH)	0.278	0.460	0.752	0.006	0.011	0.017		J	1.2		
	F → Y	(HL)	0.306	0.685	1.079	0.005	0.009	0.014		K	1.0		
		(LH)	0.267	0.460	0.775	0.006	0.011	0.017		L	1.0		
	G → Y	(HL)	0.319	0.730	1.157	0.005	0.009	0.014					
		(LH)	0.267	0.447	0.739	0.006	0.011	0.017					
	H → Y	(HL)	0.331	0.747	1.178	0.005	0.009	0.014					
		(LH)	0.254	0.445	0.756	0.006	0.011	0.017					
	I → Y	(HL)	0.329	0.718	1.139	0.005	0.009	0.014					
		(LH)	0.290	0.502	0.826	0.006	0.011	0.017					
	J → Y	(HL)	0.341	0.732	1.157	0.005	0.009	0.014					
		(LH)	0.279	0.501	0.846	0.006	0.011	0.017					
	K → Y	(HL)	0.356	0.779	1.235	0.005	0.009	0.014					
		(LH)	0.278	0.486	0.813	0.006	0.011	0.017					
	L → Y	(HL)	0.368	0.794	1.259	0.005	0.009	0.014					
		(LH)	0.263	0.484	0.831	0.006	0.011	0.017					
F457NP	A → Y	(HL)	0.326	0.524	0.819	0.003	0.004	0.007		A	1.0	Y	139
		(LH)	0.303	0.476	0.770	0.003	0.005	0.009		B	1.0		
	B → Y	(HL)	0.340	0.539	0.841	0.003	0.004	0.007		C	1.0		
		(LH)	0.291	0.475	0.791	0.003	0.005	0.009		D	1.0		
	C → Y	(HL)	0.345	0.558	0.878	0.003	0.004	0.007		E	1.0		
		(LH)	0.285	0.451	0.741	0.003	0.005	0.009		F	1.0		
	D → Y	(HL)	0.359	0.576	0.901	0.003	0.004	0.007		G	1.0		
		(LH)	0.271	0.450	0.760	0.003	0.005	0.009		H	1.0		
	E → Y	(HL)	0.374	0.859	1.354	0.003	0.004	0.007		I	1.0		
		(LH)	0.326	0.536	0.882	0.003	0.005	0.009		J	1.2		
	F → Y	(HL)	0.386	0.870	1.373	0.003	0.004	0.007		K	1.0		
		(LH)	0.315	0.538	0.903	0.003	0.005	0.009		L	1.0		
	G → Y	(HL)	0.398	0.913	1.455	0.003	0.004	0.007					
		(LH)	0.313	0.522	0.865	0.003	0.005	0.009					
	H → Y	(HL)	0.411	0.928	1.474	0.003	0.004	0.007					
		(LH)	0.300	0.519	0.884	0.003	0.005	0.009					
	I → Y	(HL)	0.410	0.905	1.436	0.003	0.004	0.007					
		(LH)	0.340	0.579	0.959	0.003	0.005	0.009					
	J → Y	(HL)	0.423	0.921	1.454	0.003	0.004	0.007					
		(LH)	0.329	0.579	0.977	0.003	0.005	0.009					
	K → Y	(HL)	0.435	0.963	1.530	0.003	0.004	0.007					
		(LH)	0.326	0.561	0.943	0.003	0.005	0.009					
	L → Y	(HL)	0.448	0.978	1.551	0.003	0.004	0.007					
		(LH)	0.312	0.562	0.959	0.003	0.005	0.009					

Function	1-1-1-2-Input OR-NAND												SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E			
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power	L458	4												
x1	F458	5												
x2	F458NP	5												
x4														
x8														
Block type	with inv. F		with inv. G		with inv. H		-		-		-			
Drivability	Name	cells	Name	cells	Name	cells								
Low Power														
x1														
x2														
x4														
x8														

Logic Diagram for "Normal"



Logic Diagram for "with inv. A type"

Logic Diagram for "with inv. B type"

Logic Diagram for "with inv. C type"

Logic Diagram for "with inv. D type"

Logic Diagram for "with inv. E type"

Logic Diagram for "with inv. F type"

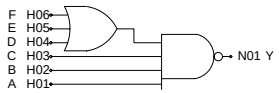
Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L458	A → Y	(HL)	0.270	0.399	0.618	0.010	0.016	0.025	A	1.2	Y	35
		(LH)	0.133	0.224	0.349	0.013	0.021	0.034	B	1.3		
	B → Y	(HL)	0.265	0.400	0.636	0.010	0.016	0.025	C	1.2		
		(LH)	0.152	0.249	0.384	0.013	0.021	0.034	D	1.3		
	C → Y	(HL)	0.253	0.398	0.660	0.010	0.016	0.025	E	1.2		
		(LH)	0.168	0.271	0.418	0.013	0.021	0.034				
	D → Y	(HL)	0.202	0.328	0.511	0.010	0.016	0.025				
		(LH)	0.193	0.304	0.476	0.013	0.021	0.034				
	E → Y	(HL)	0.215	0.344	0.534	0.010	0.016	0.025				
		(LH)	0.182	0.301	0.495	0.013	0.021	0.034				
F458	A → Y	(HL)	0.120	0.167	0.225	0.013	0.024	0.043	A	2.5	Y	30
		(LH)	0.045	0.085	0.124	0.006	0.010	0.017	B	2.4		
	B → Y	(HL)	0.118	0.186	0.288	0.013	0.024	0.043	C	2.4		
		(LH)	0.062	0.109	0.158	0.006	0.010	0.017	D	2.4		
	C → Y	(HL)	0.109	0.201	0.335	0.013	0.024	0.043	E	2.4		
		(LH)	0.074	0.126	0.182	0.006	0.010	0.017				
	D → Y	(HL)	0.136	0.221	0.383	0.015	0.024	0.043				
		(LH)	0.139	0.238	0.373	0.012	0.021	0.034				
	E → Y	(HL)	0.136	0.221	0.383	0.015	0.024	0.043				
		(LH)	0.139	0.238	0.373	0.012	0.021	0.034				
F458NP	A → Y	(HL)	0.308	0.527	0.843	0.003	0.004	0.006	A	1.0	Y	143
		(LH)	0.177	0.311	0.495	0.003	0.005	0.008	B	1.0		
	B → Y	(HL)	0.306	0.540	0.889	0.003	0.004	0.006	C	1.0		
		(LH)	0.197	0.335	0.530	0.003	0.005	0.008	D	1.0		
	C → Y	(HL)	0.299	0.556	0.941	0.003	0.004	0.006	E	1.0		
		(LH)	0.214	0.362	0.568	0.003	0.005	0.008				
	D → Y	(HL)	0.317	0.516	0.872	0.003	0.004	0.006				
		(LH)	0.332	0.530	0.828	0.003	0.005	0.008				
	E → Y	(HL)	0.348	0.567	0.974	0.003	0.004	0.006				
		(LH)	0.324	0.540	0.867	0.003	0.005	0.008				

Function	1-1-1-3-Input OR-NAND										SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	L459	5										
x1	F459	5										
x2	F459NP	6										
x4												
x8												
Block type	with inv. F		with inv. G		with inv. H		-		-		-	
Drivability	Name	cells	Name	cells	Name	cells						
Low Power												
x1												
x2												
x4												
x8												

Logic Diagram for "Normal"



Logic Diagram for "with inv. A type"

Logic Diagram for "with inv. B type"

Logic Diagram for "with inv. C type"

Logic Diagram for "with inv. D type"

Logic Diagram for "with inv. E type"

Logic Diagram for "with inv. F type"

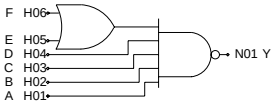
Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_{1}						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L459	A → Y	(HL)	0.215	0.320	0.491	0.010	0.016	0.025	A	1.0	Y	35
		(LH)	0.121	0.200	0.313	0.013	0.021	0.034	B	1.0		
	B → Y	(HL)	0.202	0.310	0.489	0.010	0.016	0.025	C	1.0		
		(LH)	0.140	0.227	0.349	0.013	0.021	0.034	D	1.0		
	C → Y	(HL)	0.208	0.397	0.608	0.010	0.016	0.025	E	1.0		
		(LH)	0.132	0.234	0.373	0.013	0.021	0.034	F	1.0		
	D → Y	(HL)	0.216	0.348	0.558	0.010	0.016	0.025				
		(LH)	0.276	0.440	0.693	0.013	0.021	0.034				
	E → Y	(HL)	0.233	0.374	0.601	0.010	0.016	0.025				
		(LH)	0.288	0.483	0.789	0.013	0.021	0.034				
	F → Y	(HL)	0.239	0.384	0.621	0.010	0.016	0.025				
		(LH)	0.284	0.497	0.824	0.013	0.021	0.034				
F459	A → Y	(HL)	0.256	0.388	0.600	0.005	0.008	0.013	A	1.0	Y	71
		(LH)	0.136	0.225	0.351	0.006	0.010	0.017	B	1.0		
	B → Y	(HL)	0.243	0.378	0.597	0.005	0.008	0.013	C	1.0		
		(LH)	0.157	0.252	0.387	0.006	0.010	0.017	D	1.0		
	C → Y	(HL)	0.249	0.466	0.716	0.005	0.008	0.013	E	1.0		
		(LH)	0.148	0.262	0.419	0.006	0.010	0.017	F	1.0		
	D → Y	(HL)	0.257	0.416	0.668	0.005	0.008	0.013				
		(LH)	0.301	0.475	0.750	0.006	0.010	0.017				
	E → Y	(HL)	0.274	0.443	0.713	0.005	0.008	0.013				
		(LH)	0.313	0.519	0.844	0.006	0.010	0.017				
	F → Y	(HL)	0.281	0.452	0.731	0.005	0.008	0.013				
		(LH)	0.309	0.533	0.879	0.006	0.010	0.017				
F459NP	A → Y	(HL)	0.337	0.518	0.809	0.003	0.004	0.007	A	1.0	Y	143
		(LH)	0.167	0.271	0.429	0.003	0.005	0.008	B	1.0		
	B → Y	(HL)	0.323	0.509	0.807	0.003	0.004	0.007	C	1.0		
		(LH)	0.187	0.298	0.464	0.003	0.005	0.008	D	1.0		
	C → Y	(HL)	0.330	0.598	0.930	0.003	0.004	0.007	E	1.0		
		(LH)	0.177	0.317	0.509	0.003	0.005	0.008	F	1.0		
	D → Y	(HL)	0.339	0.548	0.878	0.003	0.004	0.007				
		(LH)	0.343	0.540	0.853	0.003	0.005	0.008				
	E → Y	(HL)	0.356	0.575	0.924	0.003	0.004	0.007				
		(LH)	0.355	0.584	0.946	0.003	0.005	0.008				
	F → Y	(HL)	0.362	0.585	0.943	0.003	0.004	0.007				
		(LH)	0.351	0.598	0.982	0.003	0.005	0.008				

Function	1-1-1-1-2-Input OR-NAND										SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power												
x1	F490	5										
x2	F490NP	6										
x4												
x8												
Block type	with inv. F		with inv. G		with inv. H		-		-		-	
Drivability	Name	cells	Name	cells	Name	cells						
Low Power												
x1												
x2												
x4												
x8												

Logic Diagram for "Normal"



Logic Diagram for "with inv. A type"

Logic Diagram for "with inv. B type"

Logic Diagram for "with inv. C type"

Logic Diagram for "with inv. D type"

Logic Diagram for "with inv. E type"

Logic Diagram for "with inv. F type"

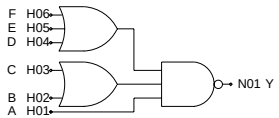
Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F490	A → Y	(HL)	0.307	0.461	0.717	0.005	0.008	0.013	A	1.0	Y	71
		(LH)	0.145	0.244	0.381	0.006	0.010	0.017	B	1.0		
	B → Y	(HL)	0.303	0.461	0.736	0.005	0.008	0.013	C	1.0		
		(LH)	0.165	0.270	0.417	0.006	0.010	0.017	D	1.0		
	C → Y	(HL)	0.291	0.462	0.757	0.005	0.008	0.013	E	1.0		
		(LH)	0.184	0.292	0.451	0.006	0.010	0.017	F	1.0		
	D → Y	(HL)	0.265	0.467	0.725	0.005	0.008	0.013				
		(LH)	0.151	0.268	0.427	0.006	0.010	0.017				
	E → Y	(HL)	0.267	0.433	0.692	0.005	0.008	0.013				
		(LH)	0.249	0.391	0.612	0.006	0.010	0.017				
	F → Y	(HL)	0.285	0.458	0.734	0.005	0.008	0.013				
		(LH)	0.240	0.399	0.649	0.006	0.010	0.017				
F490NP	A → Y	(HL)	0.389	0.592	0.929	0.003	0.004	0.007	A	1.0	Y	142
		(LH)	0.176	0.292	0.459	0.003	0.005	0.008	B	1.0		
	B → Y	(HL)	0.385	0.592	0.949	0.003	0.004	0.007	C	1.0		
		(LH)	0.198	0.318	0.497	0.003	0.005	0.008	D	1.0		
	C → Y	(HL)	0.372	0.594	0.970	0.003	0.004	0.007	E	1.0		
		(LH)	0.215	0.343	0.531	0.003	0.005	0.008	F	1.0		
	D → Y	(HL)	0.347	0.598	0.934	0.003	0.004	0.007				
		(LH)	0.182	0.319	0.508	0.003	0.005	0.008				
	E → Y	(HL)	0.348	0.566	0.901	0.003	0.004	0.007				
		(LH)	0.285	0.447	0.701	0.003	0.005	0.008				
	F → Y	(HL)	0.367	0.587	0.946	0.003	0.004	0.007				
		(LH)	0.276	0.454	0.738	0.003	0.005	0.008				

Function	1-2-3-Input OR-NAND										SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	L491	5										
x1	F491	5										
x2	F491NP	6										
x4												
x8												
Block type	with inv. F		with inv. G		with inv. H		-		-		-	
Drivability	Name	cells	Name	cells	Name	cells						
Low Power												
x1												
x2												
x4												
x8												

Logic Diagram for "Normal"



Logic Diagram for "with inv. A type"

Logic Diagram for "with inv. B type"

Logic Diagram for "with inv. C type"

Logic Diagram for "with inv. D type"

Logic Diagram for "with inv. E type"

Logic Diagram for "with inv. F type"

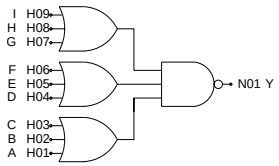
Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

Block type	Switching speed									Input		Output	
	Path		t LD0 (ns)			t 1							
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		Symbol	Fanin	Symbol	Fanout
L491	A → Y	(HL)	0.181	0.278	0.430	0.010	0.016	0.025		A	1.0	Y	35
		(LH)	0.126	0.200	0.309	0.013	0.021	0.034		B	1.0		
	B → Y	(HL)	0.211	0.408	0.626	0.010	0.016	0.025		C	1.0		
		(LH)	0.196	0.332	0.530	0.013	0.021	0.034		D	1.0		
	C → Y	(HL)	0.227	0.429	0.667	0.010	0.016	0.025		E	1.0		
		(LH)	0.184	0.331	0.551	0.013	0.021	0.034		F	1.0		
	D → Y	(HL)	0.222	0.405	0.647	0.010	0.016	0.025					
		(LH)	0.319	0.557	0.892	0.013	0.021	0.034					
	E → Y	(HL)	0.234	0.430	0.689	0.010	0.016	0.025					
		(LH)	0.328	0.591	0.960	0.013	0.021	0.034					
	F → Y	(HL)	0.238	0.446	0.717	0.010	0.016	0.025					
		(LH)	0.327	0.610	1.012	0.013	0.021	0.034					
F491	A → Y	(HL)	0.220	0.345	0.534	0.005	0.008	0.013		A	1.0	Y	71
		(LH)	0.141	0.224	0.346	0.006	0.010	0.017		B	1.0		
	B → Y	(HL)	0.254	0.477	0.734	0.005	0.008	0.013		C	1.0		
		(LH)	0.216	0.367	0.588	0.006	0.010	0.017		D	1.0		
	C → Y	(HL)	0.267	0.495	0.774	0.005	0.008	0.013		E	1.0		
		(LH)	0.203	0.367	0.608	0.006	0.010	0.017		F	1.0		
	D → Y	(HL)	0.265	0.472	0.755	0.005	0.008	0.013					
		(LH)	0.345	0.598	0.951	0.006	0.010	0.017					
	E → Y	(HL)	0.275	0.498	0.796	0.005	0.008	0.013					
		(LH)	0.354	0.632	1.019	0.006	0.010	0.017					
	F → Y	(HL)	0.281	0.514	0.822	0.005	0.008	0.013					
		(LH)	0.354	0.650	1.071	0.006	0.010	0.017					
F491NP	A → Y	(HL)	0.301	0.476	0.744	0.003	0.004	0.007		A	1.0	Y	142
		(LH)	0.171	0.269	0.423	0.003	0.005	0.008		B	1.0		
	B → Y	(HL)	0.335	0.607	0.947	0.003	0.004	0.007		C	1.0		
		(LH)	0.252	0.434	0.699	0.003	0.005	0.008		D	1.0		
	C → Y	(HL)	0.349	0.628	0.986	0.003	0.004	0.007		E	1.0		
		(LH)	0.238	0.434	0.720	0.003	0.005	0.008		F	1.0		
	D → Y	(HL)	0.347	0.604	0.966	0.003	0.004	0.007					
		(LH)	0.391	0.668	1.061	0.003	0.005	0.008					
	E → Y	(HL)	0.357	0.631	1.006	0.003	0.004	0.007					
		(LH)	0.399	0.702	1.128	0.003	0.005	0.008					
	F → Y	(HL)	0.362	0.644	1.034	0.003	0.004	0.007					
		(LH)	0.399	0.721	1.182	0.003	0.005	0.008					

Function	3-3-3-Input OR-NAND										SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	L493	6										
x1	F493	7										
x2	F493NP	8										
x4												
x8												
Block type	with inv. F		with inv. G		with inv. H		-		-		-	
Drivability	Name	cells	Name	cells	Name	cells						
Low Power												
x1												
x2												
x4												
x8												

Logic Diagram for "Normal"



Logic Diagram for "with inv. A type"

Logic Diagram for "with inv. B type"

Logic Diagram for "with inv. C type"

Logic Diagram for "with inv. D type"

Logic Diagram for "with inv. E type"

Logic Diagram for "with inv. F type"

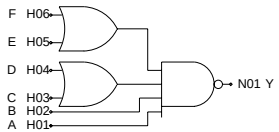
Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

Block type	Path			Switching speed t_{LD0} (ns)			Switching speed t_{1}			Input		Output	
	IN	→	OUT	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L493	A	→ Y	(HL)	0.185	0.294	0.454	0.010	0.016	0.025	A	1.0	Y	36
			(LH)	0.227	0.350	0.548	0.013	0.021	0.034	B	1.0		
	B	→ Y	(HL)	0.199	0.312	0.477	0.010	0.016	0.025	C	1.0		
			(LH)	0.232	0.378	0.611	0.013	0.021	0.034	D	1.0		
	C	→ Y	(HL)	0.205	0.322	0.491	0.010	0.016	0.025	E	1.0		
			(LH)	0.231	0.395	0.661	0.013	0.021	0.034	F	1.0		
	D	→ Y	(HL)	0.214	0.413	0.642	0.010	0.016	0.025	G	1.0		
			(LH)	0.249	0.417	0.678	0.013	0.021	0.034	H	1.0		
	E	→ Y	(HL)	0.231	0.442	0.691	0.010	0.016	0.025	I	1.0		
			(LH)	0.261	0.460	0.768	0.013	0.021	0.034				
	F	→ Y	(HL)	0.237	0.453	0.720	0.010	0.016	0.025				
			(LH)	0.256	0.473	0.803	0.013	0.021	0.034				
	G	→ Y	(HL)	0.233	0.435	0.696	0.010	0.016	0.025				
			(LH)	0.348	0.621	1.000	0.013	0.021	0.034				
	H	→ Y	(HL)	0.242	0.466	0.747	0.010	0.016	0.025				
			(LH)	0.363	0.668	1.096	0.013	0.021	0.034				
	I	→ Y	(HL)	0.244	0.483	0.775	0.010	0.016	0.025				
			(LH)	0.359	0.683	1.132	0.013	0.021	0.034				
F493	A	→ Y	(HL)	0.234	0.376	0.586	0.005	0.008	0.013	A	1.0	Y	71
			(LH)	0.255	0.395	0.620	0.006	0.010	0.017	B	1.0		
	B	→ Y	(HL)	0.249	0.394	0.610	0.005	0.008	0.013	C	1.0		
			(LH)	0.260	0.422	0.683	0.006	0.010	0.017	D	1.0		
	C	→ Y	(HL)	0.256	0.405	0.624	0.005	0.008	0.013	E	1.0		
			(LH)	0.259	0.439	0.733	0.006	0.010	0.017	F	1.0		
	D	→ Y	(HL)	0.263	0.497	0.776	0.005	0.008	0.013	G	1.0		
			(LH)	0.277	0.471	0.770	0.006	0.010	0.017	H	1.0		
	E	→ Y	(HL)	0.280	0.525	0.825	0.005	0.008	0.013	I	1.0		
			(LH)	0.288	0.513	0.859	0.006	0.010	0.017				
	F	→ Y	(HL)	0.286	0.537	0.854	0.005	0.008	0.013				
			(LH)	0.284	0.527	0.895	0.006	0.010	0.017				
	G	→ Y	(HL)	0.283	0.518	0.831	0.005	0.008	0.013				
			(LH)	0.386	0.675	1.079	0.006	0.010	0.017				
	H	→ Y	(HL)	0.290	0.550	0.882	0.005	0.008	0.013				
			(LH)	0.402	0.722	1.177	0.006	0.010	0.017				
	I	→ Y	(HL)	0.294	0.566	0.911	0.005	0.008	0.013				
			(LH)	0.398	0.737	1.214	0.006	0.010	0.017				
F493NP	A	→ Y	(HL)	0.315	0.509	0.798	0.003	0.004	0.007	A	1.0	Y	143
			(LH)	0.296	0.458	0.725	0.003	0.005	0.008	B	1.0		
	B	→ Y	(HL)	0.329	0.526	0.821	0.003	0.004	0.007	C	1.0		
			(LH)	0.300	0.487	0.789	0.003	0.005	0.008	D	1.0		
	C	→ Y	(HL)	0.337	0.538	0.837	0.003	0.004	0.007	E	1.0		
			(LH)	0.299	0.504	0.839	0.003	0.005	0.008	F	1.0		
	D	→ Y	(HL)	0.346	0.631	0.989	0.003	0.004	0.007	G	1.0		
			(LH)	0.318	0.552	0.899	0.003	0.005	0.008	H	1.0		
	E	→ Y	(HL)	0.363	0.658	1.039	0.003	0.004	0.007	I	1.0		
			(LH)	0.329	0.593	0.989	0.003	0.005	0.008				
	F	→ Y	(HL)	0.368	0.670	1.067	0.003	0.004	0.007				
			(LH)	0.325	0.607	1.024	0.003	0.005	0.008				
	G	→ Y	(HL)	0.367	0.653	1.045	0.003	0.004	0.007				
			(LH)	0.442	0.750	1.193	0.003	0.005	0.008				
	H	→ Y	(HL)	0.375	0.684	1.096	0.003	0.004	0.007				
			(LH)	0.458	0.797	1.288	0.003	0.005	0.008				
	I	→ Y	(HL)	0.377	0.699	1.124	0.003	0.004	0.007				
			(LH)	0.453	0.811	1.325	0.003	0.005	0.008				

Function	1-1-2-2-Input OR-NAND										SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	L495	5										
x1	F495	6										
x2	F495NP	6										
x4												
x8												
Block type	with inv. F		with inv. G		with inv. H		-		-		-	
Drivability	Name	cells	Name	cells	Name	cells						
Low Power												
x1												
x2												
x4												
x8												

Logic Diagram for "Normal"



Logic Diagram for "with inv. A type"

Logic Diagram for "with inv. B type"

Logic Diagram for "with inv. C type"

Logic Diagram for "with inv. D type"

Logic Diagram for "with inv. E type"

Logic Diagram for "with inv. F type"

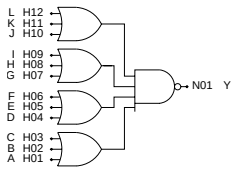
Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L495	A → Y	(HL)	0.282	0.435	0.686	0.010	0.016	0.026	A	1.3	Y	35
		(LH)	0.129	0.215	0.337	0.013	0.021	0.034	B	1.2		
	B → Y	(HL)	0.269	0.426	0.682	0.010	0.016	0.026	C	1.3		
		(LH)	0.149	0.243	0.374	0.013	0.021	0.034	D	1.3		
	C → Y	(HL)	0.279	0.460	0.726	0.010	0.016	0.026	E	1.2		
		(LH)	0.202	0.313	0.492	0.013	0.021	0.034	F	1.2		
	D → Y	(HL)	0.292	0.477	0.752	0.010	0.016	0.026				
		(LH)	0.190	0.311	0.510	0.013	0.021	0.034				
	E → Y	(HL)	0.298	0.492	0.785	0.010	0.016	0.026				
		(LH)	0.205	0.321	0.503	0.013	0.021	0.034				
	F → Y	(HL)	0.311	0.509	0.806	0.010	0.016	0.026				
		(LH)	0.192	0.320	0.523	0.013	0.021	0.034				
F495	A → Y	(HL)	0.116	0.191	0.269	0.011	0.024	0.043	A	2.5	Y	28
		(LH)	0.047	0.088	0.129	0.006	0.010	0.017	B	2.4		
	B → Y	(HL)	0.108	0.210	0.333	0.011	0.024	0.043	C	2.4		
		(LH)	0.064	0.112	0.162	0.006	0.010	0.017	D	2.4		
	C → Y	(HL)	0.126	0.237	0.402	0.013	0.024	0.043	E	2.4		
		(LH)	0.121	0.210	0.330	0.012	0.020	0.034	F	2.4		
	D → Y	(HL)	0.126	0.237	0.401	0.013	0.024	0.043				
		(LH)	0.121	0.209	0.331	0.012	0.020	0.034				
	E → Y	(HL)	0.144	0.267	0.460	0.013	0.024	0.043				
		(LH)	0.153	0.273	0.427	0.012	0.021	0.034				
	F → Y	(HL)	0.145	0.267	0.462	0.013	0.024	0.043				
		(LH)	0.153	0.273	0.427	0.012	0.021	0.034				
F495NP	A → Y	(HL)	0.283	0.552	0.902	0.003	0.004	0.006	A	1.0	Y	143
		(LH)	0.173	0.303	0.479	0.003	0.005	0.008	B	1.0		
	B → Y	(HL)	0.273	0.566	0.950	0.003	0.004	0.006	C	1.0		
		(LH)	0.190	0.326	0.514	0.003	0.005	0.008	D	1.0		
	C → Y	(HL)	0.290	0.546	0.934	0.003	0.004	0.006	E	1.0		
		(LH)	0.304	0.509	0.811	0.003	0.005	0.008	F	1.0		
	D → Y	(HL)	0.312	0.587	1.013	0.003	0.004	0.006				
		(LH)	0.293	0.513	0.836	0.003	0.005	0.008				
	E → Y	(HL)	0.301	0.577	0.991	0.003	0.004	0.006				
		(LH)	0.346	0.577	0.914	0.003	0.005	0.008				
	F → Y	(HL)	0.325	0.622	1.073	0.003	0.004	0.006				
		(LH)	0.334	0.582	0.939	0.003	0.005	0.008				

Function	3-3-3-3-Input OR-NAND										SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power												
x1	F496	8										
x2	F496NP	9										
x4												
x8												
Block type	with inv. F		with inv. G		with inv. H		-		-		-	
Drivability	Name	cells	Name	cells	Name	cells						
Low Power												
x1												
x2												
x4												
x8												

Logic Diagram for "Normal"



Logic Diagram for "with inv. A type"

Logic Diagram for "with inv. B type"

Logic Diagram for "with inv. C type"

Logic Diagram for "with inv. D type"

Logic Diagram for "with inv. E type"

Logic Diagram for "with inv. F type"

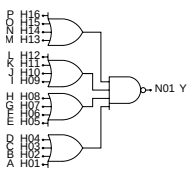
Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

Block type	Switching speed							Input		Output	
	Path		t_{LD0} (ns)			t_1					
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F496	A → Y	(HL)	0.262	0.496	0.775	0.005	0.008	0.013	A	1.0	Y	71
		(LH)	0.276	0.466	0.754	0.006	0.010	0.017	B	1.0		
	B → Y	(HL)	0.277	0.520	0.819	0.005	0.008	0.013	C	1.0		
		(LH)	0.282	0.496	0.820	0.006	0.010	0.017	D	1.0		
	C → Y	(HL)	0.287	0.537	0.856	0.005	0.008	0.013	E	1.0		
		(LH)	0.282	0.515	0.868	0.006	0.010	0.017	F	1.0		
	D → Y	(HL)	0.281	0.523	0.837	0.005	0.008	0.013	G	1.0		
		(LH)	0.370	0.684	1.099	0.006	0.010	0.017	H	1.0		
	E → Y	(HL)	0.289	0.552	0.882	0.005	0.008	0.013	I	1.0		
		(LH)	0.380	0.720	1.172	0.006	0.010	0.017	J	1.0		
	F → Y	(HL)	0.296	0.570	0.918	0.005	0.008	0.013	K	1.0		
		(LH)	0.381	0.741	1.222	0.006	0.010	0.017	L	1.0		
	G → Y	(HL)	0.267	0.498	0.779	0.005	0.008	0.013				
		(LH)	0.280	0.478	0.779	0.006	0.010	0.017				
	H → Y	(HL)	0.280	0.521	0.821	0.005	0.008	0.013				
		(LH)	0.287	0.510	0.847	0.006	0.010	0.017				
	I → Y	(HL)	0.286	0.536	0.850	0.005	0.008	0.013				
		(LH)	0.286	0.528	0.894	0.006	0.010	0.017				
	J → Y	(HL)	0.281	0.523	0.839	0.005	0.008	0.013				
		(LH)	0.378	0.697	1.118	0.006	0.010	0.017				
	K → Y	(HL)	0.289	0.551	0.881	0.005	0.008	0.013				
		(LH)	0.388	0.734	1.188	0.006	0.010	0.017				
	L → Y	(HL)	0.293	0.566	0.914	0.005	0.008	0.013				
		(LH)	0.388	0.754	1.242	0.006	0.010	0.017				
F496NP	A → Y	(HL)	0.342	0.628	0.986	0.003	0.004	0.007	A	1.0	Y	142
		(LH)	0.319	0.548	0.894	0.003	0.005	0.008	B	1.0		
	B → Y	(HL)	0.357	0.653	1.035	0.003	0.004	0.007	C	1.0		
		(LH)	0.325	0.580	0.961	0.003	0.005	0.008	D	1.0		
	C → Y	(HL)	0.367	0.671	1.070	0.003	0.004	0.007	E	1.0		
		(LH)	0.326	0.600	1.010	0.003	0.005	0.008	F	1.0		
	D → Y	(HL)	0.361	0.656	1.048	0.003	0.004	0.007	G	1.0		
		(LH)	0.421	0.768	1.226	0.003	0.005	0.008	H	1.0		
	E → Y	(HL)	0.371	0.682	1.096	0.003	0.004	0.007	I	1.0		
		(LH)	0.432	0.803	1.300	0.003	0.005	0.008	J	1.0		
	F → Y	(HL)	0.377	0.702	1.130	0.003	0.004	0.007	K	1.0		
		(LH)	0.432	0.824	1.348	0.003	0.005	0.008	L	1.0		
	G → Y	(HL)	0.345	0.628	0.984	0.003	0.004	0.007				
		(LH)	0.320	0.556	0.905	0.003	0.005	0.008				
	H → Y	(HL)	0.359	0.651	1.026	0.003	0.004	0.007				
		(LH)	0.327	0.587	0.972	0.003	0.005	0.008				
	I → Y	(HL)	0.366	0.665	1.057	0.003	0.004	0.007				
		(LH)	0.326	0.606	1.021	0.003	0.005	0.008				
	J → Y	(HL)	0.360	0.652	1.043	0.003	0.004	0.007				
		(LH)	0.424	0.772	1.229	0.003	0.005	0.008				
	K → Y	(HL)	0.370	0.678	1.089	0.003	0.004	0.007				
		(LH)	0.434	0.807	1.299	0.003	0.005	0.008				
	L → Y	(HL)	0.374	0.695	1.119	0.003	0.004	0.007				
		(LH)	0.434	0.826	1.354	0.003	0.005	0.008				

Function	4-4-4-4-Input OR-NAND										SSI Family	
Block type	Normal		with inv. A		with inv. B		with inv. C		with inv. D		with inv. E	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power												
x1	F498	14										
x2	F498NP	16										
x4												
x8												
Block type	with inv. F		with inv. G		with inv. H		-		-		-	
Drivability	Name	cells	Name	cells	Name	cells						
Low Power												
x1												
x2												
x4												
x8												

Logic Diagram for "Normal"



Logic Diagram for "with inv. A type"

Logic Diagram for "with inv. B type"

Logic Diagram for "with inv. C type"

Logic Diagram for "with inv. D type"

Logic Diagram for "with inv. E type"

Logic Diagram for "with inv. F type"

Logic Diagram for "with inv. G type"

Logic Diagram for "with inv. H type"

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F498	A → Y	(HL)	0.202	0.428	0.676	0.008	0.013	0.022	A	1.0	Y	63
		(LH)	0.239	0.394	0.630	0.006	0.010	0.017	B	1.0		
	B → Y	(HL)	0.219	0.445	0.701	0.008	0.013	0.022	C	1.0		
		(LH)	0.229	0.393	0.649	0.006	0.010	0.017	D	1.0		
	C → Y	(HL)	0.227	0.475	0.748	0.008	0.013	0.022	E	1.0		
		(LH)	0.239	0.395	0.640	0.006	0.010	0.017	F	1.0		
	D → Y	(HL)	0.242	0.492	0.771	0.008	0.013	0.022	G	1.0		
		(LH)	0.226	0.394	0.660	0.006	0.010	0.017	H	1.0		
	E → Y	(HL)	0.236	0.479	0.761	0.008	0.013	0.022	I	1.0		
		(LH)	0.267	0.446	0.724	0.006	0.010	0.017	J	1.0		
	F → Y	(HL)	0.249	0.495	0.781	0.008	0.013	0.022	K	1.0		
		(LH)	0.256	0.445	0.743	0.006	0.010	0.017	L	1.0		
	G → Y	(HL)	0.258	0.526	0.830	0.008	0.013	0.022	M	1.0		
		(LH)	0.263	0.441	0.730	0.006	0.010	0.017	N	1.0		
	H → Y	(HL)	0.272	0.541	0.851	0.008	0.013	0.022	O	1.0		
		(LH)	0.249	0.440	0.748	0.006	0.010	0.017	P	1.0		
	I → Y	(HL)	0.205	0.428	0.678	0.008	0.013	0.022				
		(LH)	0.240	0.395	0.631	0.006	0.010	0.017				
	J → Y	(HL)	0.220	0.446	0.698	0.008	0.013	0.022				
		(LH)	0.230	0.394	0.652	0.006	0.010	0.017				
	K → Y	(HL)	0.227	0.473	0.745	0.008	0.013	0.022				
		(LH)	0.237	0.393	0.637	0.006	0.010	0.017				
	L → Y	(HL)	0.241	0.491	0.770	0.008	0.013	0.022				
		(LH)	0.225	0.391	0.656	0.006	0.010	0.017				
	M → Y	(HL)	0.238	0.484	0.766	0.008	0.013	0.022				
		(LH)	0.273	0.453	0.737	0.006	0.010	0.017				
	N → Y	(HL)	0.251	0.499	0.786	0.008	0.013	0.022				
		(LH)	0.260	0.451	0.755	0.006	0.010	0.017				
	O → Y	(HL)	0.258	0.527	0.834	0.008	0.013	0.022				
		(LH)	0.264	0.444	0.735	0.006	0.010	0.017				
	P → Y	(HL)	0.273	0.543	0.854	0.008	0.013	0.022				
		(LH)	0.250	0.441	0.751	0.006	0.010	0.017				
F498NP	A → Y	(HL)	0.267	0.563	0.891	0.004	0.007	0.011	A	1.0	Y	125
		(LH)	0.290	0.475	0.768	0.003	0.005	0.008	B	1.0		
	B → Y	(HL)	0.282	0.580	0.915	0.004	0.007	0.011	C	1.0		
		(LH)	0.280	0.472	0.786	0.003	0.005	0.008	D	1.0		
	C → Y	(HL)	0.290	0.607	0.962	0.004	0.007	0.011	E	1.0		
		(LH)	0.286	0.473	0.776	0.003	0.005	0.008	F	1.0		
	D → Y	(HL)	0.304	0.625	0.988	0.004	0.007	0.011	G	1.0		
		(LH)	0.274	0.472	0.795	0.003	0.005	0.008	H	1.0		
	E → Y	(HL)	0.301	0.615	0.975	0.004	0.007	0.011	I	1.0		
		(LH)	0.317	0.525	0.862	0.003	0.005	0.009	J	1.0		
	F → Y	(HL)	0.315	0.631	0.997	0.004	0.007	0.011	K	1.0		
		(LH)	0.306	0.523	0.881	0.003	0.005	0.008	L	1.0		
	G → Y	(HL)	0.322	0.659	1.046	0.004	0.007	0.011	M	1.0		
		(LH)	0.310	0.519	0.862	0.003	0.005	0.008	N	1.0		
	H → Y	(HL)	0.336	0.675	1.066	0.004	0.007	0.011	O	1.0		
		(LH)	0.296	0.518	0.881	0.003	0.005	0.008	P	1.0		
	I → Y	(HL)	0.268	0.563	0.893	0.004	0.007	0.011				
		(LH)	0.290	0.475	0.769	0.003	0.005	0.008				
	J → Y	(HL)	0.282	0.580	0.914	0.004	0.007	0.011				
		(LH)	0.280	0.474	0.787	0.003	0.005	0.008				
	K → Y	(HL)	0.288	0.605	0.960	0.004	0.007	0.011				
		(LH)	0.284	0.471	0.772	0.003	0.005	0.008				
	L → Y	(HL)	0.302	0.624	0.982	0.004	0.007	0.011				
		(LH)	0.272	0.469	0.790	0.003	0.005	0.008				

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			Input		Output	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	M → Y	(HL)	0.303	0.619	0.982	0.004	0.007	0.011				
		(LH)	0.322	0.532	0.875	0.003	0.005	0.008				
	N → Y	(HL)	0.317	0.635	1.000	0.004	0.007	0.011				
		(LH)	0.311	0.531	0.893	0.003	0.005	0.008				
	O → Y	(HL)	0.323	0.660	1.047	0.004	0.007	0.011				
		(LH)	0.311	0.523	0.865	0.003	0.005	0.009				
	P → Y	(HL)	0.337	0.676	1.067	0.004	0.007	0.011				
		(LH)	0.298	0.520	0.884	0.003	0.005	0.008				

[MEMO]

[MEMO]

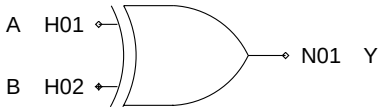
[MEMO]

2.6 Exclusive OR, Exclusive NOR

[MEMO]

Function	2-Input Exclusive OR					SSI Family	
Block type	Standard type						
	Normal		High speed				
Drivability	Name	cells	Name	cells			
Low Power	L511	3					
x1	F511	4					
x2	F511NP	5					
x4	F511NT	11					

Logic Diagram



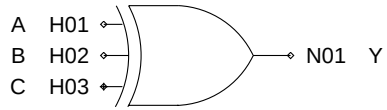
Truth Table

A	B	Y
0	0	0
0	1	1
1	0	1
1	1	0

Block type	Switching speed							Input		Output	
	Path		t_{LD0} (ns)			t_1					
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L511	A → Y	(HH)	0.137	0.212	0.341	0.013	0.021	0.034	A	2.4	Y	35
		(HL)	0.178	0.260	0.392	0.010	0.016	0.025	B	2.3		
		(LH)	0.142	0.235	0.379	0.013	0.021	0.034				
		(LL)	0.179	0.296	0.472	0.010	0.016	0.026				
	B → Y	(HH)	0.119	0.183	0.290	0.013	0.021	0.034				
		(HL)	0.164	0.248	0.387	0.010	0.016	0.025				
		(LH)	0.179	0.282	0.452	0.013	0.021	0.034				
		(LL)	0.188	0.288	0.438	0.010	0.016	0.026				
F511	A → Y	(HH)	0.159	0.244	0.398	0.006	0.011	0.017	A	2.3	Y	71
		(HL)	0.201	0.296	0.448	0.005	0.008	0.013	B	2.4		
		(LH)	0.165	0.272	0.438	0.006	0.010	0.017				
		(LL)	0.214	0.352	0.566	0.005	0.008	0.013				
	B → Y	(HH)	0.142	0.218	0.345	0.006	0.010	0.017				
		(HL)	0.186	0.283	0.444	0.005	0.008	0.013				
		(LH)	0.201	0.318	0.511	0.006	0.011	0.017				
		(LL)	0.223	0.345	0.531	0.005	0.008	0.013				
F511NP	A → Y	(HH)	0.208	0.319	0.527	0.003	0.005	0.009	A	2.3	Y	141
		(HL)	0.247	0.369	0.564	0.003	0.004	0.006	B	2.5		
		(LH)	0.211	0.344	0.566	0.003	0.005	0.009				
		(LL)	0.291	0.483	0.774	0.003	0.004	0.007				
	B → Y	(HH)	0.190	0.290	0.473	0.003	0.005	0.009				
		(HL)	0.234	0.357	0.559	0.003	0.004	0.006				
		(LH)	0.246	0.392	0.637	0.003	0.005	0.009				
		(LL)	0.299	0.474	0.738	0.003	0.004	0.007				
F511NT	A → Y	(HH)	0.194	0.291	0.449	0.002	0.003	0.004	A	4.8	Y	285
		(HL)	0.230	0.371	0.602	0.001	0.002	0.003	B	1.3		
		(LH)	0.206	0.329	0.528	0.002	0.003	0.004				
		(LL)	0.209	0.342	0.556	0.001	0.002	0.003				
	B → Y	(HH)	0.272	0.416	0.643	0.002	0.003	0.004				
		(HL)	0.278	0.438	0.684	0.001	0.002	0.003				
		(LH)	0.250	0.392	0.619	0.002	0.003	0.004				
		(LL)	0.269	0.440	0.709	0.001	0.002	0.003				

Function	3-Input Exclusive OR					SSI Family	
Block type	Standard type						
	Normal		High speed				
Drivability	Name	cells	Name	cells			
Low Power	L516	6					
x1	F516	9					
x2	F516NP	9					
x4	F516NT	14					

Logic Diagram



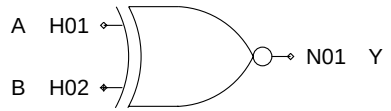
Truth Table

A	B	C	Y
0	0	0	0
0	0	1	1
0	1	0	1
0	1	1	0
1	0	0	1
1	0	1	0
1	1	0	0
1	1	1	1

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L516	A → Y	(HH)	0.254	0.393	0.626	0.013	0.021	0.034	A	1.0	Y	35
		(HL)	0.374	0.606	0.984	0.010	0.016	0.026	B	3.0		
		(LH)	0.332	0.538	0.888	0.013	0.021	0.034	C	2.5		
		(LL)	0.288	0.490	0.815	0.010	0.016	0.026				
	B → Y	(HH)	0.196	0.319	0.510	0.013	0.021	0.034				
		(HL)	0.243	0.411	0.665	0.010	0.016	0.026				
		(LH)	0.205	0.338	0.552	0.013	0.021	0.034				
		(LL)	0.229	0.391	0.644	0.010	0.016	0.026				
	C → Y	(HH)	0.144	0.214	0.323	0.013	0.021	0.034				
		(HL)	0.195	0.297	0.453	0.010	0.016	0.026				
		(LH)	0.150	0.242	0.387	0.013	0.021	0.034				
		(LL)	0.152	0.249	0.393	0.010	0.016	0.026				
F516	A → Y	(HH)	0.262	0.431	0.682	0.006	0.011	0.017	A	2.4	Y	70
		(HL)	0.260	0.432	0.675	0.005	0.008	0.013	B	2.9		
		(LH)	0.234	0.395	0.637	0.006	0.011	0.017	C	1.0		
		(LL)	0.265	0.467	0.755	0.005	0.008	0.013				
	B → Y	(HH)	0.198	0.330	0.514	0.006	0.011	0.017				
		(HL)	0.204	0.351	0.556	0.005	0.008	0.013				
		(LH)	0.180	0.304	0.485	0.006	0.011	0.017				
		(LL)	0.199	0.358	0.579	0.005	0.008	0.013				
	C → Y	(HH)	0.221	0.323	0.493	0.006	0.011	0.017				
		(HL)	0.232	0.361	0.564	0.005	0.008	0.013				
		(LH)	0.213	0.337	0.537	0.006	0.011	0.017				
		(LL)	0.247	0.395	0.633	0.005	0.008	0.013				
F516NP	A → Y	(HH)	0.295	0.496	0.789	0.003	0.005	0.009	A	2.4	Y	140
		(HL)	0.308	0.535	0.854	0.003	0.004	0.007	B	3.0		
		(LH)	0.269	0.467	0.758	0.003	0.005	0.009	C	1.0		
		(LL)	0.300	0.547	0.898	0.003	0.004	0.007				
	B → Y	(HH)	0.231	0.397	0.627	0.003	0.005	0.009				
		(HL)	0.244	0.446	0.720	0.003	0.004	0.007				
		(LH)	0.213	0.377	0.608	0.003	0.005	0.009				
		(LL)	0.233	0.443	0.730	0.003	0.004	0.007				
	C → Y	(HH)	0.258	0.380	0.592	0.003	0.005	0.009				
		(HL)	0.260	0.413	0.659	0.003	0.004	0.007				
		(LH)	0.235	0.375	0.599	0.003	0.005	0.009				
		(LL)	0.292	0.473	0.767	0.003	0.004	0.007				
F516NT	A → Y	(HH)	0.397	0.624	0.995	0.002	0.003	0.004	A	1.3	Y	285
		(HL)	0.373	0.576	0.900	0.001	0.002	0.003	B	1.3		
		(LH)	0.344	0.559	0.908	0.002	0.003	0.004	C	4.8		
		(LL)	0.392	0.645	1.055	0.001	0.002	0.003				
	B → Y	(HH)	0.341	0.548	0.868	0.002	0.003	0.004				
		(HL)	0.353	0.572	0.919	0.001	0.002	0.003				
		(LH)	0.334	0.554	0.899	0.002	0.003	0.004				
		(LL)	0.345	0.575	0.936	0.001	0.002	0.003				
	C → Y	(HH)	0.194	0.293	0.452	0.002	0.003	0.004				
		(HL)	0.228	0.370	0.602	0.001	0.002	0.003				
		(LH)	0.205	0.329	0.529	0.002	0.003	0.004				
		(LL)	0.208	0.340	0.554	0.001	0.002	0.003				

Function	2-Input Exclusive NOR										SSI Family	
Block type	Standard type											
	Normal		High speed									
Drivability	Name	cells	Name	cells								
Low Power	L512	3										
x1	F512	4										
x2	F512NP	5										
x4	F512NT	11										

Logic Diagram



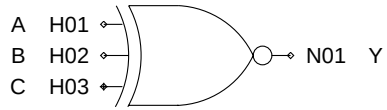
Truth Table

A	B	Y
0	0	1
0	1	0
1	0	0
1	1	1

Block type	Switching speed							Input		Output	
	Path		t_{LD0} (ns)			t_1					
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L512	A → Y	(HH)	0.136	0.210	0.336	0.013	0.021	0.034	A	2.4	Y	35
		(HL)	0.174	0.281	0.440	0.010	0.016	0.025	B	2.3		
		(LH)	0.175	0.269	0.414	0.013	0.021	0.034				
		(LL)	0.178	0.297	0.478	0.010	0.016	0.026				
	B → Y	(HH)	0.152	0.220	0.329	0.013	0.021	0.034				
		(HL)	0.217	0.347	0.542	0.010	0.016	0.026				
		(LH)	0.163	0.266	0.432	0.013	0.021	0.034				
		(LL)	0.142	0.237	0.385	0.010	0.016	0.025				
F512	A → Y	(HH)	0.163	0.248	0.404	0.006	0.011	0.017	A	2.3	Y	70
		(HL)	0.221	0.354	0.553	0.005	0.008	0.013	B	2.4		
		(LH)	0.206	0.318	0.495	0.006	0.010	0.017				
		(LL)	0.219	0.364	0.588	0.005	0.008	0.013				
	B → Y	(HH)	0.181	0.259	0.388	0.006	0.011	0.017				
		(HL)	0.264	0.424	0.663	0.005	0.008	0.013				
		(LH)	0.194	0.315	0.514	0.006	0.010	0.017				
		(LL)	0.180	0.301	0.485	0.005	0.008	0.013				
F512NP	A → Y	(HH)	0.210	0.323	0.531	0.003	0.005	0.009	A	2.3	Y	140
		(HL)	0.301	0.485	0.761	0.003	0.004	0.007	B	2.4		
		(LH)	0.242	0.373	0.585	0.003	0.005	0.008				
		(LL)	0.297	0.495	0.799	0.003	0.004	0.007				
	B → Y	(HH)	0.234	0.334	0.518	0.003	0.005	0.009				
		(HL)	0.343	0.552	0.869	0.003	0.004	0.007				
		(LH)	0.228	0.371	0.603	0.003	0.005	0.008				
		(LL)	0.260	0.432	0.695	0.003	0.004	0.007				
F512NT	A → Y	(HH)	0.194	0.290	0.448	0.002	0.003	0.004	A	4.8	Y	284
		(HL)	0.229	0.371	0.601	0.001	0.002	0.003	B	1.3		
		(LH)	0.204	0.328	0.526	0.002	0.003	0.004				
		(LL)	0.209	0.341	0.554	0.001	0.002	0.003				
	B → Y	(HH)	0.271	0.415	0.643	0.002	0.003	0.004				
		(HL)	0.276	0.434	0.678	0.001	0.002	0.003				
		(LH)	0.248	0.390	0.617	0.002	0.003	0.004				
		(LL)	0.269	0.439	0.709	0.001	0.002	0.003				

Function	3-Input Exclusive NOR					SSI Family	
Block type	Standard type						
	Normal		High speed				
Drivability	Name	cells	Name	cells			
Low Power	L517	6					
x1	F517	8					
x2							
x4	F517NT	14					

Logic Diagram



Truth Table

A	B	C	Y
0	0	0	1
0	0	1	0
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	1
1	1	0	1
1	1	1	0

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L517	A → Y	(HH)	0.255	0.391	0.623	0.013	0.021	0.034	A	1.0	Y	35
		(HL)	0.374	0.605	0.977	0.010	0.016	0.026	B	3.0		
		(LH)	0.332	0.540	0.892	0.013	0.021	0.034	C	2.4		
		(LL)	0.289	0.489	0.812	0.010	0.016	0.026				
	B → Y	(HH)	0.201	0.312	0.495	0.013	0.021	0.034				
		(HL)	0.244	0.410	0.660	0.010	0.016	0.026				
		(LH)	0.203	0.344	0.562	0.013	0.021	0.034				
		(LL)	0.227	0.396	0.652	0.010	0.016	0.026				
	C → Y	(HH)	0.142	0.212	0.319	0.013	0.021	0.034				
		(HL)	0.193	0.295	0.450	0.010	0.016	0.026				
		(LH)	0.151	0.243	0.387	0.013	0.021	0.034				
		(LL)	0.152	0.247	0.388	0.010	0.016	0.026				
F517	A → Y	(HH)	0.259	0.425	0.674	0.006	0.011	0.017	A	2.4	Y	70
		(HL)	0.258	0.429	0.668	0.005	0.008	0.013	B	2.9		
		(LH)	0.231	0.393	0.634	0.006	0.011	0.017	C	1.0		
		(LL)	0.262	0.461	0.742	0.005	0.008	0.013				
	B → Y	(HH)	0.199	0.329	0.511	0.006	0.011	0.017				
		(HL)	0.202	0.350	0.551	0.005	0.008	0.013				
		(LH)	0.177	0.307	0.490	0.006	0.011	0.017				
		(LL)	0.198	0.358	0.577	0.005	0.008	0.013				
	C → Y	(HH)	0.218	0.318	0.486	0.006	0.011	0.017				
		(HL)	0.228	0.356	0.554	0.005	0.008	0.013				
		(LH)	0.208	0.331	0.526	0.006	0.011	0.017				
		(LL)	0.244	0.390	0.622	0.005	0.008	0.013				
F517NT	A → Y	(HH)	0.396	0.622	0.991	0.002	0.003	0.004	A	1.3	Y	285
		(HL)	0.373	0.575	0.901	0.001	0.002	0.003	B	1.3		
		(LH)	0.342	0.558	0.908	0.002	0.003	0.004	C	4.8		
		(LL)	0.390	0.642	1.049	0.001	0.002	0.003				
	B → Y	(HH)	0.342	0.546	0.864	0.002	0.003	0.004				
		(HL)	0.353	0.571	0.917	0.001	0.002	0.003				
		(LH)	0.335	0.555	0.901	0.002	0.003	0.004				
		(LL)	0.346	0.574	0.935	0.001	0.002	0.003				
	C → Y	(HH)	0.194	0.293	0.452	0.002	0.003	0.004				
		(HL)	0.228	0.370	0.602	0.001	0.002	0.003				
		(LH)	0.205	0.329	0.529	0.002	0.003	0.004				
		(LL)	0.208	0.340	0.554	0.001	0.002	0.003				

[MEMO]

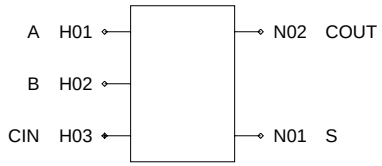
[MEMO]

2.7 Adder, 3-State Buffer, Decoder, Multiplexer, Generator

[MEMO]

Function	1-Bit Full Adder					SSI Family	
Block type	Standard type						
	Normal		High speed				
Drivability	Name	cells	Name	cells			
Low Power							
x1	F521	9					
x2	F521NP	19					
x4	F521NT	26					

Logic Diagram



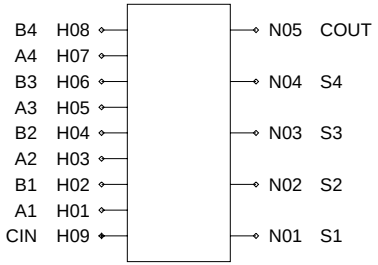
Truth Table

A	B	CIN	S	COUT
0	0	0	0	0
0	1	0	1	0
1	0	0	1	0
1	1	0	0	1
0	0	1	1	0
0	1	1	0	1
1	0	1	0	1
1	1	1	1	1

Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_1						
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F521	A → S		(HH)	0.321	0.539	0.890	0.006	0.011	0.017	A	2.4	S	71
			(HL)	0.346	0.611	0.985	0.005	0.008	0.013	B	2.4	COUT	70
			(LH)	0.356	0.802	1.311	0.006	0.010	0.017	CIN	1.0		
			(LL)	0.397	0.840	1.356	0.005	0.008	0.013				
	A → COUT		(HH)	0.292	0.571	0.935	0.006	0.011	0.017				
			(LL)	0.229	0.655	1.039	0.005	0.008	0.013				
	B → S		(HH)	0.315	0.592	0.961	0.006	0.011	0.017				
			(HL)	0.375	0.619	0.999	0.005	0.008	0.013				
			(LH)	0.348	0.745	1.223	0.006	0.010	0.017				
			(LL)	0.389	0.783	1.263	0.005	0.008	0.013				
	B → COUT		(HH)	0.309	0.585	0.935	0.006	0.011	0.017				
			(LL)	0.188	0.683	1.079	0.005	0.008	0.013				
	CIN → S		(HH)	0.256	0.393	0.614	0.006	0.011	0.017				
			(HL)	0.355	0.542	0.826	0.005	0.008	0.013				
			(LH)	0.288	0.456	0.733	0.006	0.010	0.017				
			(LL)	0.263	0.415	0.655	0.005	0.008	0.013				
	CIN → COUT		(HH)	0.216	0.316	0.482	0.006	0.010	0.017				
			(LL)	0.241	0.389	0.623	0.005	0.008	0.013				
F521NP	A → S		(HH)	0.314	0.507	0.816	0.003	0.005	0.008	A	3.6	S	142
			(HL)	0.305	0.486	0.760	0.003	0.004	0.007	B	2.4	COUT	141
			(LH)	0.270	0.452	0.731	0.003	0.005	0.008	CIN	2.4		
			(LL)	0.316	0.529	0.859	0.003	0.004	0.007				
	A → COUT		(HH)	0.304	0.501	0.804	0.003	0.005	0.009				
			(LL)	0.320	0.528	0.855	0.003	0.004	0.007				
	B → S		(HH)	0.326	0.575	0.901	0.003	0.005	0.008				
			(HL)	0.353	0.617	0.969	0.003	0.004	0.007				
			(LH)	0.324	0.607	0.980	0.003	0.005	0.008				
			(LL)	0.334	0.643	1.031	0.003	0.004	0.007				
	B → COUT		(HH)	0.228	0.512	0.804	0.003	0.005	0.009				
			(LL)	0.276	0.571	0.911	0.003	0.004	0.007				
	CIN → S		(HH)	0.207	0.303	0.460	0.003	0.005	0.009				
			(HL)	0.316	0.481	0.749	0.003	0.004	0.007				
			(LH)	0.290	0.455	0.721	0.003	0.005	0.008				
			(LL)	0.228	0.364	0.584	0.003	0.004	0.007				
	CIN → COUT		(HH)	0.209	0.305	0.462	0.003	0.005	0.009				
			(LL)	0.230	0.368	0.587	0.003	0.004	0.007				
F521NT	A → S		(HH)	0.341	0.549	0.881	0.002	0.003	0.004	A	3.6	S	284
			(HL)	0.344	0.541	0.847	0.001	0.002	0.003	B	4.8	COUT	283
			(LH)	0.301	0.497	0.804	0.002	0.003	0.004	CIN	4.8		
			(LL)	0.342	0.565	0.924	0.001	0.002	0.003				
	A → COUT		(HH)	0.334	0.539	0.864	0.002	0.003	0.004				
			(LL)	0.345	0.570	0.924	0.001	0.002	0.003				
	B → S		(HH)	0.317	0.549	0.868	0.002	0.003	0.004				
			(HL)	0.344	0.594	0.940	0.001	0.002	0.003				
			(LH)	0.308	0.555	0.897	0.002	0.003	0.004				
			(LL)	0.324	0.598	0.962	0.001	0.002	0.003				
	B → COUT		(HH)	0.220	0.505	0.805	0.002	0.003	0.004				
			(LL)	0.257	0.546	0.881	0.001	0.002	0.003				
	CIN → S		(HH)	0.199	0.300	0.463	0.002	0.003	0.004				
			(HL)	0.280	0.434	0.680	0.001	0.002	0.003				
			(LH)	0.253	0.396	0.626	0.002	0.003	0.004				
			(LL)	0.218	0.356	0.579	0.001	0.002	0.003				
	CIN → COUT		(HH)	0.201	0.300	0.461	0.002	0.003	0.004				
			(LL)	0.220	0.359	0.580	0.001	0.002	0.003				

Function	4-Bit Full Adder					SSI Family	
Block type	Standard type						
	Normal		High speed				
Drivability	Name	cells	Name	cells			
Low Power							
x1	F523	34					
x2							
x4							

Logic Diagram



Truth Table

An	Bn	CIN	Sn	COUT
0	0	0	0	0
0	1	0	1	0
1	0	0	1	0
1	1	0	0	1
0	0	1	1	0
0	1	1	0	1
1	0	1	0	1
1	1	1	1	1

(Condition of one stage, n=1,2,3 4)

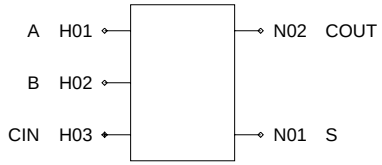
Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F523	A1 → S1	(HH)	0.309	0.485	0.803	0.006	0.011	0.017	A1	2.3	S1	71
		(HL)	0.380	0.594	0.956	0.005	0.008	0.013	B1	2.4	S2	71
		(LH)	0.569	0.892	1.423	0.006	0.010	0.017	A2	2.3	S3	70
		(LL)	0.424	0.670	1.069	0.005	0.008	0.013	B2	2.4	S4	70
	A1 → S2	(HH)	0.519	0.826	1.364	0.006	0.010	0.017	A3	2.3	COUT	62
		(HL)	0.866	1.273	2.035	0.005	0.008	0.013	B3	2.4		
		(LH)	0.570	0.950	1.535	0.006	0.010	0.017	A4	2.3		
		(LL)	0.400	0.649	1.044	0.005	0.008	0.013	B4	2.4		
	A1 → S3	(HH)	0.683	1.096	1.844	0.006	0.010	0.017	CIN	2.5		
		(HL)	1.024	1.590	2.616	0.005	0.008	0.013				
		(LH)	0.684	1.192	2.027	0.006	0.010	0.017				
		(LL)	0.548	0.913	1.519	0.005	0.008	0.013				
	A1 → S4	(HH)	0.870	1.413	2.420	0.006	0.010	0.017				
		(HL)	1.106	1.762	2.990	0.005	0.008	0.013				
		(LH)	0.764	1.365	2.405	0.006	0.010	0.017				
		(LL)	0.715	1.233	2.133	0.005	0.008	0.013				
	A1 → COUT	(HH)	0.950	1.541	2.683	0.007	0.011	0.019				
		(LL)	0.721	1.296	2.317	0.007	0.011	0.016				
	B1 → S1	(HH)	0.327	0.515	0.856	0.006	0.011	0.017				
		(HL)	0.397	0.610	0.962	0.005	0.008	0.013				
		(LH)	0.526	0.823	1.312	0.006	0.010	0.017				
		(LL)	0.414	0.680	1.110	0.005	0.008	0.013				
	B1 → S2	(HH)	0.537	0.843	1.369	0.006	0.010	0.017				
		(HL)	0.883	1.289	2.040	0.005	0.008	0.013				
		(LH)	0.550	0.922	1.492	0.006	0.010	0.017				
		(LL)	0.383	0.620	0.999	0.005	0.008	0.013				
	B1 → S3	(HH)	0.701	1.112	1.851	0.006	0.010	0.017				
		(HL)	1.041	1.607	2.622	0.005	0.008	0.013				
		(LH)	0.665	1.164	1.982	0.006	0.010	0.017				
		(LL)	0.530	0.885	1.484	0.005	0.008	0.013				
	B1 → S4	(HH)	0.887	1.429	2.426	0.006	0.010	0.017				
		(HL)	1.123	1.779	2.997	0.005	0.008	0.013				
		(LH)	0.745	1.338	2.362	0.006	0.010	0.017				
		(LL)	0.697	1.206	2.092	0.005	0.008	0.013				
	B1 → COUT	(HH)	0.967	1.558	2.690	0.007	0.011	0.019				
		(LL)	0.702	1.271	2.274	0.007	0.010	0.016				
	A2 → S2	(HH)	0.340	0.535	0.886	0.006	0.011	0.017				
		(HL)	0.365	0.573	0.926	0.005	0.008	0.013				
		(LH)	0.584	0.920	1.487	0.006	0.010	0.017				
		(LL)	0.396	0.631	1.008	0.005	0.008	0.013				
	A2 → S3	(HH)	0.510	0.812	1.343	0.006	0.010	0.017				
		(HL)	0.773	1.186	1.915	0.005	0.008	0.013				
		(LH)	0.516	0.860	1.398	0.006	0.010	0.017				
		(LL)	0.399	0.645	1.037	0.005	0.008	0.013				
	A2 → S4	(HH)	0.673	1.082	1.822	0.006	0.010	0.017				
		(HL)	0.861	1.368	2.282	0.005	0.008	0.013				
		(LH)	0.596	1.041	1.795	0.006	0.010	0.017				
		(LL)	0.550	0.915	1.531	0.005	0.008	0.013				
	A2 → COUT	(HH)	0.717	1.155	1.982	0.007	0.011	0.018				
		(LL)	0.554	0.976	1.712	0.007	0.010	0.016				
	B2 → S2	(HH)	0.357	0.565	0.937	0.006	0.011	0.017				
		(HL)	0.382	0.589	0.932	0.005	0.008	0.013				
		(LH)	0.543	0.856	1.383	0.006	0.010	0.017				
		(LL)	0.387	0.641	1.046	0.005	0.008	0.013				
	B2 → S3	(HH)	0.528	0.829	1.349	0.006	0.010	0.017				
		(HL)	0.791	1.203	1.922	0.005	0.008	0.013				

Block type	Switching speed							Input		Output	
	Path		t_{LD0} (ns)			t_1					
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
		(LH)	0.501	0.839	1.366	0.006	0.010	0.017				
		(LL)	0.383	0.620	0.996	0.005	0.008	0.013				
	B2 → S4	(HH)	0.691	1.098	1.828	0.006	0.010	0.017				
		(HL)	0.878	1.383	2.290	0.005	0.008	0.013				
		(LH)	0.582	1.022	1.768	0.006	0.010	0.017				
		(LL)	0.531	0.890	1.498	0.005	0.008	0.013				
	B2 → COUT	(HH)	0.734	1.171	1.991	0.007	0.011	0.018				
		(LL)	0.540	0.957	1.685	0.007	0.010	0.016				
	A3 → S3	(HH)	0.340	0.535	0.886	0.006	0.011	0.017				
		(HL)	0.366	0.573	0.924	0.005	0.008	0.013				
		(LH)	0.553	0.875	1.426	0.006	0.010	0.017				
		(LL)	0.396	0.631	1.008	0.005	0.008	0.013				
	A3 → S4	(HH)	0.511	0.812	1.344	0.006	0.010	0.017				
		(HL)	0.663	1.049	1.713	0.005	0.008	0.013				
		(LH)	0.436	0.721	1.182	0.006	0.010	0.017				
		(LL)	0.399	0.645	1.038	0.005	0.008	0.013				
	A3 → COUT	(HH)	0.525	0.837	1.409	0.007	0.011	0.018				
		(LL)	0.390	0.660	1.094	0.006	0.009	0.014				
	B3 → S3	(HH)	0.357	0.565	0.937	0.006	0.011	0.017				
		(HL)	0.382	0.589	0.933	0.005	0.008	0.013				
		(LH)	0.516	0.819	1.332	0.006	0.010	0.017				
		(LL)	0.387	0.641	1.046	0.005	0.008	0.013				
	B3 → S4	(HH)	0.528	0.828	1.349	0.006	0.010	0.017				
		(HL)	0.681	1.065	1.719	0.005	0.008	0.013				
		(LH)	0.419	0.695	1.140	0.006	0.010	0.017				
		(LL)	0.383	0.620	0.996	0.005	0.008	0.013				
	B3 → COUT	(HH)	0.543	0.853	1.415	0.007	0.011	0.018				
		(LL)	0.374	0.634	1.053	0.006	0.009	0.014				
	A4 → S4	(HH)	0.340	0.535	0.886	0.006	0.011	0.017				
		(HL)	0.365	0.574	0.927	0.005	0.008	0.013				
		(LH)	0.499	0.798	1.304	0.006	0.010	0.017				
		(LL)	0.395	0.630	1.008	0.005	0.008	0.013				
	A4 → COUT	(HH)	0.358	0.565	0.924	0.006	0.011	0.017				
		(LL)	0.241	0.390	0.611	0.005	0.008	0.013				
	B4 → S4	(HH)	0.357	0.566	0.938	0.006	0.011	0.017				
		(HL)	0.382	0.589	0.933	0.005	0.008	0.013				
		(LH)	0.464	0.740	1.214	0.006	0.010	0.017				
		(LL)	0.387	0.641	1.047	0.005	0.008	0.013				
	B4 → COUT	(HH)	0.376	0.581	0.930	0.006	0.011	0.017				
		(LL)	0.226	0.363	0.573	0.005	0.008	0.013				
	CIN → S1	(HH)	0.251	0.391	0.623	0.006	0.011	0.017				
		(HL)	0.328	0.494	0.752	0.005	0.008	0.013				
		(LH)	0.248	0.381	0.594	0.006	0.010	0.017				
		(LL)	0.219	0.352	0.566	0.005	0.008	0.013				
	CIN → S2	(HH)	0.305	0.474	0.760	0.006	0.010	0.017				
		(HL)	0.458	0.692	1.090	0.005	0.008	0.013				
		(LH)	0.406	0.701	1.180	0.006	0.010	0.017				
		(LL)	0.319	0.521	0.856	0.005	0.008	0.013				
	CIN → S3	(HH)	0.407	0.649	1.072	0.006	0.010	0.017				
		(HL)	0.622	0.961	1.550	0.005	0.008	0.013				
		(LH)	0.534	0.971	1.709	0.006	0.010	0.017				
		(LL)	0.431	0.740	1.273	0.005	0.008	0.013				
	CIN → S4	(HH)	0.543	0.881	1.490	0.006	0.010	0.017				
		(HL)	0.712	1.142	1.905	0.005	0.008	0.013				
		(LH)	0.618	1.150	2.097	0.006	0.010	0.017				
		(LL)	0.575	1.026	1.836	0.005	0.008	0.013				

Block type	Switching speed							Input		Output	
	Path		t_{LD0} (ns)			t_1					
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	CIN → COUT	(HH)	0.570	0.929	1.603	0.007	0.011	0.018				
		(LL)	0.575	1.082	2.009	0.007	0.010	0.016				

Function	1-Bit Carry Save Adder					SSI Family	
Block type	Standard type						
	Normal		High speed				
Drivability	Name	cells	Name	cells			
Low Power							
x1	F528	11					
x2							
x4							

Logic Diagram



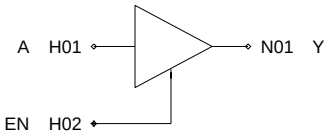
Truth Table

A	B	CIN	S	COUT
0	0	0	0	0
0	1	0	1	0
1	0	0	1	0
1	1	0	0	1
0	0	1	1	0
0	1	1	0	1
1	0	1	0	1
1	1	1	1	1

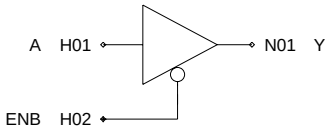
Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F528	A → S	(HH)	0.211	0.458	0.702	0.006	0.010	0.017	A	4.3	S	70
		(HL)	0.228	0.412	0.650	0.005	0.008	0.013	B	2.4	COUT	70
		(LH)	0.199	0.400	0.644	0.006	0.011	0.017	CIN	2.4		
		(LL)	0.238	0.436	0.686	0.005	0.008	0.013				
	A → COUT	(HH)	0.183	0.438	0.674	0.006	0.010	0.017				
		(LL)	0.200	0.400	0.657	0.005	0.008	0.013				
	B → S	(HH)	0.330	0.572	0.903	0.006	0.011	0.017				
		(HL)	0.272	0.458	0.718	0.005	0.008	0.013				
		(LH)	0.246	0.420	0.687	0.006	0.011	0.017				
		(LL)	0.295	0.521	0.849	0.005	0.008	0.013				
	B → COUT	(HH)	0.325	0.531	0.833	0.006	0.010	0.017				
		(LL)	0.294	0.487	0.794	0.005	0.008	0.013				
	CIN → S	(HH)	0.173	0.258	0.393	0.006	0.011	0.017				
		(HL)	0.287	0.446	0.700	0.005	0.008	0.013				
		(LH)	0.251	0.397	0.636	0.006	0.011	0.017				
		(LL)	0.186	0.303	0.482	0.005	0.008	0.013				
	CIN → COUT	(HH)	0.174	0.258	0.392	0.006	0.011	0.017				
		(LL)	0.188	0.305	0.483	0.005	0.008	0.013				

Function	3-State Buffer								SSI Family	
Block type	Buffer type						Inverter type			
	with EN		with ENB				with EN		with ENB	
Drivability	Name	cells	Name	cells			Name	cells	Name	cells
Low Power	L531	4	L532	4						
x1	F531	5	F532	5			F541	3	F542	3
x2	F533	7	F534	7			F543	4	F544	4
x4	F53F	11	F53G	11			F54F	6	F54G	6
x8	F53H	24	F53K	24			F54H	25	F54K	25

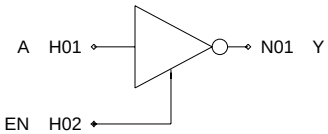
Logic Diagram for "Buffer with EN"



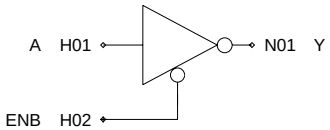
Logic Diagram for "Buffer with ENB"



Logic Diagram for "Inverter with EN"



Logic Diagram for "Inverter with ENB"



Truth Table

With EN

A	EN	Y	Y*
0	1	0	1
1	1	1	0
X	0	Z	Z

With ENB

A	ENB	Y	Y*
0	0	0	1
1	0	1	0
X	1	Z	Z

X:Irrelevant

Z:High Impedance

*:Inverter type

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L531	A → Y	(HH)	0.124	0.176	0.262	0.013	0.021	0.034	A	2.5	Y	35
		(LL)	0.153	0.231	0.351	0.010	0.016	0.026	EN	1.0		
	EN → Y	(HZ)	0.240	0.348	0.520				Y	0.8		
		(LZ)	0.173	0.256	0.383							
		(ZH)	0.213	0.327	0.510	0.013	0.021	0.034				
		(ZL)	0.218	0.340	0.522	0.010	0.016	0.026				
F531	A → Y	(HH)	0.156	0.224	0.335	0.006	0.011	0.017	A	2.4	Y	71
		(LL)	0.186	0.285	0.441	0.005	0.008	0.013	EN	1.0		
	EN → Y	(HZ)	0.291	0.413	0.616				Y	1.4		
		(LZ)	0.196	0.289	0.431							
		(ZH)	0.234	0.365	0.581	0.006	0.010	0.017				
		(ZL)	0.248	0.394	0.614	0.005	0.008	0.013				
F533	A → Y	(HH)	0.200	0.288	0.440	0.003	0.005	0.009	A	2.4	Y	141
		(LL)	0.254	0.405	0.637	0.003	0.004	0.007	EN	1.0		
	EN → Y	(HZ)	0.370	0.516	0.765				Y	2.9		
		(LZ)	0.243	0.357	0.536							
		(ZH)	0.267	0.424	0.685	0.003	0.005	0.009				
		(ZL)	0.318	0.515	0.811	0.003	0.004	0.007				
F53F	A → Y	(HH)	0.273	0.403	0.641	0.002	0.003	0.004	A	2.4	Y	280
		(LL)	0.365	0.599	0.957	0.001	0.002	0.004	EN	1.0		
	EN → Y	(HZ)	0.537	0.734	1.082				Y	4.5		
		(LZ)	0.328	0.478	0.721							
		(ZH)	0.329	0.534	0.880	0.002	0.003	0.004				
		(ZL)	0.429	0.713	1.133	0.001	0.002	0.004				
F53H	A → Y	(HH)	0.227	0.331	0.514	0.001	0.001	0.002	A	7.3	Y	566
		(LL)	0.290	0.467	0.740	0.001	0.001	0.002	EN	2.4		
	EN → Y	(HZ)	0.460	0.634	0.946				Y	9.2		
		(LZ)	0.287	0.420	0.633							
		(ZH)	0.317	0.504	0.814	0.001	0.001	0.002				
		(ZL)	0.364	0.595	0.936	0.001	0.001	0.002				
L532	A → Y	(HH)	0.126	0.179	0.267	0.013	0.021	0.034	A	2.6	Y	35
		(LL)	0.156	0.236	0.359	0.010	0.016	0.026	ENB	1.0		
	ENB → Y	(HZ)	0.215	0.292	0.416				Y	0.8		
		(LZ)	0.215	0.313	0.465							
		(ZH)	0.172	0.274	0.435	0.013	0.021	0.034				
		(ZL)	0.260	0.421	0.657	0.010	0.016	0.026				
F532	A → Y	(HH)	0.156	0.224	0.335	0.006	0.011	0.017	A	2.4	Y	71
		(LL)	0.186	0.286	0.441	0.005	0.008	0.013	ENB	1.0		
	ENB → Y	(HZ)	0.260	0.348	0.503				Y	1.4		
		(LZ)	0.233	0.339	0.507							
		(ZH)	0.188	0.306	0.490	0.006	0.010	0.017				
		(ZL)	0.286	0.465	0.732	0.005	0.008	0.013				
F534	A → Y	(HH)	0.200	0.288	0.440	0.003	0.005	0.009	A	2.4	Y	141
		(LL)	0.254	0.405	0.638	0.003	0.004	0.007	ENB	1.0		
	ENB → Y	(HZ)	0.342	0.452	0.659				Y	2.9		
		(LZ)	0.281	0.407	0.610							
		(ZH)	0.224	0.369	0.603	0.003	0.005	0.009				
		(ZL)	0.359	0.590	0.939	0.003	0.004	0.007				
F53G	A → Y	(HH)	0.277	0.408	0.649	0.002	0.003	0.004	A	2.4	Y	279
		(LL)	0.368	0.604	0.966	0.001	0.002	0.004	ENB	1.0		
	ENB → Y	(HZ)	0.507	0.671	0.971				Y	5.7		
		(LZ)	0.364	0.527	0.794							
		(ZH)	0.290	0.485	0.808	0.002	0.003	0.004				
		(ZL)	0.474	0.790	1.267	0.001	0.002	0.004				

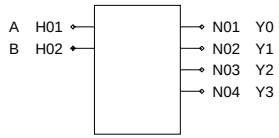
Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F53K	A → Y	(HH)	0.227	0.331	0.514	0.001	0.001	0.002	A	7.3	Y	566
		(LL)	0.290	0.467	0.742	0.001	0.001	0.002	ENB	2.4		
	ENB → Y	(HZ)	0.413	0.547	0.794				Y	9.2		
		(LZ)	0.336	0.486	0.730							
		(ZH)	0.258	0.424	0.699	0.001	0.001	0.002				
		(ZL)	0.416	0.682	1.090	0.001	0.001	0.002				
F541	A → Y	(HL)	0.094	0.131	0.186	0.011	0.017	0.028	A	2.5	Y	26
		(LH)	0.077	0.124	0.192	0.009	0.017	0.030	EN	1.0		
	EN → Y	(HZ)	0.137	0.204	0.302				Y	1.7		
		(LZ)	0.131	0.198	0.294							
		(ZH)	0.138	0.208	0.317	0.009	0.017	0.030				
		(ZL)	0.149	0.222	0.328	0.011	0.017	0.028				
F543	A → Y	(HL)	0.072	0.103	0.152	0.009	0.015	0.024	A	5.0	Y	32
		(LH)	0.058	0.095	0.150	0.007	0.013	0.025	EN	1.0		
	EN → Y	(HZ)	0.140	0.209	0.308				Y	1.4		
		(LZ)	0.135	0.202	0.300							
		(ZH)	0.146	0.218	0.321	0.007	0.013	0.025				
		(ZL)	0.133	0.197	0.288	0.009	0.015	0.024				
F54F	A → Y	(HL)	0.059	0.091	0.134	0.009	0.014	0.022	A	9.9	Y	36
		(LH)	0.048	0.081	0.128	0.006	0.012	0.022	EN	1.0		
	EN → Y	(HZ)	0.139	0.208	0.307				Y	1.4		
		(LZ)	0.134	0.201	0.299							
		(ZH)	0.147	0.217	0.314	0.006	0.012	0.022				
		(ZL)	0.133	0.198	0.286	0.009	0.014	0.022				
F54H	A → Y	(HL)	0.381	0.602	0.939	0.001	0.001	0.002	A	2.4	Y	566
		(LH)	0.295	0.471	0.762	0.001	0.001	0.002	EN	2.4		
	EN → Y	(HZ)	0.460	0.637	0.950				Y	9.2		
		(LZ)	0.288	0.421	0.635							
		(ZH)	0.321	0.510	0.824	0.001	0.001	0.002				
		(ZL)	0.366	0.596	0.940	0.001	0.001	0.002				
F542	A → Y	(HL)	0.092	0.128	0.182	0.011	0.017	0.028	A	2.5	Y	26
		(LH)	0.077	0.123	0.188	0.009	0.016	0.030	ENB	1.0		
	ENB → Y	(HZ)	0.165	0.225	0.324				Y	1.9		
		(LZ)	0.163	0.220	0.314							
		(ZH)	0.130	0.208	0.326	0.009	0.017	0.030				
		(ZL)	0.142	0.221	0.331	0.011	0.017	0.028				
F544	A → Y	(HL)	0.071	0.103	0.149	0.009	0.015	0.024	A	5.0	Y	32
		(LH)	0.057	0.092	0.150	0.007	0.014	0.025	ENB	1.0		
	ENB → Y	(HZ)	0.165	0.226	0.325				Y	1.4		
		(LZ)	0.162	0.219	0.314							
		(ZH)	0.138	0.221	0.341	0.007	0.013	0.025				
		(ZL)	0.116	0.182	0.273	0.009	0.015	0.024				
F54G	A → Y	(HL)	0.060	0.089	0.135	0.009	0.014	0.022	A	9.9	Y	37
		(LH)	0.048	0.080	0.123	0.006	0.012	0.022	ENB	1.0		
	ENB → Y	(HZ)	0.165	0.226	0.325				Y	1.4		
		(LZ)	0.163	0.219	0.314							
		(ZH)	0.140	0.214	0.334	0.006	0.012	0.022				
		(ZL)	0.117	0.184	0.273	0.009	0.014	0.022				
F54K	A → Y	(HL)	0.381	0.602	0.939	0.001	0.001	0.002	A	2.4	Y	565
		(LH)	0.295	0.471	0.762	0.001	0.001	0.002	ENB	2.4		
	ENB → Y	(HZ)	0.415	0.548	0.792				Y	9.2		
		(LZ)	0.336	0.488	0.732							
		(ZH)	0.260	0.428	0.706	0.001	0.001	0.002				
		(ZL)	0.418	0.685	1.094	0.001	0.001	0.002				

[MEMO]

Function	2 to 4 Decoder							SSI Family				
Block type	Positive output type						Negative output type					
	Normal		with ENB		with EN		Normal		with ENB		with EN	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	L560	6					L561	6	L981	8		
x1	F560	10					F561	10	F981	13		
x2	F560NP	18					F561NP	18				
x4												

Logic Diagram

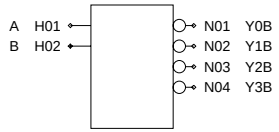
for "Positive output type"



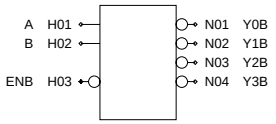
for "Positive output with ENB"

for "Positive output with EN"

for "Negative output type"



for "Negative output with ENB"



for "Negative output with EN"

Truth Table

A	B	ENB	Y0	Y1	Y2	Y3	Y0B	Y1B	Y2B	Y3B
0	0	0	1	0	0	0	0	1	1	1
1	0	0	0	1	0	0	1	0	1	1
0	1	0	0	0	1	0	1	1	0	1
1	1	0	0	0	0	1	1	1	1	0
X	X	1	0	0	0	0	1	1	1	1

X:Irrelevant

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L560	A → Y0	(HL)	0.204	0.303	0.450	0.010	0.016	0.025	A	1.0	Y0	18
		(LH)	0.199	0.312	0.483	0.024	0.041	0.066	B	1.0	Y1	18
	A → Y1	(HH)	0.150	0.218	0.316	0.024	0.041	0.066			Y2	18
		(LL)	0.147	0.224	0.335	0.010	0.016	0.025			Y3	18
	A → Y2	(HL)	0.203	0.302	0.449	0.010	0.016	0.025				
		(LH)	0.198	0.311	0.481	0.024	0.041	0.066				
	A → Y3	(HH)	0.150	0.218	0.316	0.024	0.041	0.066				
		(LL)	0.147	0.224	0.335	0.010	0.016	0.025				
	B → Y0	(HL)	0.231	0.342	0.507	0.010	0.016	0.025				
		(LH)	0.225	0.356	0.555	0.024	0.041	0.067				
	B → Y1	(HL)	0.230	0.342	0.506	0.010	0.016	0.025				
		(LH)	0.224	0.354	0.552	0.024	0.041	0.067				
	B → Y2	(HH)	0.165	0.246	0.359	0.024	0.041	0.066				
		(LL)	0.169	0.258	0.390	0.010	0.016	0.025				
	B → Y3	(HH)	0.165	0.246	0.359	0.024	0.041	0.066				
		(LL)	0.169	0.258	0.390	0.010	0.016	0.025				
F560	A → Y0	(HL)	0.218	0.325	0.483	0.005	0.008	0.013	A	1.0	Y0	71
		(LH)	0.234	0.368	0.585	0.006	0.010	0.017	B	1.0	Y1	71
	A → Y1	(HH)	0.293	0.449	0.701	0.006	0.010	0.017			Y2	71
		(LL)	0.271	0.427	0.668	0.005	0.008	0.013			Y3	72
	A → Y2	(HL)	0.219	0.325	0.483	0.005	0.008	0.013				
		(LH)	0.234	0.368	0.585	0.006	0.010	0.017				
	A → Y3	(HH)	0.293	0.449	0.701	0.006	0.010	0.017				
		(LL)	0.272	0.427	0.668	0.005	0.008	0.013				
	B → Y0	(HL)	0.237	0.352	0.521	0.005	0.008	0.013				
		(LH)	0.227	0.359	0.578	0.006	0.010	0.017				
	B → Y1	(HL)	0.237	0.352	0.521	0.005	0.008	0.013				
		(LH)	0.227	0.360	0.578	0.006	0.010	0.017				
	B → Y2	(HH)	0.291	0.450	0.702	0.006	0.010	0.017				
		(LL)	0.290	0.454	0.710	0.005	0.008	0.013				
	B → Y3	(HH)	0.292	0.450	0.702	0.006	0.010	0.017				
		(LL)	0.290	0.454	0.709	0.005	0.008	0.013				
F560NP	A → Y0	(HL)	0.248	0.363	0.540	0.003	0.004	0.006	A	1.3	Y0	142
		(LH)	0.270	0.424	0.677	0.003	0.005	0.009	B	1.3	Y1	142
	A → Y1	(HH)	0.362	0.552	0.864	0.003	0.005	0.009			Y2	142
		(LL)	0.335	0.529	0.836	0.003	0.004	0.006			Y3	144
	A → Y2	(HL)	0.247	0.363	0.539	0.003	0.004	0.006				
		(LH)	0.270	0.425	0.676	0.003	0.005	0.009				
	A → Y3	(HH)	0.361	0.550	0.862	0.003	0.005	0.008				
		(LL)	0.334	0.528	0.833	0.003	0.004	0.006				
	B → Y0	(HL)	0.276	0.406	0.607	0.003	0.004	0.006				
		(LH)	0.272	0.430	0.688	0.003	0.005	0.009				
	B → Y1	(HL)	0.276	0.405	0.605	0.003	0.004	0.006				
		(LH)	0.271	0.429	0.686	0.003	0.005	0.009				
	B → Y2	(HH)	0.374	0.571	0.899	0.003	0.005	0.009				
		(LL)	0.375	0.591	0.931	0.003	0.004	0.006				
	B → Y3	(HH)	0.373	0.569	0.897	0.003	0.005	0.009				
		(LL)	0.373	0.590	0.928	0.003	0.004	0.006				
L561	A → Y0B	(HH)	0.139	0.199	0.286	0.013	0.021	0.034	A	1.0	Y0B	32
		(LL)	0.158	0.239	0.361	0.016	0.026	0.044	B	1.0	Y1B	32
	A → Y1B	(HL)	0.215	0.318	0.477	0.016	0.026	0.044			Y2B	32
		(LH)	0.190	0.298	0.461	0.013	0.021	0.034			Y3B	32
	A → Y2B	(HH)	0.139	0.199	0.286	0.013	0.021	0.034				
		(LL)	0.158	0.239	0.361	0.016	0.026	0.044				
	A → Y3B	(HL)	0.215	0.318	0.478	0.016	0.026	0.044				
		(LH)	0.190	0.298	0.461	0.013	0.021	0.034				

Block type	Path IN → OUT		Switching speed t LD0 (ns) MIN.	TYP.	MAX.	t 1 MIN.	TYP.	MAX.	Input Symbol	Fanin	Output Symbol	Fanout
	B → Y0B	(HH)	0.154	0.224	0.323	0.013	0.021	0.034				
		(LL)	0.151	0.235	0.359	0.016	0.026	0.044				
	B → Y1B	(HH)	0.154	0.224	0.323	0.013	0.021	0.034				
		(LL)	0.151	0.235	0.359	0.016	0.026	0.044				
	B → Y2B	(HL)	0.216	0.324	0.488	0.016	0.026	0.044				
		(LH)	0.208	0.327	0.506	0.013	0.021	0.034				
	B → Y3B	(HL)	0.215	0.324	0.488	0.016	0.026	0.044				
		(LH)	0.208	0.327	0.506	0.013	0.021	0.034				
F561	A → Y0B	(HH)	0.252	0.383	0.586	0.006	0.010	0.017	A	1.0	Y0B	71
		(LL)	0.327	0.521	0.817	0.005	0.008	0.013	B	1.0	Y1B	72
	A → Y1B	(HL)	0.278	0.425	0.649	0.005	0.008	0.013			Y2B	72
		(LH)	0.194	0.303	0.468	0.006	0.010	0.017			Y3B	71
	A → Y2B	(HH)	0.252	0.385	0.587	0.006	0.010	0.017				
		(LL)	0.327	0.521	0.818	0.005	0.008	0.013				
	A → Y3B	(HL)	0.276	0.420	0.641	0.005	0.008	0.013				
		(LH)	0.193	0.301	0.465	0.006	0.010	0.017				
	B → Y0B	(HH)	0.280	0.426	0.650	0.006	0.010	0.017				
		(LL)	0.353	0.563	0.889	0.005	0.008	0.013				
	B → Y1B	(HH)	0.279	0.424	0.649	0.006	0.010	0.017				
		(LL)	0.351	0.560	0.885	0.005	0.008	0.013				
	B → Y2B	(HL)	0.292	0.453	0.692	0.005	0.008	0.013				
		(LH)	0.213	0.334	0.520	0.006	0.010	0.017				
	B → Y3B	(HL)	0.288	0.444	0.678	0.005	0.008	0.013				
		(LH)	0.211	0.331	0.515	0.006	0.010	0.017				
F561NP	A → Y0B	(HH)	0.326	0.494	0.760	0.003	0.005	0.008	A	1.3	Y0B	143
		(LL)	0.400	0.633	1.002	0.003	0.004	0.007	B	1.3	Y1B	142
	A → Y1B	(HL)	0.317	0.477	0.725	0.003	0.004	0.007			Y2B	143
		(LH)	0.235	0.369	0.576	0.003	0.005	0.008			Y3B	143
	A → Y2B	(HH)	0.326	0.494	0.760	0.003	0.005	0.008				
		(LL)	0.399	0.633	1.003	0.003	0.004	0.007				
	A → Y3B	(HL)	0.316	0.476	0.723	0.003	0.004	0.007				
		(LH)	0.235	0.368	0.574	0.003	0.005	0.008				
	B → Y0B	(HH)	0.357	0.543	0.839	0.003	0.005	0.008				
		(LL)	0.423	0.675	1.069	0.003	0.004	0.007				
	B → Y1B	(HH)	0.358	0.544	0.841	0.003	0.005	0.008				
		(LL)	0.424	0.677	1.073	0.003	0.004	0.007				
	B → Y2B	(HL)	0.323	0.493	0.754	0.003	0.004	0.007				
		(LH)	0.253	0.398	0.624	0.003	0.005	0.008				
	B → Y3B	(HL)	0.324	0.494	0.754	0.003	0.004	0.007				
		(LH)	0.253	0.398	0.624	0.003	0.005	0.008				
L981	A → Y0B	(HH)	0.140	0.201	0.288	0.013	0.021	0.034	A	1.0	Y0B	32
		(LL)	0.161	0.241	0.364	0.016	0.026	0.044	B	1.0	Y1B	32
	A → Y1B	(HL)	0.215	0.318	0.476	0.016	0.026	0.044	ENB	2.4	Y2B	32
		(LH)	0.189	0.297	0.462	0.013	0.021	0.034			Y3B	32
	A → Y2B	(HH)	0.140	0.201	0.288	0.013	0.021	0.034				
		(LL)	0.161	0.241	0.364	0.016	0.026	0.044				
	A → Y3B	(HL)	0.215	0.317	0.475	0.016	0.026	0.044				
		(LH)	0.189	0.296	0.461	0.013	0.021	0.034				
	B → Y0B	(HH)	0.226	0.345	0.527	0.013	0.021	0.034				
		(LL)	0.281	0.452	0.712	0.016	0.026	0.044				
	B → Y1B	(HH)	0.226	0.345	0.528	0.013	0.021	0.034				
		(LL)	0.281	0.452	0.713	0.016	0.026	0.044				
	B → Y2B	(HL)	0.256	0.398	0.614	0.016	0.026	0.044				
		(LH)	0.190	0.300	0.463	0.013	0.021	0.034				
	B → Y3B	(HL)	0.256	0.397	0.614	0.016	0.026	0.044				
		(LH)	0.190	0.300	0.463	0.013	0.021	0.034				

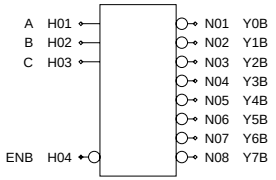
Block type	Path IN → OUT		Switching speed t LD0 (ns) MIN.	TYP.	MAX.	t 1 MIN.	TYP.	MAX.	Input Symbol	Fanin	Output Symbol	Fanout
	ENB → Y0B	(HH)	0.141	0.210	0.307	0.013	0.021	0.034				
		(LL)	0.175	0.289	0.473	0.016	0.026	0.044				
	ENB → Y1B	(HH)	0.142	0.211	0.307	0.013	0.021	0.034				
		(LL)	0.175	0.291	0.474	0.016	0.026	0.044				
	ENB → Y2B	(HH)	0.146	0.216	0.315	0.013	0.021	0.034				
		(LL)	0.181	0.301	0.493	0.016	0.026	0.044				
	ENB → Y3B	(HH)	0.146	0.216	0.315	0.013	0.021	0.034				
		(LL)	0.181	0.302	0.493	0.016	0.026	0.044				
F981	A → Y0B	(HH)	0.250	0.381	0.582	0.006	0.010	0.017	A	1.0	Y0B	71
		(LL)	0.323	0.514	0.807	0.005	0.008	0.013	B	1.0	Y1B	72
	A → Y1B	(HL)	0.274	0.419	0.638	0.005	0.008	0.013	ENB	1.0	Y2B	71
		(LH)	0.190	0.297	0.458	0.006	0.010	0.017			Y3B	71
	A → Y2B	(HH)	0.250	0.380	0.582	0.006	0.010	0.017				
		(LL)	0.323	0.513	0.807	0.005	0.008	0.013				
	A → Y3B	(HL)	0.273	0.419	0.638	0.005	0.008	0.013				
		(LH)	0.190	0.296	0.457	0.006	0.010	0.017				
	B → Y0B	(HH)	0.254	0.392	0.606	0.006	0.010	0.017				
		(LL)	0.350	0.563	0.900	0.005	0.008	0.013				
	B → Y1B	(HH)	0.255	0.393	0.606	0.006	0.010	0.017				
		(LL)	0.350	0.564	0.901	0.005	0.008	0.013				
	B → Y2B	(HL)	0.389	0.615	0.977	0.005	0.008	0.013				
		(LH)	0.286	0.457	0.721	0.006	0.010	0.017				
	B → Y3B	(HL)	0.389	0.615	0.977	0.005	0.008	0.013				
		(LH)	0.286	0.456	0.721	0.006	0.010	0.017				
	ENB → Y0B	(HH)	0.270	0.417	0.645	0.006	0.010	0.017				
		(LL)	0.345	0.560	0.904	0.005	0.008	0.013				
	ENB → Y1B	(HH)	0.270	0.418	0.646	0.006	0.010	0.017				
		(LL)	0.346	0.560	0.905	0.005	0.008	0.013				
	ENB → Y2B	(HH)	0.270	0.417	0.646	0.006	0.010	0.017				
		(LL)	0.346	0.560	0.905	0.005	0.008	0.013				
	ENB → Y3B	(HH)	0.270	0.417	0.646	0.006	0.010	0.017				
		(LL)	0.346	0.560	0.906	0.005	0.008	0.013				

Function	3 to 8 Decoder										SSI Family	
Block type	Positive output type						Negative output type					
	Normal		with ENB		with EN		Normal		with ENB		with EN	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power									L982	17		
x1									F982	26		
x2												
x4												

Logic Diagram

for "Positive output type" for "Positive output with ENB" for "Positive output with EN"

for "Negative output type" for "Negative output with ENB" for "Negative output with EN"



Truth Table

A	B	C	ENB	Y0B	Y1B	Y2B	Y3B	Y4B	Y5B	Y6B	Y7B
0	0	0	0	0	1	1	1	1	1	1	1
1	0	0	0	1	0	1	1	1	1	1	1
0	1	0	0	1	1	0	1	1	1	1	1
1	1	0	0	1	1	1	0	1	1	1	1
0	0	1	0	1	1	1	1	0	1	1	1
1	0	1	0	1	1	1	1	1	0	1	1
0	1	1	0	1	1	1	1	1	1	0	1
1	1	1	0	1	1	1	1	1	1	1	0
X	X	X	1	1	1	1	1	1	1	1	1

X:Irrelevant

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L982	A → Y0B	(HH)	0.177	0.255	0.372	0.013	0.021	0.034	A	1.3	Y0B	21
		(LL)	0.220	0.337	0.515	0.023	0.037	0.064	B	1.0	Y1B	21
	A → Y1B	(HL)	0.317	0.478	0.731	0.023	0.037	0.064	C	1.0	Y2B	21
		(LH)	0.274	0.435	0.689	0.013	0.021	0.034	ENB	2.5	Y3B	21
	A → Y2B	(HH)	0.177	0.255	0.372	0.013	0.021	0.034			Y4B	21
		(LL)	0.219	0.337	0.514	0.023	0.037	0.064			Y5B	20
	A → Y3B	(HL)	0.317	0.478	0.731	0.023	0.037	0.064			Y6B	21
		(LH)	0.274	0.435	0.689	0.013	0.021	0.034			Y7B	20
	A → Y4B	(HH)	0.177	0.254	0.370	0.013	0.021	0.034				
		(LL)	0.220	0.335	0.513	0.022	0.037	0.064				
	A → Y5B	(HL)	0.318	0.481	0.737	0.023	0.037	0.064				
		(LH)	0.275	0.439	0.693	0.013	0.021	0.034				
	A → Y6B	(HH)	0.176	0.253	0.369	0.013	0.021	0.034				
		(LL)	0.219	0.334	0.511	0.022	0.037	0.064				
	A → Y7B	(HL)	0.317	0.480	0.736	0.023	0.037	0.064				
		(LH)	0.275	0.438	0.692	0.013	0.021	0.034				
	B → Y0B	(HH)	0.196	0.284	0.417	0.013	0.021	0.034				
		(LL)	0.218	0.339	0.528	0.022	0.036	0.064				
	B → Y1B	(HH)	0.195	0.282	0.414	0.013	0.021	0.034				
		(LL)	0.217	0.337	0.524	0.022	0.036	0.064				
	B → Y2B	(HL)	0.330	0.497	0.767	0.022	0.036	0.064				
		(LH)	0.299	0.476	0.752	0.013	0.021	0.034				
	B → Y3B	(HL)	0.328	0.495	0.764	0.022	0.036	0.064				
		(LH)	0.298	0.475	0.750	0.013	0.021	0.034				
	B → Y4B	(HH)	0.195	0.283	0.415	0.013	0.021	0.034				
		(LL)	0.218	0.338	0.525	0.022	0.036	0.064				
	B → Y5B	(HH)	0.196	0.285	0.418	0.013	0.021	0.034				
		(LL)	0.219	0.340	0.530	0.022	0.036	0.064				
	B → Y6B	(HL)	0.328	0.495	0.764	0.022	0.036	0.064				
		(LH)	0.298	0.475	0.750	0.013	0.021	0.034				
	B → Y7B	(HL)	0.330	0.497	0.768	0.022	0.036	0.064				
		(LH)	0.299	0.476	0.753	0.013	0.021	0.034				
	C → Y0B	(HH)	0.273	0.425	0.661	0.013	0.021	0.034				
		(LL)	0.377	0.616	0.993	0.022	0.036	0.064				
	C → Y1B	(HH)	0.273	0.423	0.658	0.013	0.021	0.034				
		(LL)	0.376	0.614	0.989	0.022	0.036	0.064				
	C → Y2B	(HH)	0.273	0.425	0.661	0.013	0.021	0.034				
		(LL)	0.377	0.616	0.992	0.022	0.036	0.064				
	C → Y3B	(HH)	0.273	0.423	0.658	0.013	0.021	0.034				
		(LL)	0.376	0.614	0.989	0.022	0.036	0.064				
	C → Y4B	(HL)	0.345	0.549	0.878	0.022	0.037	0.064				
		(LH)	0.238	0.379	0.591	0.013	0.021	0.034				
	C → Y5B	(HL)	0.346	0.551	0.881	0.022	0.036	0.064				
		(LH)	0.239	0.381	0.596	0.013	0.021	0.034				
	C → Y6B	(HL)	0.344	0.548	0.876	0.022	0.037	0.064				
		(LH)	0.238	0.379	0.590	0.013	0.021	0.034				
	C → Y7B	(HL)	0.345	0.550	0.880	0.022	0.036	0.064				
		(LH)	0.239	0.380	0.595	0.013	0.021	0.034				
	ENB → Y0B	(HH)	0.207	0.303	0.446	0.013	0.021	0.034				
		(LL)	0.271	0.460	0.760	0.023	0.037	0.064				
	ENB → Y1B	(HH)	0.206	0.301	0.443	0.013	0.021	0.034				
		(LL)	0.271	0.457	0.758	0.023	0.037	0.064				
	ENB → Y2B	(HH)	0.207	0.303	0.445	0.013	0.021	0.034				
		(LL)	0.271	0.459	0.760	0.023	0.037	0.064				
	ENB → Y3B	(HH)	0.206	0.301	0.443	0.013	0.021	0.034				
		(LL)	0.271	0.457	0.757	0.023	0.037	0.064				

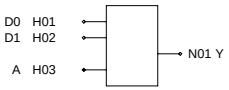
Block type	Path IN → OUT		Switching speed t LD0 (ns) MIN.	TYP.	MAX.	t 1 MIN.	TYP.	MAX.	Input Symbol	Fanin	Output Symbol	Fanout
	ENB → Y4B	(HH)	0.206	0.301	0.443	0.013	0.021	0.034				
		(LL)	0.271	0.456	0.758	0.023	0.037	0.064				
	ENB → Y5B	(HH)	0.207	0.303	0.446	0.013	0.021	0.034				
		(LL)	0.271	0.458	0.761	0.023	0.037	0.064				
	ENB → Y6B	(HH)	0.206	0.301	0.442	0.013	0.021	0.034				
		(LL)	0.270	0.456	0.756	0.023	0.037	0.064				
	ENB → Y7B	(HH)	0.207	0.302	0.445	0.013	0.021	0.034				
		(LL)	0.271	0.457	0.760	0.023	0.037	0.064				
F982	A → Y0B	(HH)	0.348	0.532	0.824	0.006	0.010	0.017	A	1.0	Y0B	71
		(LL)	0.490	0.787	1.256	0.005	0.008	0.013	B	1.0	Y1B	71
	A → Y1B	(HL)	0.399	0.612	0.943	0.005	0.008	0.013	C	1.0	Y2B	71
		(LH)	0.242	0.384	0.604	0.006	0.010	0.017	ENB	1.0	Y3B	71
	A → Y2B	(HH)	0.348	0.532	0.823	0.006	0.010	0.017			Y4B	71
		(LL)	0.489	0.787	1.255	0.005	0.008	0.013			Y5B	71
	A → Y3B	(HL)	0.398	0.610	0.940	0.005	0.008	0.013			Y6B	71
		(LH)	0.242	0.384	0.603	0.006	0.010	0.017			Y7B	71
	A → Y4B	(HH)	0.348	0.533	0.825	0.006	0.010	0.017				
		(LL)	0.490	0.789	1.257	0.005	0.008	0.013				
	A → Y5B	(HL)	0.401	0.616	0.950	0.005	0.008	0.013				
		(LH)	0.243	0.386	0.606	0.006	0.010	0.017				
	A → Y6B	(HH)	0.348	0.532	0.823	0.006	0.010	0.017				
		(LL)	0.490	0.788	1.255	0.005	0.008	0.013				
	A → Y7B	(HL)	0.398	0.610	0.941	0.005	0.008	0.013				
		(LH)	0.242	0.384	0.603	0.006	0.010	0.017				
	B → Y0B	(HH)	0.378	0.578	0.903	0.006	0.010	0.017				
		(LL)	0.534	0.862	1.379	0.005	0.008	0.013				
	B → Y1B	(HH)	0.377	0.576	0.899	0.006	0.010	0.017				
		(LL)	0.533	0.858	1.371	0.005	0.008	0.013				
	B → Y2B	(HL)	0.430	0.667	1.038	0.005	0.008	0.013				
		(LH)	0.270	0.429	0.680	0.006	0.010	0.017				
	B → Y3B	(HL)	0.427	0.662	1.028	0.005	0.008	0.013				
		(LH)	0.268	0.426	0.675	0.006	0.010	0.017				
	B → Y4B	(HH)	0.378	0.578	0.904	0.006	0.010	0.017				
		(LL)	0.535	0.864	1.382	0.005	0.008	0.013				
	B → Y5B	(HH)	0.378	0.577	0.901	0.006	0.010	0.017				
		(LL)	0.536	0.863	1.380	0.005	0.008	0.013				
	B → Y6B	(HL)	0.430	0.667	1.039	0.005	0.008	0.013				
		(LH)	0.270	0.429	0.680	0.006	0.010	0.017				
	B → Y7B	(HL)	0.428	0.662	1.029	0.005	0.008	0.013				
		(LH)	0.268	0.426	0.675	0.006	0.010	0.017				
	C → Y0B	(HH)	0.326	0.512	0.804	0.006	0.010	0.017				
		(LL)	0.515	0.837	1.354	0.005	0.008	0.013				
	C → Y1B	(HH)	0.325	0.510	0.801	0.006	0.010	0.017				
		(LL)	0.514	0.834	1.349	0.005	0.008	0.013				
	C → Y2B	(HH)	0.326	0.512	0.804	0.006	0.010	0.017				
		(LL)	0.515	0.837	1.354	0.005	0.008	0.013				
	C → Y3B	(HH)	0.325	0.509	0.800	0.006	0.010	0.017				
		(LL)	0.512	0.833	1.343	0.005	0.008	0.013				
	C → Y4B	(HL)	0.548	0.880	1.418	0.005	0.008	0.013				
		(LH)	0.352	0.566	0.901	0.006	0.010	0.017				
	C → Y5B	(HL)	0.547	0.878	1.415	0.005	0.008	0.014				
		(LH)	0.351	0.565	0.899	0.006	0.010	0.017				
	C → Y6B	(HL)	0.547	0.879	1.416	0.005	0.008	0.013				
		(LH)	0.351	0.565	0.901	0.006	0.010	0.017				
	C → Y7B	(HL)	0.544	0.873	1.406	0.005	0.008	0.013				
		(LH)	0.350	0.563	0.896	0.006	0.010	0.017				

Block type	Path IN → OUT		Switching speed t LD0 (ns) MIN.	TYP.	MAX.	t 1 MIN.	TYP.	MAX.	Input Symbol	Fanin	Output Symbol	Fanout
	ENB → Y0B	(HH)	0.339	0.534	0.839	0.006	0.010	0.017				
		(LL)	0.509	0.835	1.365	0.005	0.008	0.013				
	ENB → Y1B	(HH)	0.338	0.531	0.837	0.006	0.011	0.017				
		(LL)	0.507	0.832	1.358	0.005	0.008	0.013				
	ENB → Y2B	(HH)	0.339	0.534	0.840	0.006	0.010	0.017				
		(LL)	0.509	0.836	1.365	0.005	0.008	0.013				
	ENB → Y3B	(HH)	0.338	0.531	0.834	0.006	0.011	0.017				
		(LL)	0.505	0.828	1.356	0.005	0.008	0.013				
	ENB → Y4B	(HH)	0.335	0.526	0.828	0.006	0.010	0.017				
		(LL)	0.505	0.829	1.353	0.005	0.008	0.013				
	ENB → Y5B	(HH)	0.335	0.525	0.826	0.006	0.010	0.017				
		(LL)	0.504	0.827	1.351	0.005	0.008	0.014				
	ENB → Y6B	(HH)	0.335	0.525	0.827	0.006	0.010	0.017				
		(LL)	0.504	0.828	1.351	0.005	0.008	0.013				
	ENB → Y7B	(HH)	0.333	0.523	0.822	0.006	0.010	0.017				
		(LL)	0.501	0.822	1.341	0.005	0.008	0.013				

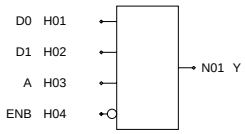
Function	2 to 1 Multiplexer (Positive Out)						SSI Family					
Block type	Standard type						High-speed type					
	Normal		with ENB		with EN		Normal		with ENB		with EN	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power			L571	4								
x1	F565	4	F571	6								
x2	F56C	7	F571NP	8								
x4	F565NT	11										

Logic Diagram

for "Standard type"



for "Standard type with ENB"



for "Standard type with EN"

for "High-speed typee"

for "High-speed type with ENB"

for "High-speed type with EN"

Truth Table

D0	D1	A	ENB	Y	YB
X	X	X	1	0	1
A	X	0	0	A	AB
X	B	1	0	B	BB

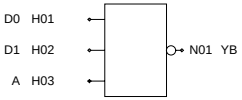
X:Irrelevant

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F565	D0 → Y	(HH)	0.177	0.261	0.396	0.006	0.010	0.017	D0	1.0	Y	71
		(LL)	0.190	0.305	0.486	0.005	0.008	0.013	D1	1.0		
	D1 → Y	(HH)	0.180	0.263	0.403	0.006	0.011	0.017	A	1.0		
		(LL)	0.193	0.313	0.500	0.005	0.008	0.013				
	A → Y	(HH)	0.216	0.333	0.518	0.006	0.010	0.017				
		(HL)	0.227	0.359	0.566	0.005	0.008	0.013				
		(LH)	0.200	0.317	0.501	0.006	0.011	0.017				
		(LL)	0.228	0.372	0.597	0.005	0.008	0.013				
F56C	D0 → Y	(HH)	0.174	0.255	0.388	0.003	0.005	0.008	D0	2.5	Y	142
		(LL)	0.185	0.297	0.476	0.003	0.004	0.007	D1	2.4		
	D1 → Y	(HH)	0.177	0.260	0.396	0.003	0.005	0.008	A	1.3		
		(LL)	0.190	0.304	0.486	0.003	0.004	0.007				
	A → Y	(HH)	0.248	0.381	0.589	0.003	0.005	0.008				
		(HL)	0.254	0.394	0.609	0.003	0.004	0.007				
		(LH)	0.223	0.351	0.556	0.003	0.005	0.008				
		(LL)	0.250	0.408	0.655	0.003	0.004	0.007				
F565NT	D0 → Y	(HH)	0.169	0.255	0.400	0.002	0.003	0.004	D0	4.8	Y	284
		(LL)	0.178	0.295	0.482	0.001	0.002	0.003	D1	4.8		
	D1 → Y	(HH)	0.172	0.260	0.407	0.002	0.003	0.004	A	1.3		
		(LL)	0.182	0.300	0.491	0.001	0.002	0.003				
	A → Y	(HH)	0.273	0.418	0.646	0.002	0.003	0.004				
		(HL)	0.279	0.439	0.684	0.001	0.002	0.003				
		(LH)	0.250	0.392	0.620	0.002	0.003	0.004				
		(LL)	0.270	0.442	0.711	0.001	0.002	0.003				
L571	D0 → Y	(HH)	0.169	0.253	0.383	0.024	0.041	0.067	D0	1.0	Y	17
		(LL)	0.169	0.271	0.428	0.010	0.016	0.026	D1	1.0		
	D1 → Y	(HH)	0.172	0.257	0.391	0.024	0.041	0.067	A	1.0		
		(LL)	0.172	0.276	0.437	0.010	0.016	0.026	ENB	1.0		
	A → Y	(HH)	0.207	0.317	0.496	0.024	0.041	0.067				
		(HL)	0.202	0.311	0.479	0.010	0.016	0.026				
		(LH)	0.189	0.301	0.472	0.024	0.041	0.067				
		(LL)	0.204	0.331	0.524	0.010	0.016	0.026				
	ENB → Y	(HL)	0.088	0.111	0.134	0.010	0.016	0.025				
		(LH)	0.056	0.099	0.166	0.024	0.041	0.067				
F571	D0 → Y	(HH)	0.276	0.424	0.675	0.006	0.011	0.017	D0	1.0	Y	71
		(LL)	0.258	0.415	0.668	0.005	0.008	0.013	D1	1.0		
	D1 → Y	(HH)	0.279	0.431	0.681	0.006	0.010	0.017	A	1.0		
		(LL)	0.262	0.423	0.678	0.005	0.008	0.013	ENB	1.0		
	A → Y	(HH)	0.319	0.500	0.801	0.006	0.011	0.017				
		(HL)	0.299	0.465	0.734	0.005	0.008	0.013				
		(LH)	0.299	0.479	0.774	0.006	0.010	0.017				
		(LL)	0.301	0.487	0.782	0.005	0.008	0.013				
	ENB → Y	(HL)	0.176	0.269	0.410	0.005	0.008	0.013				
		(LH)	0.164	0.268	0.440	0.006	0.010	0.017				
F571NP	D0 → Y	(HH)	0.300	0.464	0.739	0.003	0.005	0.008	D0	1.3	Y	142
		(LL)	0.278	0.449	0.720	0.003	0.004	0.006	D1	1.2		
	D1 → Y	(HH)	0.306	0.473	0.752	0.003	0.005	0.008	A	1.3		
		(LL)	0.285	0.460	0.738	0.003	0.004	0.006	ENB	1.3		
	A → Y	(HH)	0.343	0.542	0.870	0.003	0.005	0.008				
		(HL)	0.318	0.501	0.788	0.003	0.004	0.006				
		(LH)	0.324	0.518	0.838	0.003	0.005	0.008				
		(LL)	0.322	0.521	0.836	0.003	0.004	0.006				
	ENB → Y	(HL)	0.205	0.309	0.464	0.003	0.004	0.006				
		(LH)	0.198	0.315	0.509	0.003	0.005	0.008				

Function	2 to 1 Multiplexer (Negative Out)							SSI Family				
Block type	Standard type						High-speed type					
	Normal		with ENB		with EN		Normal		with ENB		with EN	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power												
x1	F57B	5										
x2	F57BNP	6										
x4												

Logic Diagram

for "Standard type"



for "Standard type with ENB"

for "Standard type with EN"

for "High-speed typee"

for "High-speed type with ENB"

for "High-speed type with EN"

Truth Table

D0	D1	A	ENB	Y	YB
X	X	X	1	0	1
A	X	0	0	A	AB
X	B	1	0	B	BB

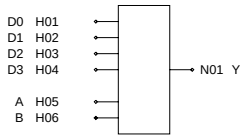
X:Irrelevant

Block type	Switching speed								Input		Output	
	Path			t_{LD0} (ns)			t_1					
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F57B	D0 → YB		(HL)	0.203	0.298	0.453	0.005	0.008	0.013	D0	1.1	YB	71
			(LH)	0.167	0.274	0.443	0.006	0.010	0.017	D1	1.0		
	D1 → YB		(HL)	0.219	0.324	0.492	0.005	0.008	0.013	A	1.0		
			(LH)	0.165	0.277	0.454	0.006	0.010	0.017				
	A → YB		(HH)	0.260	0.401	0.625	0.006	0.010	0.017				
			(HL)	0.305	0.473	0.743	0.005	0.008	0.013				
			(LH)	0.291	0.467	0.753	0.006	0.010	0.017				
			(LL)	0.248	0.392	0.622	0.005	0.008	0.013				
F57BNP	D0 → YB		(HL)	0.240	0.358	0.551	0.003	0.004	0.006	D0	1.3	YB	144
			(LH)	0.223	0.364	0.587	0.003	0.005	0.008	D1	1.2		
	D1 → YB		(HL)	0.245	0.366	0.563	0.003	0.004	0.006	A	1.3		
			(LH)	0.230	0.375	0.606	0.003	0.005	0.008				
	A → YB		(HH)	0.261	0.419	0.668	0.003	0.005	0.008				
			(HL)	0.280	0.433	0.678	0.003	0.004	0.006				
			(LH)	0.262	0.432	0.699	0.003	0.005	0.008				
			(LL)	0.263	0.417	0.656	0.003	0.004	0.006				

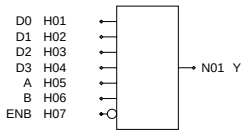
Function	4 to 1 Multiplexer (Positive Out)						SSI Family					
Block type	Standard type						High-speed type					
	Normal		with ENB		with EN		Normal		with ENB		with EN	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power												
x1	F564	8	F570	10								
x2	F56B	11	F570NP	12			F56BNSP	15				
x4	F564NT	16					F564NST	21				

Logic Diagram

for "Standard type"

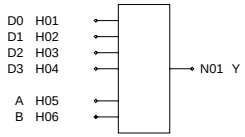


for "Standard type with ENB"



for "Standard type with EN"

for "High-speed typee"



for "High-speed type with ENB"

for "High-speed type with EN"

Truth Table

D0	D1	D2	D3	A	B	ENB	Y	YB
X	X	X	X	X	X	1	0	1
A	X	X	X	0	0	0	A	AB
X	B	X	X	1	0	0	B	BB
X	X	C	X	0	1	0	C	CB
X	X	X	D	1	1	0	D	DB

X:Irrelevant

Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_1						
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F564	D0 → Y		(HH)	0.247	0.378	0.609	0.006	0.011	0.017	D0	1.0	Y	70
			(LL)	0.270	0.456	0.765	0.005	0.009	0.014	D1	1.0		
	D1 → Y		(HH)	0.250	0.382	0.613	0.006	0.011	0.017	D2	1.0		
			(LL)	0.273	0.463	0.779	0.005	0.009	0.014	D3	1.0		
	D2 → Y		(HH)	0.254	0.388	0.626	0.006	0.011	0.017	A	1.0		
			(LL)	0.276	0.467	0.786	0.005	0.009	0.014	B	1.0		
	D3 → Y		(HH)	0.256	0.392	0.631	0.006	0.011	0.017				
			(LL)	0.280	0.476	0.805	0.005	0.009	0.014				
	A → Y		(HH)	0.320	0.510	0.821	0.006	0.011	0.017				
			(HL)	0.338	0.572	0.941	0.005	0.009	0.014				
			(LH)	0.297	0.487	0.800	0.006	0.011	0.017				
			(LL)	0.334	0.579	0.975	0.005	0.009	0.014				
	B → Y		(HH)	0.236	0.364	0.578	0.006	0.011	0.017				
			(HL)	0.244	0.398	0.640	0.005	0.009	0.014				
			(LH)	0.221	0.350	0.562	0.006	0.011	0.017				
			(LL)	0.249	0.423	0.694	0.005	0.009	0.014				
F56B	D0 → Y		(HH)	0.335	0.532	0.859	0.003	0.005	0.008	D0	1.2	Y	144
			(LL)	0.334	0.545	0.881	0.003	0.004	0.006	D1	1.3		
	D1 → Y		(HH)	0.333	0.529	0.855	0.003	0.005	0.008	D2	1.3		
			(LL)	0.331	0.537	0.875	0.003	0.004	0.006	D3	1.3		
	D2 → Y		(HH)	0.331	0.526	0.850	0.003	0.005	0.008	A	1.3		
			(LL)	0.330	0.538	0.873	0.003	0.004	0.006	B	1.3		
	D3 → Y		(HH)	0.328	0.522	0.844	0.003	0.005	0.008				
			(LL)	0.327	0.532	0.864	0.003	0.004	0.006				
	A → Y		(HH)	0.405	0.656	1.059	0.003	0.005	0.008				
			(HL)	0.388	0.615	0.974	0.003	0.004	0.006				
			(LH)	0.372	0.613	1.003	0.003	0.005	0.008				
			(LL)	0.399	0.655	1.065	0.003	0.004	0.006				
	B → Y		(HH)	0.262	0.420	0.669	0.003	0.005	0.008				
			(HL)	0.280	0.432	0.677	0.003	0.004	0.006				
			(LH)	0.262	0.432	0.699	0.003	0.005	0.008				
			(LL)	0.263	0.416	0.656	0.003	0.004	0.006				
F564NT	D0 → Y		(HH)	0.358	0.565	0.915	0.002	0.003	0.004	D0	1.2	Y	288
			(LL)	0.363	0.592	0.966	0.001	0.002	0.003	D1	1.3		
	D1 → Y		(HH)	0.355	0.561	0.911	0.002	0.003	0.004	D2	1.3		
			(LL)	0.360	0.585	0.959	0.001	0.002	0.003	D3	1.3		
	D2 → Y		(HH)	0.355	0.560	0.908	0.002	0.003	0.004	A	1.3		
			(LL)	0.360	0.586	0.958	0.001	0.002	0.003	B	1.3		
	D3 → Y		(HH)	0.352	0.557	0.902	0.002	0.003	0.004				
			(LL)	0.357	0.580	0.952	0.001	0.002	0.003				
	A → Y		(HH)	0.425	0.685	1.114	0.002	0.003	0.004				
			(HL)	0.425	0.681	1.083	0.001	0.002	0.003				
			(LH)	0.398	0.653	1.073	0.002	0.003	0.004				
			(LL)	0.426	0.699	1.144	0.001	0.002	0.003				
	B → Y		(HH)	0.293	0.461	0.722	0.002	0.003	0.004				
			(HL)	0.315	0.487	0.754	0.001	0.002	0.003				
			(LH)	0.288	0.473	0.768	0.002	0.003	0.004				
			(LL)	0.290	0.456	0.722	0.001	0.002	0.003				
F570	D0 → Y		(HH)	0.347	0.537	0.875	0.006	0.011	0.017	D0	1.3	Y	71
			(LL)	0.332	0.552	0.930	0.005	0.008	0.013	D1	1.0		
	D1 → Y		(HH)	0.343	0.531	0.864	0.006	0.011	0.017	D2	1.0		
			(LL)	0.325	0.542	0.907	0.005	0.008	0.013	D3	1.0		
	D2 → Y		(HH)	0.347	0.538	0.877	0.006	0.011	0.017	A	1.0		
			(LL)	0.332	0.554	0.931	0.005	0.008	0.013	B	1.0		
	D3 → Y		(HH)	0.344	0.532	0.867	0.006	0.011	0.017	ENB	1.0		
			(LL)	0.327	0.544	0.911	0.005	0.008	0.013				

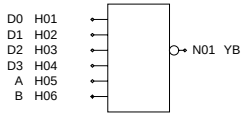
Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	A → Y	(HH)	0.416	0.659	1.067	0.006	0.011	0.017				
		(HL)	0.396	0.648	1.060	0.005	0.008	0.013				
		(LH)	0.391	0.630	1.043	0.006	0.011	0.017				
		(LL)	0.392	0.659	1.098	0.005	0.008	0.013				
	B → Y	(HH)	0.329	0.516	0.833	0.006	0.011	0.017				
		(HL)	0.302	0.481	0.766	0.005	0.008	0.013				
		(LH)	0.310	0.493	0.801	0.006	0.011	0.017				
		(LL)	0.306	0.504	0.823	0.005	0.008	0.013				
	ENB → Y	(HL)	0.176	0.269	0.410	0.005	0.008	0.013				
		(LH)	0.164	0.269	0.440	0.006	0.010	0.017				
F570NP	D0 → Y	(HH)	0.370	0.578	0.943	0.003	0.005	0.008	D0	1.3	Y	142
		(LL)	0.354	0.590	0.985	0.003	0.004	0.006	D1	1.3		
	D1 → Y	(HH)	0.376	0.585	0.953	0.003	0.005	0.008	D2	1.3		
		(LL)	0.360	0.603	1.003	0.003	0.004	0.006	D3	1.2		
	D2 → Y	(HH)	0.368	0.575	0.935	0.003	0.005	0.008	A	1.3		
		(LL)	0.351	0.586	0.975	0.003	0.004	0.006	B	1.3		
	D3 → Y	(HH)	0.373	0.582	0.948	0.003	0.005	0.008	ENB	1.3		
		(LL)	0.357	0.597	0.991	0.003	0.004	0.006				
	A → Y	(HH)	0.442	0.704	1.144	0.003	0.005	0.008				
		(HL)	0.420	0.692	1.125	0.003	0.004	0.006				
		(LH)	0.418	0.676	1.112	0.003	0.005	0.008				
		(LL)	0.418	0.703	1.166	0.003	0.004	0.006				
	B → Y	(HH)	0.362	0.570	0.922	0.003	0.005	0.008				
		(HL)	0.331	0.529	0.842	0.003	0.004	0.006				
		(LH)	0.339	0.542	0.881	0.003	0.005	0.008				
		(LL)	0.334	0.552	0.896	0.003	0.004	0.006				
	ENB → Y	(HL)	0.206	0.309	0.466	0.003	0.004	0.006				
		(LH)	0.198	0.316	0.512	0.003	0.005	0.008				
F56BNSP	D0 → Y	(HH)	0.247	0.377	0.607	0.003	0.005	0.009	D0	2.4	Y	141
		(LL)	0.268	0.454	0.771	0.003	0.004	0.007	D1	2.5		
	D1 → Y	(HH)	0.246	0.377	0.606	0.003	0.005	0.009	D2	2.4		
		(LL)	0.267	0.453	0.765	0.003	0.004	0.007	D3	2.5		
	D2 → Y	(HH)	0.248	0.378	0.609	0.003	0.005	0.009	A	2.4		
		(LL)	0.268	0.455	0.770	0.003	0.004	0.007	B	1.3		
	D3 → Y	(HH)	0.247	0.377	0.607	0.003	0.005	0.009				
		(LL)	0.268	0.454	0.768	0.003	0.004	0.007				
	A → Y	(HH)	0.317	0.497	0.800	0.003	0.005	0.009				
		(HL)	0.333	0.552	0.907	0.003	0.004	0.007				
		(LH)	0.295	0.473	0.775	0.003	0.005	0.009				
		(LL)	0.330	0.560	0.942	0.003	0.004	0.007				
	B → Y	(HH)	0.265	0.409	0.642	0.003	0.005	0.009				
		(HL)	0.273	0.436	0.693	0.003	0.004	0.007				
		(LH)	0.244	0.384	0.615	0.003	0.005	0.009				
		(LL)	0.270	0.455	0.745	0.003	0.004	0.007				
F564NST	D0 → Y	(HH)	0.245	0.387	0.637	0.002	0.003	0.004	D0	4.9	Y	282
		(LL)	0.262	0.460	0.796	0.001	0.002	0.003	D1	4.9		
	D1 → Y	(HH)	0.245	0.386	0.635	0.002	0.003	0.004	D2	4.9		
		(LL)	0.261	0.458	0.792	0.001	0.002	0.003	D3	4.9		
	D2 → Y	(HH)	0.245	0.386	0.636	0.002	0.003	0.004	A	2.4		
		(LL)	0.261	0.459	0.791	0.001	0.002	0.003	B	1.3		
	D3 → Y	(HH)	0.244	0.385	0.634	0.002	0.003	0.004				
		(LL)	0.260	0.457	0.790	0.001	0.002	0.003				
	A → Y	(HH)	0.346	0.544	0.874	0.002	0.003	0.004				
		(HL)	0.360	0.600	0.986	0.001	0.002	0.003				
		(LH)	0.322	0.516	0.842	0.002	0.003	0.004				
		(LL)	0.354	0.607	1.023	0.001	0.002	0.003				

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	B → Y	(HH)	0.299	0.462	0.730	0.002	0.003	0.004				
		(HL)	0.315	0.518	0.839	0.001	0.002	0.003				
		(LH)	0.282	0.445	0.719	0.002	0.003	0.004				
		(LL)	0.306	0.523	0.867	0.001	0.002	0.003				

Function	4 to 1 Multiplexer (Negative Out)						SSI Family					
Block type	Standard type						High-speed type					
	Normal		with ENB		with EN		Normal		with ENB		with EN	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power												
x1	F57A	10										
x2	F57ANP	10										
x4												

Logic Diagram

for "Standard type"



for "Standard type with ENB"

for "Standard type with EN"

for "High-speed typee"

for "High-speed type with ENB"

for "High-speed type with EN"

Truth Table

D0	D1	D2	D3	A	B	ENB	Y	YB
X	X	X	X	X	X	1	0	1
A	X	X	X	0	0	0	A	AB
X	B	X	X	1	0	0	B	BB
X	X	C	X	0	1	0	C	CB
X	X	X	D	1	1	0	D	DB

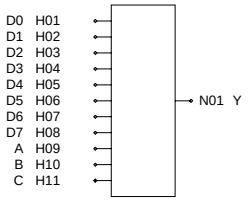
X:Irrelevant

Block type	Switching speed							Input		Output	
	Path			t_{LD0} (ns)			t_1				
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F57A	D0 → YB		(HL)	0.238	0.363	0.564	0.008	0.013	0.022	D0	1.0	YB	64
			(LH)	0.254	0.413	0.677	0.006	0.010	0.017	D1	1.0		
	D1 → YB		(HL)	0.244	0.371	0.573	0.008	0.013	0.022	D2	1.0		
			(LH)	0.260	0.423	0.691	0.006	0.010	0.017	D3	1.0		
	D2 → YB		(HL)	0.235	0.357	0.554	0.008	0.013	0.022	A	1.0		
			(LH)	0.251	0.407	0.665	0.006	0.010	0.017	B	1.0		
	D3 → YB		(HL)	0.242	0.365	0.567	0.008	0.013	0.022				
			(LH)	0.257	0.417	0.680	0.006	0.010	0.017				
	A → YB		(HH)	0.314	0.495	0.785	0.006	0.010	0.017				
			(HL)	0.313	0.491	0.770	0.008	0.013	0.022				
			(LH)	0.325	0.534	0.870	0.006	0.010	0.017				
			(LL)	0.282	0.452	0.721	0.008	0.013	0.022				
	B → YB		(HH)	0.251	0.390	0.620	0.006	0.010	0.017				
			(HL)	0.214	0.324	0.494	0.008	0.013	0.022				
			(LH)	0.206	0.332	0.535	0.006	0.010	0.017				
			(LL)	0.245	0.388	0.609	0.008	0.013	0.022				
F57ANP	D0 → YB		(HL)	0.314	0.482	0.774	0.003	0.004	0.006	D0	1.3	YB	144
			(LH)	0.303	0.516	0.877	0.003	0.005	0.008	D1	1.3		
	D1 → YB		(HL)	0.320	0.489	0.786	0.003	0.004	0.006	D2	1.3		
			(LH)	0.309	0.526	0.898	0.003	0.005	0.008	D3	1.2		
	D2 → YB		(HL)	0.312	0.480	0.769	0.003	0.004	0.006	A	1.3		
			(LH)	0.299	0.511	0.867	0.003	0.005	0.008	B	1.3		
	D3 → YB		(HL)	0.317	0.486	0.777	0.003	0.004	0.006				
			(LH)	0.306	0.520	0.888	0.003	0.005	0.008				
	A → YB		(HH)	0.368	0.620	1.025	0.003	0.005	0.008				
			(HL)	0.386	0.607	0.972	0.003	0.004	0.006				
			(LH)	0.365	0.626	1.059	0.003	0.005	0.008				
			(LL)	0.362	0.581	0.946	0.003	0.004	0.006				
	B → YB		(HH)	0.279	0.462	0.754	0.003	0.005	0.008				
			(HL)	0.304	0.473	0.750	0.003	0.004	0.006				
			(LH)	0.279	0.478	0.794	0.003	0.005	0.008				
			(LL)	0.286	0.450	0.720	0.003	0.004	0.006				

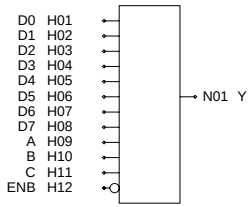
Function	8 to 1 Multiplexer (Positive Out)												SSI Family	
Block type	Standard type						High-speed type							
	Normal		with ENB		with EN		Normal		with ENB		with EN			
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power														
x1	F563	17	F569	19										
x2	F563NP	20	F569NP	21			F563NSP	31						
x4	F563NT	25					F563NST	41						

Logic Diagram

for "Standard type"

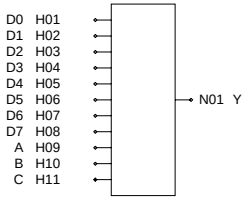


for "Standard type with ENB"



for "Standard type with EN"

for "High-speed typee"



for "High-speed type with ENB"

for "High-speed type with EN"

Truth Table

D0	D1	D2	D3	D4	D5	D6	D7	A	B	C	ENB	Y	YB
X	X	X	X	X	X	X	X	X	X	X	1	0	1
A	X	X	X	X	X	X	X	0	0	0	0	A	AB
X	B	X	X	X	X	X	X	1	0	0	0	B	BB
X	X	C	X	X	X	X	X	0	1	0	0	C	CB
X	X	X	D	X	X	X	X	1	1	0	0	D	DB
X	X	X	X	E	X	X	X	0	0	1	0	E	EB
X	X	X	X	X	F	X	X	1	0	1	0	F	FB
X	X	X	X	X	X	G	X	0	1	1	0	G	GB
X	X	X	X	X	X	X	H	1	1	1	0	H	HB

X:Irrelevant

Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_{1}						
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F563	D0 → Y		(HH)	0.348	0.546	0.893	0.006	0.011	0.017	D0	1.0	Y	71
			(LL)	0.382	0.634	1.059	0.005	0.008	0.013	D1	1.0		
	D1 → Y		(HH)	0.352	0.551	0.901	0.006	0.011	0.017	D2	1.0		
			(LL)	0.387	0.643	1.076	0.005	0.008	0.013	D3	1.0		
	D2 → Y		(HH)	0.354	0.556	0.913	0.006	0.011	0.017	D4	1.4		
			(LL)	0.391	0.650	1.092	0.005	0.008	0.013	D5	1.0		
	D3 → Y		(HH)	0.356	0.561	0.919	0.006	0.011	0.017	D6	1.4		
			(LL)	0.394	0.655	1.101	0.005	0.008	0.013	D7	1.0		
	D4 → Y		(HH)	0.347	0.541	0.878	0.006	0.010	0.017	A	1.0		
			(LL)	0.364	0.604	1.008	0.005	0.008	0.013	B	1.0		
	D5 → Y		(HH)	0.351	0.544	0.887	0.006	0.011	0.017	C	1.0		
			(LL)	0.370	0.615	1.029	0.005	0.008	0.013				
	D6 → Y		(HH)	0.346	0.538	0.878	0.006	0.011	0.017				
			(LL)	0.364	0.605	1.008	0.005	0.008	0.013				
	D7 → Y		(HH)	0.349	0.543	0.887	0.006	0.011	0.017				
			(LL)	0.370	0.614	1.029	0.005	0.008	0.013				
	A → Y		(HH)	0.481	0.774	1.257	0.006	0.011	0.017				
			(HL)	0.483	0.818	1.319	0.005	0.008	0.013				
			(LH)	0.435	0.723	1.197	0.006	0.011	0.017				
			(LL)	0.490	0.854	1.425	0.005	0.008	0.013				
	B → Y		(HH)	0.365	0.576	0.931	0.006	0.011	0.017				
			(HL)	0.364	0.590	0.937	0.005	0.008	0.013				
			(LH)	0.337	0.541	0.888	0.006	0.011	0.017				
			(LL)	0.374	0.637	1.041	0.005	0.008	0.013				
	C → Y		(HH)	0.254	0.395	0.628	0.006	0.011	0.017				
			(HL)	0.295	0.459	0.722	0.005	0.008	0.013				
			(LH)	0.293	0.466	0.745	0.006	0.011	0.017				
			(LL)	0.258	0.411	0.653	0.005	0.008	0.013				
F563NP	D0 → Y		(HH)	0.378	0.595	0.970	0.003	0.005	0.008	D0	1.3	Y	142
			(LL)	0.407	0.675	1.129	0.003	0.004	0.006	D1	1.3		
	D1 → Y		(HH)	0.385	0.602	0.982	0.003	0.005	0.008	D2	1.3		
			(LL)	0.414	0.688	1.146	0.003	0.004	0.006	D3	1.3		
	D2 → Y		(HH)	0.380	0.596	0.973	0.003	0.005	0.008	D4	1.3		
			(LL)	0.408	0.679	1.131	0.003	0.004	0.006	D5	1.3		
	D3 → Y		(HH)	0.385	0.604	0.985	0.003	0.005	0.008	D6	1.3		
			(LL)	0.415	0.690	1.150	0.003	0.004	0.006	D7	1.2		
	D4 → Y		(HH)	0.385	0.605	0.996	0.003	0.005	0.008	A	2.4		
			(LL)	0.433	0.720	1.205	0.003	0.004	0.006	B	1.3		
	D5 → Y		(HH)	0.389	0.612	1.006	0.003	0.005	0.008	C	1.3		
			(LL)	0.438	0.730	1.225	0.003	0.004	0.006				
	D6 → Y		(HH)	0.376	0.593	0.973	0.003	0.005	0.008				
			(LL)	0.423	0.701	1.170	0.003	0.004	0.006				
	D7 → Y		(HH)	0.381	0.599	0.986	0.003	0.005	0.008				
			(LL)	0.427	0.712	1.188	0.003	0.004	0.006				
	A → Y		(HH)	0.451	0.733	1.197	0.003	0.005	0.008				
			(HL)	0.478	0.824	1.357	0.003	0.004	0.006				
			(LH)	0.425	0.706	1.172	0.003	0.005	0.008				
			(LL)	0.478	0.835	1.395	0.003	0.004	0.006				
	B → Y		(HH)	0.398	0.639	1.030	0.003	0.005	0.008				
			(HL)	0.409	0.661	1.055	0.003	0.004	0.006				
			(LH)	0.365	0.597	0.974	0.003	0.005	0.008				
			(LL)	0.420	0.701	1.144	0.003	0.004	0.006				
	C → Y		(HH)	0.290	0.448	0.706	0.003	0.005	0.008				
			(HL)	0.336	0.524	0.836	0.003	0.004	0.006				
			(LH)	0.314	0.507	0.817	0.003	0.005	0.008				
			(LL)	0.278	0.445	0.718	0.003	0.004	0.006				

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F563NT	D0 → Y	(HH)	0.411	0.645	1.059	0.002	0.003	0.004	D0	1.3	Y	285
		(LL)	0.441	0.739	1.236	0.001	0.002	0.003	D1	1.3		
	D1 → Y	(HH)	0.416	0.652	1.071	0.002	0.003	0.004	D2	1.3		
		(LL)	0.448	0.750	1.258	0.001	0.002	0.003	D3	1.3		
	D2 → Y	(HH)	0.412	0.646	1.062	0.002	0.003	0.004	D4	1.3		
		(LL)	0.442	0.741	1.241	0.001	0.002	0.003	D5	1.3		
	D3 → Y	(HH)	0.417	0.653	1.072	0.002	0.003	0.004	D6	1.3		
		(LL)	0.448	0.751	1.262	0.001	0.002	0.003	D7	1.2		
	D4 → Y	(HH)	0.415	0.656	1.085	0.002	0.003	0.004	A	2.4		
		(LL)	0.465	0.781	1.304	0.001	0.002	0.003	B	1.3		
	D5 → Y	(HH)	0.419	0.662	1.094	0.002	0.003	0.004	C	1.4		
		(LL)	0.471	0.791	1.323	0.001	0.002	0.003				
	D6 → Y	(HH)	0.407	0.644	1.061	0.002	0.003	0.004				
		(LL)	0.456	0.763	1.275	0.001	0.002	0.003				
	D7 → Y	(HH)	0.412	0.650	1.072	0.002	0.003	0.004				
		(LL)	0.462	0.773	1.296	0.001	0.002	0.003				
	A → Y	(HH)	0.482	0.782	1.282	0.002	0.003	0.004				
		(HL)	0.511	0.887	1.462	0.001	0.002	0.003				
		(LH)	0.457	0.757	1.261	0.002	0.003	0.004				
		(LL)	0.511	0.896	1.505	0.001	0.002	0.003				
	B → Y	(HH)	0.428	0.689	1.112	0.002	0.003	0.004				
		(HL)	0.449	0.740	1.192	0.001	0.002	0.003				
		(LH)	0.401	0.656	1.075	0.002	0.003	0.004				
		(LL)	0.449	0.761	1.251	0.001	0.002	0.003				
	C → Y	(HH)	0.315	0.482	0.757	0.002	0.003	0.004				
		(HL)	0.385	0.599	0.942	0.001	0.002	0.003				
		(LH)	0.362	0.580	0.941	0.002	0.003	0.004				
		(LL)	0.306	0.487	0.778	0.001	0.002	0.003				
F569	D0 → Y	(HH)	0.425	0.677	1.119	0.006	0.010	0.017	D0	1.0	Y	71
		(LL)	0.403	0.677	1.130	0.005	0.008	0.013	D1	1.3		
	D1 → Y	(HH)	0.428	0.680	1.125	0.006	0.010	0.017	D2	1.0		
		(LL)	0.406	0.684	1.144	0.005	0.008	0.013	D3	1.0		
	D2 → Y	(HH)	0.423	0.674	1.113	0.006	0.010	0.017	D4	1.2		
		(LL)	0.402	0.672	1.121	0.005	0.008	0.013	D5	1.3		
	D3 → Y	(HH)	0.426	0.678	1.119	0.006	0.010	0.017	D6	1.2		
		(LL)	0.403	0.679	1.137	0.005	0.008	0.013	D7	1.3		
	D4 → Y	(HH)	0.422	0.672	1.109	0.006	0.010	0.017	A	1.0		
		(LL)	0.400	0.669	1.113	0.005	0.008	0.013	B	1.0		
	D5 → Y	(HH)	0.425	0.675	1.114	0.006	0.010	0.017	C	1.0		
		(LL)	0.403	0.675	1.136	0.005	0.008	0.013	ENB	1.0		
	D6 → Y	(HH)	0.418	0.664	1.096	0.006	0.010	0.017				
		(LL)	0.394	0.661	1.101	0.005	0.008	0.013				
	D7 → Y	(HH)	0.421	0.668	1.102	0.006	0.010	0.017				
		(LL)	0.399	0.669	1.114	0.005	0.008	0.013				
	A → Y	(HH)	0.559	0.894	1.460	0.006	0.010	0.017				
		(HL)	0.524	0.841	1.356	0.005	0.008	0.013				
		(LH)	0.517	0.841	1.398	0.006	0.010	0.017				
		(LL)	0.527	0.883	1.467	0.005	0.008	0.013				
	B → Y	(HH)	0.444	0.711	1.156	0.006	0.010	0.017				
		(HL)	0.399	0.628	1.000	0.005	0.008	0.013				
		(LH)	0.411	0.666	1.096	0.006	0.010	0.017				
		(LL)	0.411	0.675	1.106	0.005	0.008	0.013				
	C → Y	(HH)	0.273	0.432	0.694	0.006	0.011	0.017				
		(HL)	0.266	0.411	0.640	0.005	0.008	0.013				
		(LH)	0.276	0.451	0.737	0.006	0.010	0.017				
		(LL)	0.247	0.392	0.617	0.005	0.008	0.013				

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	ENB → Y	(HL)	0.176	0.268	0.410	0.005	0.008	0.013				
		(LH)	0.164	0.267	0.442	0.006	0.011	0.017				
F569NP	D0 → Y	(HH)	0.450	0.720	1.195	0.003	0.005	0.008	D0	1.3	Y	143
		(LL)	0.424	0.710	1.181	0.003	0.004	0.006	D1	1.3		
	D1 → Y	(HH)	0.456	0.729	1.206	0.003	0.005	0.008	D2	1.3		
		(LL)	0.431	0.723	1.202	0.003	0.004	0.006	D3	1.3		
	D2 → Y	(HH)	0.451	0.723	1.198	0.003	0.005	0.008	D4	1.3		
		(LL)	0.425	0.711	1.184	0.003	0.004	0.006	D5	1.3		
	D3 → Y	(HH)	0.456	0.729	1.210	0.003	0.005	0.008	D6	1.3		
		(LL)	0.431	0.720	1.201	0.003	0.004	0.006	D7	1.2		
	D4 → Y	(HH)	0.456	0.729	1.210	0.003	0.005	0.008	A	2.4		
		(LL)	0.431	0.723	1.210	0.003	0.004	0.006	B	1.3		
	D5 → Y	(HH)	0.460	0.735	1.220	0.003	0.005	0.008	C	1.3		
		(LL)	0.436	0.730	1.227	0.003	0.004	0.006	ENB	1.3		
	D6 → Y	(HH)	0.447	0.715	1.183	0.003	0.005	0.008				
		(LL)	0.422	0.704	1.175	0.003	0.004	0.006				
	D7 → Y	(HH)	0.452	0.723	1.196	0.003	0.005	0.008				
		(LL)	0.429	0.715	1.195	0.003	0.004	0.006				
	A → Y	(HH)	0.526	0.849	1.398	0.003	0.005	0.008				
		(HL)	0.495	0.812	1.323	0.003	0.004	0.006				
		(LH)	0.500	0.818	1.364	0.003	0.005	0.008				
		(LL)	0.495	0.826	1.372	0.003	0.004	0.006				
	B → Y	(HH)	0.475	0.766	1.254	0.003	0.005	0.008				
		(HL)	0.427	0.679	1.085	0.003	0.004	0.006				
		(LH)	0.444	0.724	1.197	0.003	0.005	0.008				
		(LL)	0.437	0.724	1.181	0.003	0.004	0.006				
	C → Y	(HH)	0.309	0.498	0.808	0.003	0.005	0.008				
		(HL)	0.292	0.454	0.714	0.003	0.004	0.006				
		(LH)	0.309	0.510	0.836	0.003	0.005	0.008				
		(LL)	0.277	0.440	0.700	0.003	0.004	0.006				
	ENB → Y	(HL)	0.205	0.308	0.464	0.003	0.004	0.006				
		(LH)	0.197	0.317	0.512	0.003	0.005	0.008				
F563NSP	D0 → Y	(HH)	0.341	0.534	0.891	0.003	0.005	0.009	D0	2.4	Y	140
		(LL)	0.363	0.644	1.134	0.003	0.005	0.007	D1	2.5		
	D1 → Y	(HH)	0.340	0.534	0.890	0.003	0.005	0.009	D2	2.4		
		(LL)	0.362	0.640	1.132	0.003	0.005	0.007	D3	2.5		
	D2 → Y	(HH)	0.340	0.534	0.893	0.003	0.005	0.009	D4	2.4		
		(LL)	0.364	0.641	1.133	0.003	0.005	0.007	D5	2.5		
	D3 → Y	(HH)	0.340	0.534	0.892	0.003	0.005	0.009	D6	2.4		
		(LL)	0.363	0.643	1.132	0.003	0.005	0.007	D7	2.4		
	D4 → Y	(HH)	0.335	0.525	0.875	0.003	0.005	0.009	A	4.9		
		(LL)	0.357	0.632	1.112	0.003	0.005	0.007	B	2.4		
	D5 → Y	(HH)	0.334	0.524	0.873	0.003	0.005	0.009	C	1.3		
		(LL)	0.356	0.628	1.110	0.003	0.005	0.007				
	D6 → Y	(HH)	0.336	0.527	0.879	0.003	0.005	0.009				
		(LL)	0.359	0.635	1.117	0.003	0.005	0.007				
	D7 → Y	(HH)	0.336	0.526	0.879	0.003	0.005	0.009				
		(LL)	0.359	0.635	1.115	0.003	0.005	0.007				
	A → Y	(HH)	0.405	0.654	1.083	0.003	0.005	0.009				
		(HL)	0.423	0.746	1.286	0.003	0.005	0.007				
		(LH)	0.383	0.632	1.064	0.003	0.005	0.009				
		(LL)	0.419	0.752	1.314	0.003	0.005	0.007				
	B → Y	(HH)	0.353	0.559	0.914	0.003	0.005	0.009				
		(HL)	0.362	0.625	1.058	0.003	0.005	0.007				
		(LH)	0.333	0.537	0.892	0.003	0.005	0.009				
		(LL)	0.360	0.642	1.112	0.003	0.005	0.007				

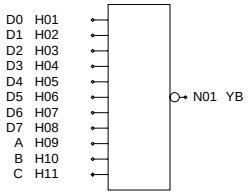
Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	C → Y	(HH)	0.287	0.441	0.696	0.003	0.005	0.009				
		(HL)	0.283	0.459	0.740	0.003	0.004	0.007				
		(LH)	0.262	0.411	0.661	0.003	0.005	0.009				
		(LL)	0.282	0.481	0.804	0.003	0.004	0.007				
F563NST	D0 → Y	(HH)	0.346	0.555	0.937	0.002	0.003	0.004	D0	4.9	Y	278
		(LL)	0.361	0.661	1.185	0.001	0.002	0.004	D1	4.9		
	D1 → Y	(HH)	0.345	0.554	0.935	0.002	0.003	0.004	D2	4.9		
		(LL)	0.360	0.661	1.183	0.001	0.002	0.004	D3	4.9		
	D2 → Y	(HH)	0.346	0.553	0.936	0.002	0.003	0.004	D4	4.9		
		(LL)	0.361	0.659	1.181	0.001	0.002	0.004	D5	4.9		
	D3 → Y	(HH)	0.345	0.553	0.934	0.002	0.003	0.004	D6	4.9		
		(LL)	0.360	0.658	1.173	0.001	0.002	0.004	D7	4.9		
	D4 → Y	(HH)	0.340	0.545	0.920	0.002	0.003	0.004	A	4.9		
		(LL)	0.356	0.651	1.161	0.001	0.002	0.004	B	2.4		
	D5 → Y	(HH)	0.339	0.544	0.919	0.002	0.003	0.004	C	1.3		
		(LL)	0.355	0.649	1.155	0.001	0.002	0.004				
	D6 → Y	(HH)	0.340	0.545	0.922	0.002	0.003	0.004				
		(LL)	0.357	0.653	1.165	0.001	0.002	0.004				
	D7 → Y	(HH)	0.340	0.545	0.921	0.002	0.003	0.004				
		(LL)	0.355	0.651	1.164	0.001	0.002	0.004				
	A → Y	(HH)	0.441	0.711	1.172	0.002	0.003	0.004				
		(HL)	0.455	0.805	1.382	0.001	0.002	0.004				
		(LH)	0.415	0.683	1.143	0.002	0.003	0.004				
		(LL)	0.450	0.811	1.418	0.001	0.002	0.004				
	B → Y	(HH)	0.394	0.623	1.022	0.002	0.003	0.004				
		(HL)	0.410	0.715	1.226	0.001	0.002	0.004				
		(LH)	0.375	0.604	1.004	0.002	0.003	0.004				
		(LL)	0.404	0.723	1.257	0.001	0.002	0.004				
	C → Y	(HH)	0.338	0.521	0.832	0.002	0.003	0.004				
		(HL)	0.342	0.578	0.963	0.001	0.002	0.004				
		(LH)	0.319	0.502	0.817	0.002	0.003	0.004				
		(LL)	0.336	0.587	1.002	0.001	0.002	0.004				

[MEMO]

Function	8 to 1 Multiplexer (Negative Out)												SSI Family	
Block type	Standard type						High-speed type							
	Normal		with ENB		with EN		Normal		with ENB		with EN			
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power														
x1	F579	17												
x2														
x4														

Logic Diagram

for "Standard type"



for "Standard type with ENB"

for "Standard type with EN"

for "High-speed typee"

for "High-speed type with ENB"

for "High-speed type with EN"

Truth Table

D0	D1	D2	D3	D4	D5	D6	D7	A	B	C	ENB	Y	YB
X	X	X	X	X	X	X	X	X	X	X	1	0	1
A	X	X	X	X	X	X	X	0	0	0	0	A	AB
X	B	X	X	X	X	X	X	1	0	0	0	B	BB
X	X	C	X	X	X	X	X	0	1	0	0	C	CB
X	X	X	D	X	X	X	X	1	1	0	0	D	DE
X	X	X	X	E	X	X	X	0	0	1	0	E	EB
X	X	X	X	X	F	X	X	1	0	1	0	F	FB
X	X	X	X	X	X	G	X	0	1	1	0	G	GB
X	X	X	X	X	X	X	H	1	1	1	0	H	HB

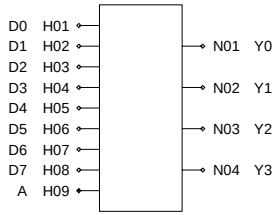
X:Irrelevant

Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_1						
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F579	D0 → YB		(HL)	0.311	0.483	0.777	0.008	0.013	0.022	D0	1.0	YB	64
			(LH)	0.343	0.578	0.975	0.006	0.010	0.017	D1	1.0		
	D1 → YB		(HL)	0.314	0.490	0.790	0.008	0.013	0.022	D2	1.0		
			(LH)	0.348	0.585	0.993	0.006	0.010	0.017	D3	1.0		
	D2 → YB		(HL)	0.307	0.479	0.773	0.008	0.013	0.022	D4	1.0		
			(LH)	0.340	0.572	0.966	0.006	0.010	0.017	D5	1.0		
	D3 → YB		(HL)	0.312	0.486	0.781	0.008	0.013	0.022	D6	1.0		
			(LH)	0.345	0.583	0.981	0.006	0.010	0.017	D7	1.3		
	D4 → YB		(HL)	0.305	0.476	0.765	0.008	0.013	0.022	A	1.0		
			(LH)	0.336	0.565	0.956	0.006	0.010	0.017	B	1.0		
	D5 → YB		(HL)	0.310	0.482	0.774	0.008	0.013	0.022	C	1.0		
			(LH)	0.342	0.576	0.973	0.006	0.010	0.017				
	D6 → YB		(HL)	0.305	0.471	0.759	0.008	0.013	0.022				
			(LH)	0.334	0.564	0.950	0.006	0.010	0.017				
	D7 → YB		(HL)	0.308	0.477	0.771	0.008	0.013	0.022				
			(LH)	0.340	0.574	0.968	0.006	0.010	0.017				
	A → YB		(HH)	0.455	0.745	1.204	0.006	0.010	0.017				
			(HL)	0.440	0.700	1.124	0.008	0.013	0.022				
			(LH)	0.460	0.782	1.308	0.006	0.010	0.017				
			(LL)	0.394	0.649	1.061	0.008	0.013	0.022				
	B → YB		(HH)	0.334	0.530	0.848	0.006	0.010	0.017				
			(HL)	0.327	0.515	0.813	0.008	0.013	0.022				
			(LH)	0.345	0.573	0.939	0.006	0.010	0.017				
			(LL)	0.299	0.476	0.762	0.008	0.013	0.022				
	C → YB		(HH)	0.251	0.390	0.619	0.006	0.010	0.017				
			(HL)	0.212	0.323	0.492	0.008	0.013	0.022				
			(LH)	0.206	0.332	0.534	0.006	0.010	0.017				
			(LL)	0.242	0.388	0.606	0.008	0.013	0.022				

Function	Quad 2 to 1 Multiplexer (Positive Out)										SSI Family	
Block type	Standard type						High-speed type					
	Normal		with ENB		with EN		Normal		with ENB		with EN	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power												
x1	F552	13										
x2												
x4												

Logic Diagram

for "Standard type"



for "Standard type with ENB"

for "Standard type with EN"

for "High-speed typee"

for "High-speed type with ENB"

for "High-speed type with EN"

Truth Table

Da	Da+1	A	ENB	Yn	YnB
A	X	0	0	A	AB
X	B	1	0	B	BB
X	X	X	1	0	1

X:Irrelevant

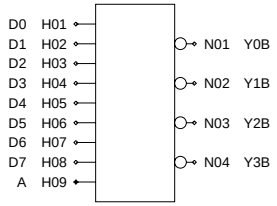
a=2*n(n=0 to 3)

Block type	Switching speed							Input		Output	
	Path			t_{LD0} (ns)			t_1				
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F552	D0 → Y0	(HH)		0.175	0.257	0.392	0.006	0.011	0.017	D0	1.0	Y0	70
		(LL)		0.187	0.303	0.483	0.005	0.008	0.013	D1	1.0	Y1	70
	D1 → Y0	(HH)		0.180	0.263	0.403	0.006	0.011	0.017	D2	1.0	Y2	70
		(LL)		0.194	0.313	0.501	0.005	0.008	0.013	D3	1.0	Y3	70
	D2 → Y1	(HH)		0.175	0.257	0.392	0.006	0.011	0.017	D4	1.0		
		(LL)		0.187	0.303	0.483	0.005	0.008	0.013	D5	1.0		
	D3 → Y1	(HH)		0.180	0.263	0.403	0.006	0.011	0.017	D6	1.0		
		(LL)		0.194	0.313	0.501	0.005	0.008	0.013	D7	1.0		
	D4 → Y2	(HH)		0.175	0.257	0.392	0.006	0.011	0.017	A	1.0		
		(LL)		0.187	0.303	0.483	0.005	0.008	0.013				
	D5 → Y2	(HH)		0.180	0.263	0.403	0.006	0.011	0.017				
		(LL)		0.194	0.313	0.501	0.005	0.008	0.013				
	D6 → Y3	(HH)		0.175	0.257	0.392	0.006	0.011	0.017				
		(LL)		0.187	0.303	0.483	0.005	0.008	0.013				
	D7 → Y3	(HH)		0.180	0.263	0.403	0.006	0.011	0.017				
		(LL)		0.194	0.313	0.501	0.005	0.008	0.013				
	A → Y0	(HH)		0.322	0.493	0.767	0.006	0.010	0.017				
		(HL)		0.308	0.463	0.705	0.005	0.008	0.013				
		(LH)		0.278	0.434	0.692	0.006	0.011	0.017				
		(LL)		0.309	0.505	0.817	0.005	0.008	0.013				
	A → Y1	(HH)		0.322	0.493	0.767	0.006	0.010	0.017				
		(HL)		0.308	0.463	0.705	0.005	0.008	0.013				
		(LH)		0.278	0.434	0.692	0.006	0.011	0.017				
		(LL)		0.309	0.505	0.817	0.005	0.008	0.013				
	A → Y2	(HH)		0.322	0.493	0.767	0.006	0.010	0.017				
		(HL)		0.308	0.463	0.705	0.005	0.008	0.013				
		(LH)		0.278	0.434	0.692	0.006	0.011	0.017				
		(LL)		0.309	0.505	0.817	0.005	0.008	0.013				
	A → Y3	(HH)		0.322	0.493	0.767	0.006	0.010	0.017				
		(HL)		0.308	0.463	0.705	0.005	0.008	0.013				
		(LH)		0.278	0.434	0.692	0.006	0.011	0.017				
		(LL)		0.309	0.505	0.817	0.005	0.008	0.013				

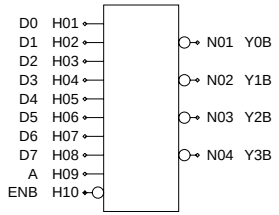
Function	Quad 2 to 1 Multiplexer (Negative Out)										SSI Family	
Block type	Standard type						High-speed type					
	Normal		with ENB		with EN		Normal		with ENB		with EN	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power			L572	10								
x1	F555	9	F572	14								
x2												
x4												

Logic Diagram

for "Standard type"



for "Standard type with ENB"



for "Standard type with EN"

for "High-speed typee"

for "High-speed type with ENB"

for "High-speed type with EN"

Truth Table

Da	Da+1	A	ENB	Yn	YnB
A	X	0	0	A	AB
X	B	1	0	B	BB
X	X	X	1	0	1

X:Irrelevant

a=2*n(n=0 to 3)

Block type	Switching speed							Input		Output	
	Path		t_{LD0} (ns)			t_1					
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F555	D0 → Y0B	(HL)	0.104	0.156	0.231	0.005	0.008	0.013	D0	4.9	Y0B	71
		(LH)	0.073	0.121	0.190	0.006	0.010	0.017	D1	5.1	Y1B	71
	D1 → Y0B	(HL)	0.105	0.156	0.229	0.005	0.008	0.013	D2	4.9	Y2B	71
		(LH)	0.073	0.121	0.191	0.006	0.010	0.017	D3	5.1	Y3B	71
	D2 → Y1B	(HL)	0.104	0.156	0.231	0.005	0.008	0.013	D4	4.9		
		(LH)	0.073	0.121	0.190	0.006	0.010	0.017	D5	5.1		
	D3 → Y1B	(HL)	0.105	0.156	0.229	0.005	0.008	0.013	D6	4.9		
		(LH)	0.073	0.121	0.191	0.006	0.010	0.017	D7	5.1		
	D4 → Y2B	(HL)	0.104	0.156	0.231	0.005	0.008	0.013	A	1.0		
		(LH)	0.073	0.121	0.190	0.006	0.010	0.017				
	D5 → Y2B	(HL)	0.105	0.156	0.229	0.005	0.008	0.013				
		(LH)	0.073	0.121	0.191	0.006	0.010	0.017				
	D6 → Y3B	(HL)	0.104	0.156	0.231	0.005	0.008	0.013				
		(LH)	0.073	0.121	0.190	0.006	0.010	0.017				
	D7 → Y3B	(HL)	0.105	0.156	0.229	0.005	0.008	0.013				
		(LH)	0.073	0.121	0.191	0.006	0.010	0.017				
	A → Y0B	(HH)	0.292	0.445	0.682	0.006	0.010	0.017				
		(HL)	0.254	0.369	0.548	0.005	0.008	0.013				
		(LH)	0.243	0.378	0.588	0.006	0.010	0.017				
		(LL)	0.272	0.438	0.699	0.005	0.008	0.013				
	A → Y1B	(HH)	0.292	0.445	0.682	0.006	0.010	0.017				
		(HL)	0.254	0.369	0.548	0.005	0.008	0.013				
		(LH)	0.243	0.378	0.588	0.006	0.010	0.017				
		(LL)	0.272	0.438	0.699	0.005	0.008	0.013				
	A → Y2B	(HH)	0.292	0.445	0.682	0.006	0.010	0.017				
		(HL)	0.254	0.369	0.548	0.005	0.008	0.013				
		(LH)	0.243	0.378	0.588	0.006	0.010	0.017				
		(LL)	0.272	0.438	0.699	0.005	0.008	0.013				
	A → Y3B	(HH)	0.292	0.445	0.682	0.006	0.010	0.017				
		(HL)	0.254	0.369	0.548	0.005	0.008	0.013				
		(LH)	0.243	0.378	0.588	0.006	0.010	0.017				
		(LL)	0.272	0.438	0.699	0.005	0.008	0.013				
L572	D0 → Y0B	(HL)	0.119	0.156	0.222	0.016	0.026	0.044	D0	3.6	Y0B	32
		(LH)	0.065	0.111	0.175	0.013	0.021	0.034	D1	3.8	Y1B	32
	D1 → Y0B	(HL)	0.121	0.159	0.223	0.016	0.026	0.044	D2	3.6	Y2B	32
		(LH)	0.066	0.111	0.173	0.013	0.021	0.034	D3	3.8	Y3B	32
	D2 → Y1B	(HL)	0.119	0.156	0.222	0.016	0.026	0.044	D4	3.6		
		(LH)	0.065	0.111	0.175	0.013	0.021	0.034	D5	3.8		
	D3 → Y1B	(HL)	0.121	0.159	0.223	0.016	0.026	0.044	D6	3.6		
		(LH)	0.066	0.111	0.173	0.013	0.021	0.034	D7	3.8		
	D4 → Y2B	(HL)	0.119	0.156	0.222	0.016	0.026	0.044	A	1.0		
		(LH)	0.065	0.111	0.175	0.013	0.021	0.034	ENB	1.0		
	D5 → Y2B	(HL)	0.121	0.159	0.223	0.016	0.026	0.044				
		(LH)	0.066	0.111	0.173	0.013	0.021	0.034				
	D6 → Y3B	(HL)	0.119	0.156	0.222	0.016	0.026	0.044				
		(LH)	0.065	0.111	0.175	0.013	0.021	0.034				
	D7 → Y3B	(HL)	0.121	0.159	0.223	0.016	0.026	0.044				
		(LH)	0.066	0.111	0.173	0.013	0.021	0.034				
	A → Y0B	(HH)	0.280	0.426	0.652	0.013	0.021	0.034				
		(HL)	0.237	0.344	0.509	0.016	0.026	0.044				
		(LH)	0.225	0.348	0.542	0.013	0.021	0.034				
		(LL)	0.270	0.426	0.678	0.016	0.026	0.044				
	A → Y1B	(HH)	0.280	0.426	0.652	0.013	0.021	0.034				
		(HL)	0.237	0.344	0.509	0.016	0.026	0.044				
		(LH)	0.225	0.348	0.542	0.013	0.021	0.034				
		(LL)	0.270	0.426	0.678	0.016	0.026	0.044				

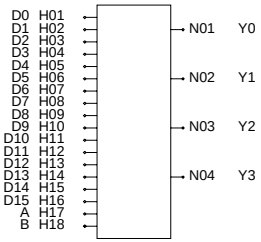
Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	A → Y2B	(HH)	0.280	0.426	0.652	0.013	0.021	0.034				
		(HL)	0.237	0.344	0.509	0.016	0.026	0.044				
		(LH)	0.225	0.348	0.542	0.013	0.021	0.034				
		(LL)	0.270	0.426	0.678	0.016	0.026	0.044				
	A → Y3B	(HH)	0.280	0.426	0.652	0.013	0.021	0.034				
		(HL)	0.237	0.344	0.509	0.016	0.026	0.044				
		(LH)	0.225	0.348	0.542	0.013	0.021	0.034				
		(LL)	0.270	0.426	0.678	0.016	0.026	0.044				
	ENB → Y0B	(HH)	0.177	0.254	0.366	0.013	0.021	0.034				
		(LL)	0.175	0.274	0.421	0.016	0.026	0.044				
	ENB → Y1B	(HH)	0.177	0.254	0.366	0.013	0.021	0.034				
		(LL)	0.175	0.274	0.421	0.016	0.026	0.044				
	ENB → Y2B	(HH)	0.177	0.254	0.366	0.013	0.021	0.034				
		(LL)	0.175	0.274	0.421	0.016	0.026	0.044				
	ENB → Y3B	(HH)	0.177	0.254	0.366	0.013	0.021	0.034				
		(LL)	0.175	0.274	0.421	0.016	0.026	0.044				
F572	D0 → Y0B	(HL)	0.116	0.170	0.255	0.008	0.013	0.022	D0	5.1	Y0B	63
		(LH)	0.082	0.138	0.218	0.006	0.010	0.017	D1	4.8	Y1B	63
	D1 → Y0B	(HL)	0.116	0.170	0.255	0.008	0.013	0.022	D2	5.2	Y2B	63
		(LH)	0.082	0.139	0.218	0.006	0.010	0.017	D3	4.9	Y3B	63
	D2 → Y1B	(HL)	0.115	0.170	0.257	0.008	0.013	0.022	D4	5.2		
		(LH)	0.083	0.139	0.220	0.006	0.010	0.017	D5	4.9		
	D3 → Y1B	(HL)	0.117	0.170	0.257	0.008	0.013	0.022	D6	5.1		
		(LH)	0.083	0.140	0.220	0.006	0.010	0.017	D7	4.9		
	D4 → Y2B	(HL)	0.115	0.170	0.257	0.008	0.013	0.022	A	1.0		
		(LH)	0.083	0.139	0.220	0.006	0.010	0.017	ENB	2.5		
	D5 → Y2B	(HL)	0.117	0.170	0.257	0.008	0.013	0.022				
		(LH)	0.083	0.140	0.220	0.006	0.010	0.017				
	D6 → Y3B	(HL)	0.118	0.170	0.257	0.008	0.013	0.022				
		(LH)	0.083	0.139	0.220	0.006	0.010	0.017				
	D7 → Y3B	(HL)	0.117	0.170	0.257	0.008	0.013	0.022				
		(LH)	0.083	0.140	0.220	0.006	0.010	0.017				
	A → Y0B	(HH)	0.313	0.481	0.736	0.006	0.010	0.017				
		(HL)	0.268	0.392	0.593	0.008	0.013	0.022				
		(LH)	0.259	0.405	0.633	0.006	0.010	0.017				
		(LL)	0.295	0.471	0.758	0.008	0.013	0.022				
	A → Y1B	(HH)	0.314	0.482	0.738	0.006	0.010	0.017				
		(HL)	0.269	0.394	0.596	0.008	0.013	0.022				
		(LH)	0.260	0.407	0.636	0.006	0.010	0.017				
		(LL)	0.296	0.472	0.760	0.008	0.013	0.022				
	A → Y2B	(HH)	0.314	0.482	0.738	0.006	0.010	0.017				
		(HL)	0.269	0.394	0.596	0.008	0.013	0.022				
		(LH)	0.260	0.407	0.636	0.006	0.010	0.017				
		(LL)	0.296	0.472	0.760	0.008	0.013	0.022				
	A → Y3B	(HH)	0.314	0.482	0.738	0.006	0.010	0.017				
		(HL)	0.269	0.394	0.596	0.008	0.013	0.022				
		(LH)	0.260	0.407	0.636	0.006	0.010	0.017				
		(LL)	0.296	0.472	0.760	0.008	0.013	0.022				
	ENB → Y0B	(HH)	0.166	0.237	0.340	0.006	0.010	0.017				
		(LL)	0.176	0.268	0.409	0.008	0.013	0.022				
	ENB → Y1B	(HH)	0.166	0.237	0.340	0.006	0.010	0.017				
		(LL)	0.175	0.268	0.409	0.008	0.013	0.022				
	ENB → Y2B	(HH)	0.166	0.237	0.340	0.006	0.010	0.017				
		(LL)	0.175	0.268	0.409	0.008	0.013	0.022				
	ENB → Y3B	(HH)	0.166	0.237	0.340	0.006	0.010	0.017				
		(LL)	0.175	0.268	0.409	0.008	0.013	0.022				

[MEMO]

Function	Quad 4 to 1 Multiplexer (Positive Out)						SSI Family					
Block type	Standard type						High-speed type					
	Normal		with ENB		with EN		Normal		with ENB		with EN	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power												
x1	F551	27										
x2												
x4												

Logic Diagram

for "Standard type"



for "Standard type with ENB"

for "Standard type with EN"

for "High-speed typee"

for "High-speed type with ENB"

for "High-speed type with EN"

Truth Table

Da	Da+1	Da+2	Da+3	A	B	Yn	YnB
A	X	X	X	0	0	A	AB
X	B	X	X	1	0	B	BB
X	X	C	X	0	1	C	CB
X	X	X	D	1	1	D	DB

X:Irrelevant

a=4*n(n=0 to 3)

Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_{1}						
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F551	D0 → Y0	(HH)		0.247	0.378	0.610	0.006	0.011	0.017	D0	1.0	Y0	70
		(LL)		0.270	0.459	0.774	0.005	0.009	0.014	D1	1.3	Y1	70
	D1 → Y0	(HH)		0.251	0.384	0.619	0.006	0.011	0.017	D2	1.3	Y2	70
		(LL)		0.275	0.468	0.787	0.005	0.009	0.014	D3	1.2	Y3	70
	D2 → Y0	(HH)		0.250	0.382	0.617	0.006	0.011	0.017	D4	1.0		
		(LL)		0.274	0.464	0.786	0.005	0.009	0.014	D5	1.3		
	D3 → Y0	(HH)		0.253	0.386	0.624	0.006	0.011	0.017	D6	1.3		
		(LL)		0.277	0.470	0.799	0.005	0.009	0.014	D7	1.2		
	D4 → Y1	(HH)		0.248	0.379	0.613	0.006	0.011	0.017	D8	1.3		
		(LL)		0.272	0.461	0.778	0.005	0.009	0.014	D9	1.2		
	D5 → Y1	(HH)		0.253	0.385	0.621	0.006	0.011	0.017	D10	1.3		
		(LL)		0.277	0.470	0.795	0.005	0.009	0.014	D11	1.2		
	D6 → Y1	(HH)		0.250	0.382	0.618	0.006	0.011	0.017	D12	1.0		
		(LL)		0.275	0.465	0.788	0.005	0.009	0.014	D13	1.3		
	D7 → Y1	(HH)		0.254	0.387	0.627	0.006	0.011	0.017	D14	1.0		
		(LL)		0.278	0.471	0.799	0.005	0.009	0.014	D15	1.0		
	D8 → Y2	(HH)		0.247	0.378	0.609	0.006	0.011	0.017	A	2.5		
		(LL)		0.270	0.459	0.774	0.005	0.009	0.014	B	1.0		
	D9 → Y2	(HH)		0.252	0.385	0.619	0.006	0.011	0.017				
		(LL)		0.276	0.468	0.790	0.005	0.009	0.014				
	D10 → Y2	(HH)		0.250	0.382	0.617	0.006	0.011	0.017				
		(LL)		0.274	0.464	0.786	0.005	0.009	0.014				
	D11 → Y2	(HH)		0.253	0.386	0.624	0.006	0.011	0.017				
		(LL)		0.277	0.470	0.799	0.005	0.009	0.014				
	D12 → Y3	(HH)		0.247	0.378	0.610	0.006	0.011	0.017				
		(LL)		0.270	0.459	0.774	0.005	0.009	0.014				
	D13 → Y3	(HH)		0.251	0.384	0.619	0.006	0.011	0.017				
		(LL)		0.275	0.468	0.787	0.005	0.009	0.014				
	D14 → Y3	(HH)		0.250	0.382	0.617	0.006	0.011	0.017				
		(LL)		0.274	0.464	0.786	0.005	0.009	0.014				
	D15 → Y3	(HH)		0.253	0.386	0.623	0.006	0.011	0.017				
		(LL)		0.277	0.470	0.796	0.005	0.009	0.014				
	A → Y0	(HH)		0.392	0.614	0.980	0.006	0.011	0.017				
		(HL)		0.396	0.636	1.021	0.005	0.009	0.014				
		(LH)		0.347	0.559	0.916	0.006	0.011	0.017				
		(LL)		0.390	0.662	1.110	0.005	0.009	0.014				
	A → Y1	(HH)		0.393	0.615	0.982	0.006	0.011	0.017				
		(HL)		0.397	0.638	1.024	0.005	0.009	0.014				
		(LH)		0.349	0.560	0.917	0.006	0.011	0.017				
		(LL)		0.391	0.662	1.112	0.005	0.009	0.014				
	A → Y2	(HH)		0.392	0.614	0.980	0.006	0.011	0.017				
		(HL)		0.396	0.636	1.021	0.005	0.009	0.014				
		(LH)		0.347	0.559	0.916	0.006	0.011	0.017				
		(LL)		0.390	0.662	1.110	0.005	0.009	0.014				
	A → Y3	(HH)		0.392	0.614	0.980	0.006	0.011	0.017				
		(HL)		0.396	0.636	1.021	0.005	0.009	0.014				
		(LH)		0.347	0.559	0.916	0.006	0.011	0.017				
		(LL)		0.390	0.662	1.110	0.005	0.009	0.014				
	B → Y0	(HH)		0.366	0.562	0.883	0.006	0.011	0.017				
		(HL)		0.360	0.554	0.856	0.005	0.009	0.014				
		(LH)		0.321	0.505	0.813	0.006	0.011	0.017				
		(LL)		0.359	0.602	0.987	0.005	0.009	0.014				
	B → Y1	(HH)		0.366	0.562	0.884	0.006	0.011	0.017				
		(HL)		0.360	0.554	0.855	0.005	0.009	0.014				
		(LH)		0.321	0.505	0.812	0.006	0.011	0.017				
		(LL)		0.359	0.602	0.987	0.005	0.009	0.014				

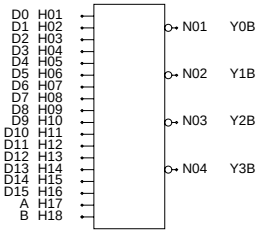
Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			Input		Output	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	B → Y2	(HH)	0.366	0.562	0.883	0.006	0.011	0.017				
		(HL)	0.360	0.554	0.856	0.005	0.009	0.014				
		(LH)	0.321	0.505	0.813	0.006	0.011	0.017				
		(LL)	0.359	0.602	0.987	0.005	0.009	0.014				
	B → Y3	(HH)	0.366	0.562	0.883	0.006	0.011	0.017				
		(HL)	0.360	0.554	0.856	0.005	0.009	0.014				
		(LH)	0.321	0.505	0.813	0.006	0.011	0.017				
		(LL)	0.359	0.602	0.987	0.005	0.009	0.014				

[MEMO]

Function	Quad 4 to 1 Multiplexer (Negative Out)						SSI Family					
Block type	Standard type						High-speed type					
	Normal		with ENB		with EN		Normal		with ENB		with EN	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power												
x1	F554	29										
x2												
x4												

Logic Diagram

for "Standard type"



for "Standard type with ENB"

for "Standard type with EN"

for "High-speed typee"

for "High-speed type with ENB"

for "High-speed type with EN"

Truth Table

Da	Da+1	Da+2	Da+3	A	B	Yn	YnB
A	X	X	X	0	0	A	AB
X	B	X	X	1	0	B	BB
X	X	C	X	0	1	C	CB
X	X	X	D	1	1	D	DB

X:Irrelevant

a=4*n(n=0 to 3)

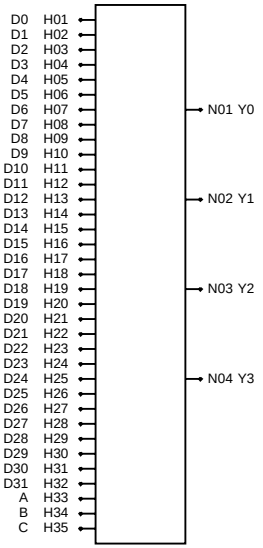
Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_1						
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F554	D0 → Y0B	(HL)		0.292	0.447	0.712	0.005	0.008	0.013	D0	1.3	Y0B	71
		(LH)		0.277	0.469	0.790	0.006	0.010	0.017	D1	1.2	Y1B	71
	D1 → Y0B	(HL)		0.296	0.454	0.724	0.005	0.008	0.013	D2	1.3	Y2B	71
		(LH)		0.284	0.480	0.807	0.006	0.010	0.017	D3	1.3	Y3B	71
	D2 → Y0B	(HL)		0.294	0.450	0.720	0.005	0.008	0.013	D4	1.3		
		(LH)		0.280	0.476	0.799	0.006	0.010	0.017	D5	1.2		
	D3 → Y0B	(HL)		0.298	0.456	0.727	0.005	0.008	0.013	D6	1.3		
		(LH)		0.285	0.482	0.813	0.006	0.010	0.017	D7	1.3		
	D4 → Y1B	(HL)		0.291	0.445	0.709	0.005	0.008	0.013	D8	1.3		
		(LH)		0.276	0.466	0.786	0.006	0.010	0.017	D9	1.2		
	D5 → Y1B	(HL)		0.295	0.451	0.719	0.005	0.008	0.013	D10	1.3		
		(LH)		0.282	0.477	0.802	0.006	0.010	0.017	D11	1.3		
	D6 → Y1B	(HL)		0.293	0.447	0.715	0.005	0.008	0.013	D12	1.3		
		(LH)		0.279	0.474	0.795	0.006	0.010	0.017	D13	1.2		
	D7 → Y1B	(HL)		0.297	0.454	0.723	0.005	0.008	0.013	D14	1.0		
		(LH)		0.284	0.481	0.808	0.006	0.010	0.017	D15	1.0		
	D8 → Y2B	(HL)		0.292	0.447	0.712	0.005	0.008	0.013	A	2.6		
		(LH)		0.277	0.469	0.790	0.006	0.010	0.017	B	1.3		
	D9 → Y2B	(HL)		0.296	0.454	0.724	0.005	0.008	0.013				
		(LH)		0.284	0.480	0.807	0.006	0.010	0.017				
	D10 → Y2B	(HL)		0.294	0.450	0.720	0.005	0.008	0.013				
		(LH)		0.280	0.476	0.799	0.006	0.010	0.017				
	D11 → Y2B	(HL)		0.298	0.456	0.727	0.005	0.008	0.013				
		(LH)		0.285	0.482	0.813	0.006	0.010	0.017				
	D12 → Y3B	(HL)		0.291	0.445	0.709	0.005	0.008	0.013				
		(LH)		0.276	0.466	0.786	0.006	0.010	0.017				
	D13 → Y3B	(HL)		0.295	0.451	0.719	0.005	0.008	0.013				
		(LH)		0.282	0.477	0.802	0.006	0.010	0.017				
	D14 → Y3B	(HL)		0.293	0.447	0.715	0.005	0.008	0.013				
		(LH)		0.279	0.473	0.795	0.006	0.010	0.017				
	D15 → Y3B	(HL)		0.296	0.453	0.722	0.005	0.008	0.013				
		(LH)		0.283	0.479	0.807	0.006	0.010	0.017				
	A → Y0B	(HH)		0.401	0.637	1.022	0.006	0.010	0.017				
		(HL)		0.440	0.689	1.092	0.005	0.008	0.013				
		(LH)		0.404	0.680	1.138	0.006	0.010	0.017				
		(LL)		0.390	0.627	1.016	0.005	0.008	0.013				
	A → Y1B	(HH)		0.399	0.635	1.018	0.006	0.010	0.017				
		(HL)		0.438	0.686	1.087	0.005	0.008	0.013				
		(LH)		0.403	0.678	1.134	0.006	0.010	0.017				
		(LL)		0.388	0.624	1.011	0.005	0.008	0.013				
	A → Y2B	(HH)		0.401	0.637	1.022	0.006	0.010	0.017				
		(HL)		0.440	0.689	1.092	0.005	0.008	0.013				
		(LH)		0.404	0.680	1.138	0.006	0.010	0.017				
		(LL)		0.390	0.627	1.016	0.005	0.008	0.013				
	A → Y3B	(HH)		0.399	0.635	1.018	0.006	0.010	0.017				
		(HL)		0.438	0.686	1.087	0.005	0.008	0.013				
		(LH)		0.403	0.678	1.134	0.006	0.010	0.017				
		(LL)		0.388	0.624	1.011	0.005	0.008	0.013				
	B → Y0B	(HH)		0.353	0.537	0.836	0.006	0.010	0.017				
		(HL)		0.419	0.646	1.013	0.005	0.008	0.013				
		(LH)		0.380	0.631	1.035	0.006	0.010	0.017				
		(LL)		0.360	0.569	0.908	0.005	0.008	0.013				
	B → Y1B	(HH)		0.352	0.534	0.831	0.006	0.010	0.017				
		(HL)		0.417	0.643	1.008	0.005	0.008	0.013				
		(LH)		0.378	0.629	1.031	0.006	0.010	0.017				
		(LL)		0.358	0.566	0.903	0.005	0.008	0.013				

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			Input		Output	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	B → Y2B	(HH)	0.353	0.537	0.836	0.006	0.010	0.017				
		(HL)	0.419	0.646	1.013	0.005	0.008	0.013				
		(LH)	0.380	0.631	1.035	0.006	0.010	0.017				
		(LL)	0.360	0.569	0.908	0.005	0.008	0.013				
	B → Y3B	(HH)	0.352	0.534	0.831	0.006	0.010	0.017				
		(HL)	0.417	0.643	1.009	0.005	0.008	0.013				
		(LH)	0.378	0.629	1.031	0.006	0.010	0.017				
		(LL)	0.358	0.566	0.903	0.005	0.008	0.013				

[MEMO]

Function	Quad 8 to 1 Multiplexer (Positive Out)												SSI Family	
Block type	Positive output type						Negative output type							
	Normal		with ENB		with EN		Normal		with ENB		with EN			
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells		
Low Power														
x1	F550	64												
x2														
x4														

Logic Diagram for "Normal type"



Logic Diagram for "with ENB"

Logic Diagram for "with EN"

Truth Table

Da	Da+1	Da+2	Da+3	Da+4	Da+5	Da+6	Da+7	A	B	C	Yn	YnB
A	X	X	X	X	X	X	X	0	0	0	A	AB
X	B	X	X	X	X	X	X	1	0	0	B	BB
X	X	C	X	X	X	X	X	0	1	0	C	CB
X	X	X	D	X	X	X	X	1	1	0	D	DB
X	X	X	X	E	X	X	X	0	0	1	E	EB
X	X	X	X	X	F	X	X	1	0	1	F	FB
X	X	X	X	X	X	G	X	0	1	1	G	GB
X	X	X	X	X	X	X	H	1	1	1	H	HB

X:Irrelevant

a=8*n(n=0 to 3)

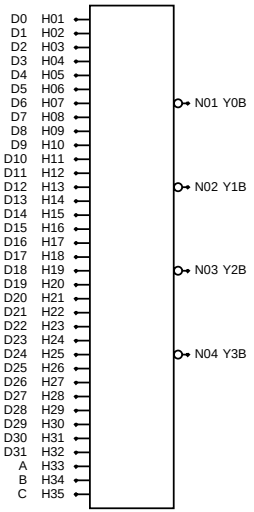
Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F550	D0 → Y0	(HH)	0.343	0.536	0.879	0.006	0.011	0.017	D0	1.0	Y0	71
		(LL)	0.378	0.628	1.046	0.005	0.008	0.013	D1	1.2	Y1	71
	D1 → Y0	(HH)	0.348	0.543	0.887	0.006	0.011	0.017	D2	1.0	Y2	71
		(LL)	0.384	0.638	1.059	0.005	0.008	0.013	D3	1.2	Y3	71
	D2 → Y0	(HH)	0.341	0.533	0.873	0.006	0.011	0.017	D4	1.3		
		(LL)	0.376	0.622	1.039	0.005	0.008	0.013	D5	1.0		
	D3 → Y0	(HH)	0.345	0.540	0.883	0.006	0.011	0.017	D6	1.3		
		(LL)	0.382	0.633	1.051	0.005	0.008	0.013	D7	1.0		
	D4 → Y0	(HH)	0.339	0.525	0.856	0.006	0.011	0.017	D8	1.0		
		(LL)	0.358	0.597	0.991	0.005	0.008	0.013	D9	1.2		
	D5 → Y0	(HH)	0.343	0.531	0.864	0.006	0.011	0.017	D10	1.0		
		(LL)	0.364	0.602	1.003	0.005	0.008	0.013	D11	1.2		
	D6 → Y0	(HH)	0.346	0.539	0.880	0.006	0.011	0.017	D12	1.3		
		(LL)	0.368	0.613	1.018	0.005	0.008	0.013	D13	1.0		
	D7 → Y0	(HH)	0.350	0.543	0.888	0.006	0.011	0.017	D14	1.3		
		(LL)	0.373	0.619	1.028	0.005	0.008	0.013	D15	1.0		
	D8 → Y1	(HH)	0.343	0.536	0.879	0.006	0.011	0.017	D16	1.0		
		(LL)	0.378	0.628	1.046	0.005	0.008	0.013	D17	1.2		
	D9 → Y1	(HH)	0.348	0.543	0.887	0.006	0.011	0.017	D18	1.0		
		(LL)	0.384	0.638	1.059	0.005	0.008	0.013	D19	1.2		
	D10 → Y1	(HH)	0.341	0.533	0.873	0.006	0.011	0.017	D20	1.3		
		(LL)	0.376	0.622	1.039	0.005	0.008	0.013	D21	1.0		
	D11 → Y1	(HH)	0.345	0.540	0.883	0.006	0.011	0.017	D22	1.3		
		(LL)	0.382	0.633	1.051	0.005	0.008	0.013	D23	1.0		
	D12 → Y1	(HH)	0.339	0.525	0.856	0.006	0.011	0.017	D24	1.0		
		(LL)	0.358	0.597	0.991	0.005	0.008	0.013	D25	1.2		
	D13 → Y1	(HH)	0.343	0.531	0.864	0.006	0.011	0.017	D26	1.0		
		(LL)	0.364	0.602	1.003	0.005	0.008	0.013	D27	1.2		
	D14 → Y1	(HH)	0.346	0.539	0.880	0.006	0.011	0.017	D28	1.0		
		(LL)	0.368	0.613	1.018	0.005	0.008	0.013	D29	1.0		
	D15 → Y1	(HH)	0.350	0.543	0.888	0.006	0.011	0.017	D30	1.0		
		(LL)	0.373	0.619	1.028	0.005	0.008	0.013	D31	1.0		
	D16 → Y2	(HH)	0.345	0.535	0.874	0.006	0.011	0.017	A	5.1		
		(LL)	0.366	0.608	1.014	0.005	0.008	0.013	B	2.5		
	D17 → Y2	(HH)	0.350	0.543	0.884	0.006	0.011	0.017	C	2.5		
		(LL)	0.372	0.617	1.027	0.005	0.008	0.013				
	D18 → Y2	(HH)	0.343	0.534	0.869	0.006	0.011	0.017				
		(LL)	0.364	0.602	1.006	0.005	0.008	0.013				
	D19 → Y2	(HH)	0.347	0.539	0.878	0.006	0.011	0.017				
		(LL)	0.369	0.612	1.019	0.005	0.008	0.013				
	D20 → Y2	(HH)	0.341	0.531	0.872	0.006	0.011	0.017				
		(LL)	0.377	0.624	1.037	0.005	0.008	0.013				
	D21 → Y2	(HH)	0.344	0.537	0.880	0.006	0.011	0.017				
		(LL)	0.381	0.630	1.050	0.005	0.008	0.013				
	D22 → Y2	(HH)	0.348	0.545	0.892	0.006	0.011	0.017				
		(LL)	0.387	0.642	1.065	0.005	0.008	0.013				
	D23 → Y2	(HH)	0.351	0.550	0.902	0.006	0.011	0.017				
		(LL)	0.391	0.649	1.074	0.005	0.008	0.013				
	D24 → Y3	(HH)	0.345	0.535	0.874	0.006	0.011	0.017				
		(LL)	0.366	0.608	1.014	0.005	0.008	0.013				
	D25 → Y3	(HH)	0.350	0.543	0.884	0.006	0.011	0.017				
		(LL)	0.372	0.617	1.027	0.005	0.008	0.013				
	D26 → Y3	(HH)	0.343	0.534	0.869	0.006	0.011	0.017				
		(LL)	0.364	0.602	1.006	0.005	0.008	0.013				
	D27 → Y3	(HH)	0.347	0.539	0.878	0.006	0.011	0.017				
		(LL)	0.369	0.612	1.019	0.005	0.008	0.013				

Block type	Switching speed									Input		Output	
	Path		t LD0 (ns)			t 1							
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		Symbol	Fanin	Symbol	Fanout
	D28 → Y3	(HH)	0.341	0.531	0.872	0.006	0.011	0.017					
		(LL)	0.377	0.625	1.037	0.005	0.008	0.013					
	D29 → Y3	(HH)	0.344	0.537	0.880	0.006	0.011	0.017					
		(LL)	0.381	0.630	1.050	0.005	0.008	0.013					
	D30 → Y3	(HH)	0.348	0.545	0.892	0.006	0.011	0.017					
		(LL)	0.387	0.642	1.065	0.005	0.008	0.013					
	D31 → Y3	(HH)	0.351	0.550	0.902	0.006	0.011	0.017					
		(LL)	0.391	0.649	1.074	0.005	0.008	0.013					
	A → Y0	(HH)	0.490	0.784	1.262	0.006	0.011	0.017					
		(HL)	0.479	0.793	1.270	0.005	0.008	0.013					
		(LH)	0.435	0.718	1.181	0.006	0.011	0.017					
		(LL)	0.497	0.852	1.416	0.005	0.008	0.013					
	A → Y1	(HH)	0.490	0.784	1.262	0.006	0.011	0.017					
		(HL)	0.479	0.793	1.270	0.005	0.008	0.013					
		(LH)	0.435	0.718	1.181	0.006	0.011	0.017					
		(LL)	0.497	0.852	1.416	0.005	0.008	0.013					
	A → Y2	(HH)	0.491	0.789	1.276	0.006	0.011	0.017					
		(HL)	0.487	0.809	1.297	0.005	0.008	0.013					
		(LH)	0.436	0.723	1.196	0.006	0.011	0.017					
		(LL)	0.501	0.864	1.434	0.005	0.008	0.013					
	A → Y3	(HH)	0.491	0.789	1.276	0.006	0.011	0.017					
		(HL)	0.487	0.809	1.297	0.005	0.008	0.013					
		(LH)	0.436	0.723	1.196	0.006	0.011	0.017					
		(LL)	0.501	0.864	1.434	0.005	0.008	0.013					
	B → Y0	(HH)	0.461	0.725	1.163	0.006	0.011	0.017					
		(HL)	0.417	0.668	1.054	0.005	0.008	0.013					
		(LH)	0.398	0.641	1.045	0.006	0.011	0.017					
		(LL)	0.469	0.790	1.284	0.005	0.008	0.013					
	B → Y1	(HH)	0.461	0.725	1.163	0.006	0.011	0.017					
		(HL)	0.417	0.668	1.054	0.005	0.008	0.013					
		(LH)	0.398	0.641	1.045	0.006	0.011	0.017					
		(LL)	0.469	0.790	1.284	0.005	0.008	0.013					
	B → Y2	(HH)	0.464	0.728	1.168	0.006	0.011	0.017					
		(HL)	0.422	0.666	1.051	0.005	0.008	0.013					
		(LH)	0.398	0.643	1.050	0.006	0.011	0.017					
		(LL)	0.469	0.797	1.294	0.005	0.008	0.013					
	B → Y3	(HH)	0.464	0.728	1.168	0.006	0.011	0.017					
		(HL)	0.422	0.666	1.051	0.005	0.008	0.013					
		(LH)	0.398	0.643	1.050	0.006	0.011	0.017					
		(LL)	0.469	0.797	1.294	0.005	0.008	0.013					
	C → Y0	(HH)	0.297	0.455	0.709	0.006	0.010	0.017					
		(HL)	0.381	0.586	0.918	0.005	0.008	0.013					
		(LH)	0.377	0.602	0.967	0.006	0.011	0.017					
		(LL)	0.305	0.481	0.762	0.005	0.008	0.013					
	C → Y1	(HH)	0.297	0.455	0.709	0.006	0.010	0.017					
		(HL)	0.381	0.586	0.918	0.005	0.008	0.013					
		(LH)	0.377	0.602	0.967	0.006	0.011	0.017					
		(LL)	0.305	0.481	0.762	0.005	0.008	0.013					
	C → Y2	(HH)	0.302	0.457	0.706	0.006	0.010	0.017					
		(HL)	0.398	0.613	0.961	0.005	0.008	0.013					
		(LH)	0.377	0.606	0.981	0.006	0.011	0.017					
		(LL)	0.292	0.460	0.730	0.005	0.008	0.013					
	C → Y3	(HH)	0.302	0.457	0.706	0.006	0.010	0.017					
		(HL)	0.398	0.613	0.961	0.005	0.008	0.013					
		(LH)	0.377	0.606	0.981	0.006	0.011	0.017					
		(LL)	0.292	0.460	0.730	0.005	0.008	0.013					

[MEMO]

Function	Quad 8 to 1 Multiplexer (Negative Out)						SSI Family					
Block type	Positive output type						Negative output type					
	Normal		with ENB		with EN		Normal		with ENB		with EN	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power												
x1							F553	64				
x2												
x4												

Logic Diagram for "Normal type"



Logic Diagram for "with ENB"

Logic Diagram for "with EN"

Truth Table

Da	Da+1	Da+2	Da+3	Da+4	Da+5	Da+6	Da+7	A	B	C	Yn	YnB
A	X	X	X	X	X	X	X	0	0	0	A	AB
X	B	X	X	X	X	X	X	1	0	0	B	BB
X	X	C	X	X	X	X	X	0	1	0	C	CB
X	X	X	D	X	X	X	X	1	1	0	D	DB
X	X	X	X	E	X	X	X	0	0	1	E	EB
X	X	X	X	X	F	X	X	1	0	1	F	FB
X	X	X	X	X	X	G	X	0	1	1	G	GB
X	X	X	X	X	X	X	H	1	1	1	H	HB

X:Irrelevant

a=8*n(n=0 to 3)

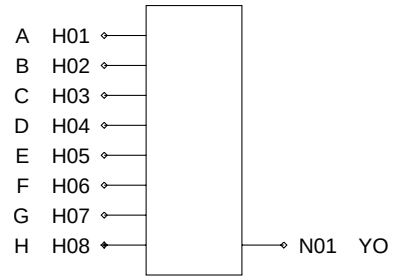
Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F553	D0 → Y0B	(HL)	0.303	0.465	0.751	0.008	0.013	0.022	D0	1.0	Y0B	64
		(LH)	0.333	0.559	0.937	0.006	0.010	0.017	D1	1.2	Y1B	64
	D1 → Y0B	(HL)	0.308	0.473	0.760	0.008	0.013	0.022	D2	1.0	Y2B	64
		(LH)	0.339	0.568	0.953	0.006	0.010	0.017	D3	1.2	Y3B	64
	D2 → Y0B	(HL)	0.301	0.463	0.742	0.008	0.013	0.022	D4	1.3		
		(LH)	0.331	0.554	0.929	0.006	0.010	0.017	D5	1.0		
	D3 → Y0B	(HL)	0.305	0.469	0.753	0.008	0.013	0.022	D6	1.3		
		(LH)	0.337	0.563	0.947	0.006	0.010	0.017	D7	1.0		
	D4 → Y0B	(HL)	0.298	0.458	0.735	0.008	0.013	0.022	D8	1.0		
		(LH)	0.327	0.549	0.921	0.006	0.010	0.017	D9	1.2		
	D5 → Y0B	(HL)	0.302	0.463	0.744	0.008	0.013	0.022	D10	1.0		
		(LH)	0.332	0.555	0.932	0.006	0.010	0.017	D11	1.2		
	D6 → Y0B	(HL)	0.305	0.472	0.759	0.008	0.013	0.022	D12	1.3		
		(LH)	0.338	0.567	0.951	0.006	0.010	0.017	D13	1.0		
	D7 → Y0B	(HL)	0.308	0.478	0.767	0.008	0.013	0.022	D14	1.3		
		(LH)	0.342	0.574	0.962	0.006	0.010	0.017	D15	1.0		
	D8 → Y1B	(HL)	0.303	0.465	0.751	0.008	0.013	0.022	D16	1.0		
		(LH)	0.333	0.559	0.937	0.006	0.010	0.017	D17	1.2		
	D9 → Y1B	(HL)	0.308	0.473	0.760	0.008	0.013	0.022	D18	1.0		
		(LH)	0.339	0.568	0.953	0.006	0.010	0.017	D19	1.2		
	D10 → Y1B	(HL)	0.301	0.463	0.742	0.008	0.013	0.022	D20	1.3		
		(LH)	0.331	0.554	0.929	0.006	0.010	0.017	D21	1.0		
	D11 → Y1B	(HL)	0.305	0.469	0.753	0.008	0.013	0.022	D22	1.3		
		(LH)	0.337	0.563	0.947	0.006	0.010	0.017	D23	1.0		
	D12 → Y1B	(HL)	0.298	0.458	0.735	0.008	0.013	0.022	D24	1.0		
		(LH)	0.327	0.549	0.921	0.006	0.010	0.017	D25	1.2		
	D13 → Y1B	(HL)	0.302	0.463	0.744	0.008	0.013	0.022	D26	1.0		
		(LH)	0.332	0.555	0.932	0.006	0.010	0.017	D27	1.2		
	D14 → Y1B	(HL)	0.305	0.472	0.759	0.008	0.013	0.022	D28	1.0		
		(LH)	0.338	0.567	0.951	0.006	0.010	0.017	D29	1.0		
	D15 → Y1B	(HL)	0.308	0.478	0.767	0.008	0.013	0.022	D30	1.0		
		(LH)	0.342	0.574	0.962	0.006	0.010	0.017	D31	1.0		
	D16 → Y2B	(HL)	0.303	0.465	0.751	0.008	0.013	0.022	A	5.1		
		(LH)	0.333	0.559	0.937	0.006	0.010	0.017	B	2.5		
	D17 → Y2B	(HL)	0.308	0.473	0.760	0.008	0.013	0.022	C	2.5		
		(LH)	0.339	0.568	0.953	0.006	0.010	0.017				
	D18 → Y2B	(HL)	0.301	0.463	0.742	0.008	0.013	0.022				
		(LH)	0.331	0.554	0.929	0.006	0.010	0.017				
	D19 → Y2B	(HL)	0.305	0.469	0.753	0.008	0.013	0.022				
		(LH)	0.337	0.563	0.947	0.006	0.010	0.017				
	D20 → Y2B	(HL)	0.298	0.458	0.735	0.008	0.013	0.022				
		(LH)	0.327	0.549	0.921	0.006	0.010	0.017				
	D21 → Y2B	(HL)	0.302	0.463	0.744	0.008	0.013	0.022				
		(LH)	0.332	0.555	0.932	0.006	0.010	0.017				
	D22 → Y2B	(HL)	0.305	0.472	0.759	0.008	0.013	0.022				
		(LH)	0.338	0.567	0.951	0.006	0.010	0.017				
	D23 → Y2B	(HL)	0.308	0.478	0.767	0.008	0.013	0.022				
		(LH)	0.342	0.574	0.962	0.006	0.010	0.017				
	D24 → Y3B	(HL)	0.303	0.465	0.751	0.008	0.013	0.022				
		(LH)	0.333	0.559	0.937	0.006	0.010	0.017				
	D25 → Y3B	(HL)	0.308	0.473	0.760	0.008	0.013	0.022				
		(LH)	0.339	0.568	0.953	0.006	0.010	0.017				
	D26 → Y3B	(HL)	0.301	0.463	0.742	0.008	0.013	0.022				
		(LH)	0.331	0.554	0.929	0.006	0.010	0.017				
	D27 → Y3B	(HL)	0.305	0.469	0.753	0.008	0.013	0.022				
		(LH)	0.337	0.563	0.947	0.006	0.010	0.017				

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	D28 → Y3B	(HL)	0.298	0.458	0.734	0.008	0.013	0.022				
		(LH)	0.327	0.549	0.921	0.006	0.010	0.017				
	D29 → Y3B	(HL)	0.302	0.463	0.744	0.008	0.013	0.022				
		(LH)	0.332	0.555	0.932	0.006	0.010	0.017				
	D30 → Y3B	(HL)	0.305	0.472	0.759	0.008	0.013	0.022				
		(LH)	0.338	0.567	0.951	0.006	0.010	0.017				
	D31 → Y3B	(HL)	0.308	0.478	0.767	0.008	0.013	0.022				
		(LH)	0.342	0.574	0.962	0.006	0.010	0.017				
	A → Y0B	(HH)	0.447	0.734	1.184	0.006	0.010	0.017				
		(HL)	0.446	0.715	1.141	0.008	0.013	0.022				
		(LH)	0.465	0.790	1.318	0.006	0.010	0.017				
		(LL)	0.393	0.650	1.060	0.008	0.013	0.022				
	A → Y1B	(HH)	0.447	0.734	1.184	0.006	0.010	0.017				
		(HL)	0.446	0.715	1.141	0.008	0.013	0.022				
		(LH)	0.465	0.790	1.318	0.006	0.010	0.017				
		(LL)	0.393	0.650	1.060	0.008	0.013	0.022				
	A → Y2B	(HH)	0.447	0.734	1.184	0.006	0.010	0.017				
		(HL)	0.446	0.715	1.141	0.008	0.013	0.022				
		(LH)	0.465	0.790	1.318	0.006	0.010	0.017				
		(LL)	0.393	0.650	1.060	0.008	0.013	0.022				
	A → Y3B	(HH)	0.447	0.734	1.184	0.006	0.010	0.017				
		(HL)	0.446	0.715	1.141	0.008	0.013	0.022				
		(LH)	0.465	0.790	1.318	0.006	0.010	0.017				
		(LL)	0.393	0.650	1.060	0.008	0.013	0.022				
	B → Y0B	(HH)	0.382	0.596	0.945	0.006	0.010	0.017				
		(HL)	0.421	0.656	1.033	0.008	0.013	0.022				
		(LH)	0.436	0.718	1.176	0.006	0.010	0.017				
		(LL)	0.354	0.570	0.915	0.008	0.013	0.022				
	B → Y1B	(HH)	0.382	0.596	0.945	0.006	0.010	0.017				
		(HL)	0.421	0.656	1.033	0.008	0.013	0.022				
		(LH)	0.436	0.718	1.176	0.006	0.010	0.017				
		(LL)	0.354	0.570	0.915	0.008	0.013	0.022				
	B → Y2B	(HH)	0.382	0.596	0.945	0.006	0.010	0.017				
		(HL)	0.421	0.656	1.033	0.008	0.013	0.022				
		(LH)	0.436	0.718	1.176	0.006	0.010	0.017				
		(LL)	0.354	0.570	0.915	0.008	0.013	0.022				
	B → Y3B	(HH)	0.382	0.596	0.945	0.006	0.010	0.017				
		(HL)	0.421	0.656	1.033	0.008	0.013	0.022				
		(LH)	0.436	0.718	1.176	0.006	0.010	0.017				
		(LL)	0.354	0.570	0.915	0.008	0.013	0.022				
	C → Y0B	(HH)	0.341	0.527	0.829	0.006	0.010	0.017				
		(HL)	0.254	0.381	0.573	0.008	0.013	0.022				
		(LH)	0.251	0.398	0.637	0.006	0.010	0.017				
		(LL)	0.330	0.527	0.835	0.008	0.013	0.022				
	C → Y1B	(HH)	0.341	0.527	0.829	0.006	0.010	0.017				
		(HL)	0.254	0.381	0.573	0.008	0.013	0.022				
		(LH)	0.251	0.398	0.637	0.006	0.010	0.017				
		(LL)	0.330	0.527	0.835	0.008	0.013	0.022				
	C → Y2B	(HH)	0.341	0.527	0.829	0.006	0.010	0.017				
		(HL)	0.254	0.381	0.573	0.008	0.013	0.022				
		(LH)	0.251	0.398	0.637	0.006	0.010	0.017				
		(LL)	0.330	0.527	0.835	0.008	0.013	0.022				
	C → Y3B	(HH)	0.341	0.527	0.829	0.006	0.010	0.017				
		(HL)	0.254	0.381	0.573	0.008	0.013	0.022				
		(LH)	0.251	0.398	0.637	0.006	0.010	0.017				
		(LL)	0.330	0.527	0.835	0.008	0.013	0.022				

[MEMO]

Function	8-Bit Odd Parity Generator				SSI Family	
Block type	Standard type					
	Normal		High speed			
Drivability	Name	cells	Name	cells		
Low Power						
x1	F581	19				
x2			F581NSP	21		
x4						

Logic Diagram



Truth Table

A	B	C	D	E	F	G	H	YO
Σ of 1's at A through H is Odd								1
Σ of 1's at A through H is Even								0

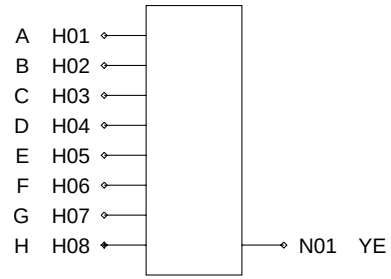
Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F581	A → YO	(HH)	0.417	0.667	1.107	0.006	0.010	0.017	A	2.4	YO	71
		(HL)	0.458	0.712	1.142	0.005	0.008	0.013	B	2.4		
		(LH)	0.419	0.691	1.145	0.006	0.010	0.017	C	2.4		
		(LL)	0.475	0.780	1.277	0.005	0.008	0.013	D	2.3		
	B → YO	(HH)	0.399	0.639	1.054	0.006	0.010	0.017	E	2.4		
		(HL)	0.442	0.700	1.139	0.005	0.008	0.013	F	2.4		
		(LH)	0.457	0.737	1.215	0.006	0.010	0.017	G	2.4		
		(LL)	0.485	0.771	1.240	0.005	0.008	0.013	H	2.3		
	C → YO	(HH)	0.441	0.703	1.171	0.006	0.010	0.017				
		(HL)	0.442	0.691	1.115	0.005	0.008	0.013				
		(LH)	0.442	0.725	1.203	0.006	0.010	0.017				
		(LL)	0.443	0.733	1.202	0.005	0.008	0.013				
	D → YO	(HH)	0.422	0.675	1.115	0.006	0.010	0.017				
		(HL)	0.428	0.679	1.109	0.005	0.008	0.013				
		(LH)	0.480	0.773	1.278	0.006	0.010	0.017				
		(LL)	0.453	0.724	1.169	0.005	0.008	0.013				
	E → YO	(HH)	0.445	0.709	1.184	0.006	0.011	0.017				
		(HL)	0.448	0.700	1.127	0.005	0.008	0.013				
		(LH)	0.448	0.735	1.221	0.006	0.010	0.017				
		(LL)	0.465	0.766	1.258	0.005	0.008	0.013				
	F → YO	(HH)	0.427	0.681	1.132	0.006	0.011	0.017				
		(HL)	0.434	0.687	1.123	0.005	0.008	0.013				
		(LH)	0.484	0.782	1.291	0.006	0.010	0.017				
		(LL)	0.473	0.756	1.221	0.005	0.008	0.013				
	G → YO	(HH)	0.473	0.753	1.257	0.006	0.011	0.017				
		(HL)	0.436	0.685	1.110	0.005	0.008	0.013				
		(LH)	0.474	0.777	1.290	0.006	0.011	0.017				
		(LL)	0.440	0.728	1.201	0.005	0.008	0.013				
	H → YO	(HH)	0.454	0.726	1.203	0.006	0.011	0.017				
		(HL)	0.422	0.673	1.104	0.005	0.008	0.013				
		(LH)	0.512	0.825	1.367	0.006	0.010	0.017				
		(LL)	0.449	0.719	1.165	0.005	0.008	0.013				
F581NSP	A → YO	(HH)	0.408	0.659	1.076	0.003	0.005	0.009	A	2.4	YO	141
		(HL)	0.458	0.737	1.202	0.003	0.004	0.007	B	1.3		
		(LH)	0.413	0.683	1.136	0.003	0.005	0.009	C	2.4		
		(LL)	0.419	0.698	1.163	0.003	0.004	0.007	D	1.3		
	B → YO	(HH)	0.459	0.731	1.193	0.003	0.005	0.009	E	2.4		
		(HL)	0.511	0.838	1.380	0.003	0.004	0.007	F	1.3		
		(LH)	0.471	0.777	1.291	0.003	0.005	0.009	G	2.4		
		(LL)	0.482	0.795	1.317	0.003	0.004	0.007	H	1.3		
	C → YO	(HH)	0.406	0.665	1.099	0.003	0.005	0.009				
		(HL)	0.446	0.713	1.165	0.003	0.004	0.007				
		(LH)	0.408	0.690	1.161	0.003	0.005	0.008				
		(LL)	0.405	0.676	1.125	0.003	0.004	0.007				
	D → YO	(HH)	0.455	0.737	1.216	0.003	0.005	0.009				
		(HL)	0.497	0.815	1.343	0.003	0.004	0.007				
		(LH)	0.466	0.786	1.317	0.003	0.005	0.009				
		(LL)	0.467	0.774	1.280	0.003	0.004	0.007				
	E → YO	(HH)	0.394	0.636	1.043	0.003	0.005	0.009				
		(HL)	0.432	0.695	1.130	0.003	0.004	0.007				
		(LH)	0.398	0.660	1.100	0.003	0.005	0.008				
		(LL)	0.394	0.656	1.088	0.003	0.004	0.007				
	F → YO	(HH)	0.445	0.710	1.163	0.003	0.005	0.008				
		(HL)	0.485	0.796	1.306	0.003	0.004	0.007				
		(LH)	0.456	0.755	1.256	0.003	0.005	0.008				
		(LL)	0.458	0.756	1.246	0.003	0.004	0.007				

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			Input		Output	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	G → YO	(HH)	0.389	0.652	1.093	0.003	0.005	0.008				
		(HL)	0.423	0.675	1.093	0.003	0.004	0.007				
		(LH)	0.392	0.679	1.155	0.003	0.005	0.008				
		(LL)	0.382	0.638	1.051	0.003	0.004	0.007				
	H → YO	(HH)	0.437	0.722	1.204	0.003	0.005	0.008				
		(HL)	0.473	0.776	1.273	0.003	0.004	0.007				
		(LH)	0.450	0.772	1.313	0.003	0.005	0.008				
		(LL)	0.444	0.734	1.208	0.003	0.004	0.007				

[MEMO]

Function	8-Bit Even Parity Generator					SSI Family	
Block type	Standard type						
	Normal		High speed				
Drivability	Name	cells	Name	cells			
Low Power							
x1	F582	19					
x2			F582NSP	21			
x4							

Logic Diagram



Truth Table

A	B	C	D	E	F	G	H	YE
Σ of 1's at A through H is Odd								0
Σ of 1's at A through H is Even								1

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F582	A → YE	(HH)	0.420	0.655	1.063	0.006	0.011	0.017	A	2.4	YE	71
		(HL)	0.437	0.700	1.144	0.005	0.008	0.013	B	2.4		
		(LH)	0.437	0.722	1.197	0.006	0.011	0.017	C	2.4		
		(LL)	0.440	0.722	1.179	0.005	0.008	0.013	D	2.3		
	B → YE	(HH)	0.405	0.643	1.059	0.006	0.011	0.017	E	2.4		
		(HL)	0.420	0.673	1.094	0.005	0.008	0.013	F	2.4		
		(LH)	0.446	0.713	1.159	0.006	0.011	0.017	G	2.4		
		(LL)	0.477	0.769	1.252	0.005	0.008	0.013	H	2.3		
	C → YE	(HH)	0.406	0.635	1.038	0.006	0.011	0.017				
		(HL)	0.459	0.734	1.204	0.005	0.008	0.013				
		(LH)	0.407	0.677	1.126	0.006	0.011	0.017				
		(LL)	0.460	0.756	1.241	0.005	0.008	0.013				
	D → YE	(HH)	0.392	0.624	1.033	0.006	0.011	0.017				
		(HL)	0.441	0.706	1.153	0.005	0.008	0.013				
		(LH)	0.416	0.667	1.092	0.006	0.011	0.017				
		(LL)	0.497	0.805	1.314	0.005	0.008	0.013				
	E → YE	(HH)	0.427	0.671	1.097	0.006	0.011	0.017				
		(HL)	0.476	0.763	1.246	0.005	0.008	0.013				
		(LH)	0.444	0.737	1.227	0.006	0.011	0.017				
		(LL)	0.478	0.787	1.285	0.005	0.008	0.013				
	F → YE	(HH)	0.413	0.659	1.092	0.006	0.011	0.017				
		(HL)	0.457	0.735	1.197	0.005	0.008	0.013				
		(LH)	0.453	0.728	1.191	0.006	0.011	0.017				
		(LL)	0.516	0.833	1.355	0.005	0.008	0.013				
	G → YE	(HH)	0.415	0.656	1.078	0.006	0.011	0.017				
		(HL)	0.502	0.805	1.319	0.005	0.008	0.013				
		(LH)	0.418	0.699	1.171	0.006	0.011	0.017				
		(LL)	0.503	0.829	1.352	0.005	0.008	0.013				
	H → YE	(HH)	0.401	0.645	1.072	0.006	0.011	0.017				
		(HL)	0.483	0.776	1.264	0.005	0.008	0.013				
		(LH)	0.428	0.692	1.137	0.006	0.011	0.017				
		(LL)	0.540	0.875	1.426	0.005	0.008	0.013				
F582NSP	A → YE	(HH)	0.451	0.722	1.176	0.003	0.005	0.009	A	2.4	YE	141
		(HL)	0.456	0.743	1.219	0.003	0.004	0.007	B	1.3		
		(LH)	0.412	0.683	1.136	0.003	0.005	0.009	C	2.4		
		(LL)	0.460	0.767	1.279	0.003	0.004	0.007	D	1.3		
	B → YE	(HH)	0.504	0.822	1.353	0.003	0.005	0.009	E	2.4		
		(HL)	0.506	0.815	1.337	0.003	0.004	0.007	F	1.3		
		(LH)	0.476	0.780	1.289	0.003	0.005	0.009	G	2.4		
		(LL)	0.519	0.862	1.434	0.003	0.004	0.007	H	1.3		
	C → YE	(HH)	0.439	0.698	1.137	0.003	0.005	0.009				
		(HL)	0.443	0.731	1.214	0.003	0.004	0.007				
		(LH)	0.398	0.661	1.097	0.003	0.005	0.009				
		(LL)	0.445	0.755	1.276	0.003	0.004	0.007				
	D → YE	(HH)	0.490	0.800	1.315	0.003	0.005	0.009				
		(HL)	0.492	0.803	1.331	0.003	0.004	0.007				
		(LH)	0.461	0.758	1.253	0.003	0.005	0.009				
		(LL)	0.504	0.851	1.433	0.003	0.004	0.007				
	E → YE	(HH)	0.429	0.684	1.112	0.003	0.005	0.009				
		(HL)	0.427	0.696	1.138	0.003	0.004	0.007				
		(LH)	0.390	0.647	1.075	0.003	0.005	0.009				
		(LL)	0.431	0.721	1.194	0.003	0.004	0.007				
	F → YE	(HH)	0.482	0.782	1.293	0.003	0.005	0.009				
		(HL)	0.478	0.770	1.256	0.003	0.004	0.007				
		(LH)	0.454	0.744	1.233	0.003	0.005	0.009				
		(LL)	0.489	0.817	1.351	0.003	0.004	0.007				

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			Input		Output	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	G → YE	(HH)	0.417	0.663	1.076	0.003	0.005	0.009				
		(HL)	0.421	0.697	1.145	0.003	0.004	0.007				
		(LH)	0.377	0.625	1.038	0.003	0.005	0.009				
		(LL)	0.424	0.723	1.215	0.003	0.004	0.007				
	H → YE	(HH)	0.469	0.764	1.256	0.003	0.005	0.009				
		(HL)	0.468	0.767	1.263	0.003	0.004	0.007				
		(LH)	0.439	0.721	1.191	0.003	0.005	0.009				
		(LL)	0.481	0.815	1.368	0.003	0.004	0.007				

[MEMO]

[MEMO]

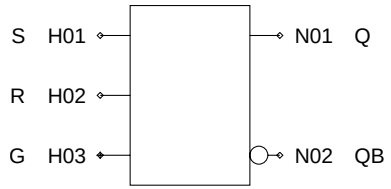
[MEMO]

2.8 RS-F/F, RS-latch

[MEMO]

Function	RS-Latch					SSI Family	
Block type	Standard type						
	Normal		High speed				
Drivability	Name	cells	Name	cells			
Low Power							
x1	F595	5					
x2							
x4							

Logic Diagram



Truth Table

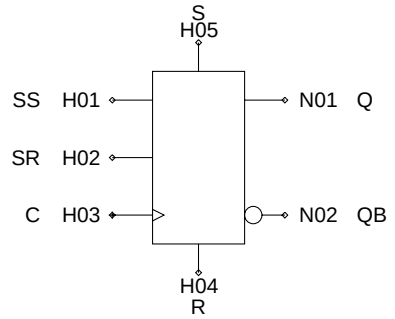
S	R	G	Q	QB
0	0	1	Latch	
0	1	1	0	1
1	0	1	1	0
1	1	1	1	1
1	1	1->0	Undefined	
X	X	0	Latch	

X:Irrelevant

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F595	S → Q	(HH)	0.187	0.287	0.468	0.006	0.010	0.017	S	1.0	Q	71
		(LL)	0.248	0.414	0.668	0.005	0.008	0.013	R	1.0	QB	71
	S → QB	(HL)	0.404	0.634	1.027	0.005	0.008	0.013	G	2.1		
	R → Q	(HL)	0.407	0.641	1.035	0.005	0.008	0.013				
	R → QB	(HH)	0.185	0.282	0.460	0.006	0.010	0.017				
		(LL)	0.243	0.406	0.654	0.005	0.008	0.013				
	G → Q	(HH)	0.211	0.300	0.459	0.006	0.010	0.017				
		(HL)	0.422	0.648	1.022	0.005	0.008	0.013				
	G → QB	(HH)	0.208	0.296	0.452	0.006	0.010	0.017				
		(HL)	0.421	0.642	1.013	0.005	0.008	0.013				
	Set up time	S	0.520		0.840							
	Set up time	R	0.520		0.850							
	Hold time	S	0.000		0.000							
	Hold time	R	0.000		0.000							
	Min Pulse	G	0.499		1.137							

Function	RS-F/F with R,S					SSI Family	
Block type	Standard type						
	Normal		High speed				
Drivability	Name	cells	Name	cells			
Low Power							
x1	F596	11					
x2							
x4							

Logic Diagram



Truth Table

SS	SR	C	R	S	Q	QB	
0	0	↗	0	0	Hold		
1	0	↗	0	0	1	0	
X	1	↗	0	0	0	1	
X	X	↘	0	0	Hold		
X	X	X	0	1	1	0	
X	X	X	1	0	0	1	
X	X	X	1	1	1	1	← Prohibition

X:Irrelevant

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F596	C → Q	(HH)	0.307	0.476	0.748	0.006	0.010	0.017	SS	1.0	Q	71
		(HL)	0.419	0.658	1.034	0.005	0.008	0.013	SR	1.0	QB	71
	C → QB	(HH)	0.508	0.812	1.292	0.006	0.010	0.017	C	1.0		
		(HL)	0.530	0.843	1.343	0.005	0.008	0.013	R	2.6		
	R → Q	(HL)	0.367	0.625	0.979	0.005	0.008	0.013	S	2.6		
	R → QB	(HH)	0.174	0.297	0.434	0.006	0.010	0.017				
	S → Q	(HH)	0.153	0.220	0.315	0.006	0.010	0.017				
	S → QB	(HL)	0.378	0.732	1.148	0.005	0.009	0.014				
	Set up time	SS	0.280		0.720							
	Set up time	SR	0.280		0.800							
	Hold time	SS	0.000		0.000							
	Hold time	SR	0.050		0.000							
	Release time	R	0.090		0.350							
	Release time	S	0.000		0.000							
	Removal time	R	0.120		0.120							
	Removal time	S	0.420		0.700							
	Min Pulse	C	0.585		1.448							
	Min Pulse	R	0.601		1.383							
	Min Pulse	S	0.578		1.442							

[MEMO]

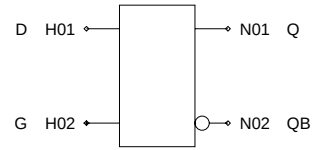
[MEMO]

2.9 D-Latch

[MEMO]

Function	D-Latch											SSI Family
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	F601NL	5	F601NQL	4	F601NBL	4			L601	4		
x1	F601	6	F601NQ	5	F601NB	5						
x2	F601NP	8	F601NQP	6	F601NBP	6						
x4												

Logic Diagram for "Normal"

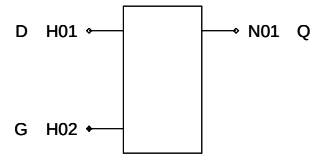


Truth Table for "Normal"

D	G	Q	QB
0	1	0	1
1	1	1	0
X	0	Latch	

X:Irrelevant

Logic Diagram for "Q output"

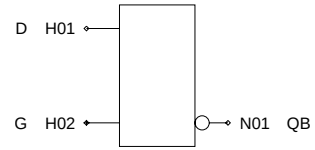


Truth Table for "Q output"

D	G	Q	QB
0	1	0	1
1	1	1	0
X	0	Latch	

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

D	G	Q	QB
0	1	0	1
1	1	1	0
X	0	Latch	

X:Irrelevant

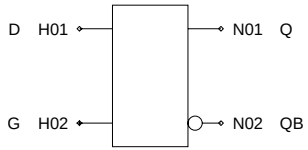
Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_1						
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F601NL	D → Q		(HH)	0.182	0.269	0.409	0.013	0.021	0.034	D	1.0	Q	35
			(LL)	0.198	0.321	0.513	0.010	0.016	0.026	G	1.0	QB	35
	D → QB		(HL)	0.253	0.381	0.586	0.010	0.016	0.025				
			(LH)	0.235	0.385	0.625	0.013	0.021	0.034				
	G → Q		(HH)	0.217	0.336	0.523	0.013	0.021	0.034				
			(HL)	0.231	0.367	0.578	0.010	0.016	0.026				
	G → QB		(HH)	0.268	0.431	0.689	0.013	0.021	0.034				
			(HL)	0.289	0.447	0.701	0.010	0.016	0.025				
	Set up time	D		0.260		0.500							
	Hold time	D		0.020		0.000							
	Min Pulse	G		0.329		0.785							
F601	D → Q		(HH)	0.305	0.470	0.739	0.006	0.010	0.017	D	1.0	Q	72
			(LL)	0.311	0.501	0.806	0.005	0.008	0.013	G	1.0	QB	71
	D → QB		(HL)	0.244	0.371	0.571	0.005	0.008	0.013				
			(LH)	0.221	0.358	0.573	0.006	0.010	0.017				
	G → Q		(HH)	0.350	0.549	0.870	0.006	0.010	0.017				
			(HL)	0.352	0.556	0.877	0.005	0.008	0.013				
	G → QB		(HH)	0.262	0.413	0.644	0.006	0.010	0.017				
			(HL)	0.291	0.450	0.703	0.005	0.008	0.013				
	Set up time	D		0.240		0.450							
	Hold time	D		0.010		0.000							
	Min Pulse	G		0.397		0.965							
F601NP	D → Q		(HH)	0.240	0.355	0.556	0.003	0.005	0.009	D	1.0	Q	142
			(LL)	0.267	0.436	0.713	0.003	0.004	0.007	G	1.0	QB	144
	D → QB		(HL)	0.390	0.597	0.946	0.003	0.004	0.006				
			(LH)	0.377	0.621	1.019	0.003	0.005	0.008				
	G → Q		(HH)	0.274	0.425	0.675	0.003	0.005	0.009				
			(HL)	0.300	0.494	0.805	0.003	0.004	0.007				
	G → QB		(HH)	0.410	0.678	1.111	0.003	0.005	0.008				
			(HL)	0.425	0.666	1.064	0.003	0.004	0.006				
	Set up time	D		0.370		0.780							
	Hold time	D		0.000		0.000							
	Min Pulse	G		0.467		1.200							
L601	D → Q		(HH)	0.145	0.224	0.339	0.013	0.021	0.034	D	3.8	Q	35
			(LL)	0.148	0.229	0.355	0.010	0.016	0.025	G	1.0		
	G → Q		(HH)	0.217	0.329	0.505	0.013	0.021	0.034				
			(HL)	0.248	0.380	0.587	0.010	0.016	0.025				
	Set up time	D		0.160		0.250							
	Hold time	D		0.120		0.140							
	Min Pulse	G		0.286		0.670							
F601NQL	D → Q		(HH)	0.180	0.267	0.409	0.013	0.021	0.034	D	1.0	Q	35
			(LL)	0.200	0.321	0.512	0.010	0.016	0.026	G	1.0		
	G → Q		(HH)	0.217	0.335	0.525	0.013	0.021	0.034				
			(HL)	0.232	0.367	0.576	0.010	0.016	0.026				
	Set up time	D		0.240		0.480							
	Hold time	D		0.020		0.000							
	Min Pulse	G		0.276		0.662							
F601NQ	D → Q		(HH)	0.195	0.287	0.442	0.006	0.011	0.017	D	1.0	Q	71
			(LL)	0.216	0.348	0.562	0.005	0.008	0.013	G	1.0		
	G → Q		(HH)	0.234	0.361	0.567	0.006	0.011	0.017				
			(HL)	0.253	0.406	0.649	0.005	0.008	0.013				
	Set up time	D		0.260		0.520							
	Hold time	D		0.010		0.000							
	Min Pulse	G		0.296		0.737							

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F601NQP	D → Q	(HH)	0.238	0.352	0.551	0.003	0.005	0.009	D	1.0	Q	142
		(LL)	0.265	0.433	0.708	0.003	0.004	0.007	G	1.0		
	G → Q	(HH)	0.272	0.422	0.670	0.003	0.005	0.009				
		(HL)	0.298	0.491	0.800	0.003	0.004	0.007				
	Set up time	D	0.310		0.650							
	Hold time	D	0.000		0.000							
	Min Pulse	G	0.342		0.887							
F601NBL	D → QB	(HL)	0.234	0.352	0.538	0.010	0.016	0.025	D	1.0	QB	35
		(LH)	0.212	0.344	0.555	0.013	0.021	0.034	G	1.0		
	G → QB	(HH)	0.247	0.386	0.605	0.013	0.021	0.034				
		(HL)	0.273	0.421	0.657	0.010	0.016	0.025				
	Set up time	D	0.230		0.430							
	Hold time	D	0.030		0.000							
	Min Pulse	G	0.313		0.741							
F601NB	D → QB	(HL)	0.246	0.372	0.572	0.005	0.008	0.013	D	1.0	QB	71
		(LH)	0.220	0.355	0.571	0.006	0.010	0.017	G	1.0		
	G → QB	(HH)	0.260	0.407	0.640	0.006	0.010	0.017				
		(HL)	0.291	0.451	0.702	0.005	0.008	0.013				
	Set up time	D	0.240		0.430							
	Hold time	D	0.030		0.000							
	Min Pulse	G	0.332		0.788							
F601NBP	D → QB	(HL)	0.291	0.442	0.685	0.003	0.004	0.006	D	1.0	QB	143
		(LH)	0.254	0.410	0.656	0.003	0.005	0.008	G	1.0		
	G → QB	(HH)	0.293	0.459	0.724	0.003	0.005	0.008				
		(HL)	0.335	0.520	0.815	0.003	0.004	0.006				
	Set up time	D	0.260		0.470							
	Hold time	D	0.000		0.000							
	Min Pulse	G	0.376		0.899							

[MEMO]

Function	D-Latch (High Speed)							SSI Family				
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power												
x1	F6R1	6										
x2												
x4												

Logic Diagram for "Normal"



Truth Table for "Normal"

D	G	Q	QB
0	1	0	1
1	1	1	0
X	0	Latch	

X:Irrelevant

Logic Diagram for "Q output"

Truth Table for "Q output"

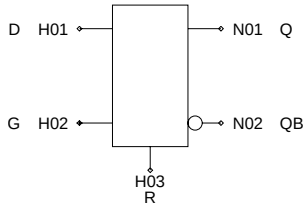
Logic Diagram for "QB output"

Truth Table for "QB output"

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F6R1	D → Q	(HH)	0.195	0.287	0.440	0.006	0.010	0.017	D	1.0	Q	71
		(LL)	0.213	0.346	0.556	0.005	0.008	0.013	G	1.0	QB	71
	D → QB	(HL)	0.296	0.446	0.696	0.005	0.008	0.013				
		(LH)	0.278	0.455	0.740	0.006	0.010	0.017				
	G → Q	(HH)	0.233	0.361	0.565	0.006	0.010	0.017				
		(HL)	0.251	0.404	0.643	0.005	0.008	0.013				
	G → QB	(HH)	0.316	0.513	0.828	0.006	0.010	0.017				
		(HL)	0.333	0.521	0.822	0.005	0.008	0.013				
	Set up time	D	0.290		0.590							
	Hold time	D	0.010		0.000							
	Min Pulse	G	0.376		0.917							

Function	D-Latch with R											
	SSI Family											
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	F602NL	6	F602NQL	5					L602	5		
x1	F602	6	F602NQ	6	F602NB	6						
x2	F602NP	9	F602NQP	7	F602NBP	7						
x4												

Logic Diagram for "Normal"

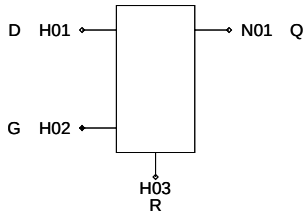


Truth Table for "Normal"

D	G	R	Q	QB
1	1	0	1	0
0	1	0	0	1
X	0	0	Latch	
X	X	1	0	1

X:Irrelevant

Logic Diagram for "Q output"

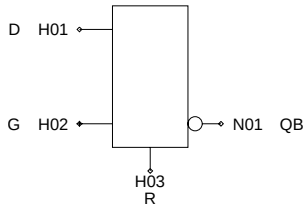


Truth Table for "Q output"

D	G	R	Q	QB
1	1	0	1	0
0	1	0	0	1
X	0	0	Latch	
X	X	1	0	1

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

D	G	R	Q	QB
1	1	0	1	0
0	1	0	0	1
X	0	0	Latch	
X	X	1	0	1

X:Irrelevant

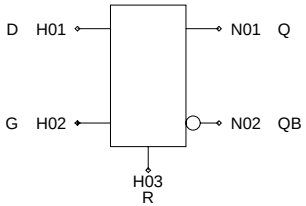
Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_1						
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F602NL	D → Q		(HH)	0.257	0.378	0.604	0.013	0.021	0.034	D	1.1	Q	35
			(LL)	0.207	0.342	0.551	0.010	0.016	0.026	G	1.0	QB	36
	D → QB		(HL)	0.330	0.493	0.785	0.010	0.016	0.025	R	1.0		
			(LH)	0.250	0.416	0.679	0.013	0.021	0.034				
	G → Q		(HH)	0.255	0.395	0.632	0.013	0.021	0.034				
			(HL)	0.238	0.381	0.606	0.010	0.016	0.026				
	G → QB		(HH)	0.280	0.455	0.734	0.013	0.021	0.034				
			(HL)	0.327	0.510	0.814	0.010	0.016	0.025				
	R → Q		(HL)	0.230	0.393	0.603	0.010	0.016	0.026				
			(LH)	0.257	0.429	0.729	0.013	0.021	0.034				
	R → QB		(HH)	0.279	0.470	0.732	0.013	0.021	0.034				
			(LL)	0.331	0.544	0.910	0.010	0.016	0.025				
	Set up time	D		0.320		0.530							
	Hold time	D		0.000		0.000							
	Release time	R		0.250		0.570							
	Removal time	R		0.000		0.000							
	Min Pulse	G		0.366		0.896							
	Min Pulse	R		0.378		1.053							
F602	D → Q		(HH)	0.399	0.627	0.995	0.006	0.010	0.017	D	1.0	Q	71
			(LL)	0.321	0.522	0.836	0.005	0.008	0.013	G	1.0	QB	71
	D → QB		(HL)	0.339	0.525	0.821	0.005	0.008	0.013	R	1.0		
			(LH)	0.231	0.376	0.602	0.006	0.010	0.017				
	G → Q		(HH)	0.443	0.704	1.123	0.006	0.010	0.017				
			(HL)	0.359	0.565	0.890	0.005	0.008	0.013				
	G → QB		(HH)	0.268	0.419	0.655	0.006	0.010	0.017				
			(HL)	0.382	0.601	0.948	0.005	0.008	0.013				
	R → Q		(HL)	0.243	0.437	0.665	0.005	0.008	0.013				
			(LH)	0.289	0.476	0.775	0.006	0.010	0.017				
	R → QB		(HH)	0.152	0.219	0.312	0.006	0.010	0.017				
			(LL)	0.229	0.374	0.601	0.005	0.008	0.013				
	Set up time	D		0.290		0.510							
	Hold time	D		0.000		0.000							
	Release time	R		0.180		0.240							
	Removal time	R		0.040		0.000							
	Min Pulse	G		0.483		1.208							
	Min Pulse	R		0.455		0.979							
F602NP	D → Q		(HH)	0.339	0.506	0.823	0.003	0.005	0.009	D	1.0	Q	138
			(LL)	0.280	0.463	0.762	0.003	0.004	0.007	G	1.0	QB	143
	D → QB		(HL)	0.499	0.764	1.241	0.003	0.004	0.006	R	1.0		
			(LH)	0.394	0.654	1.079	0.003	0.005	0.008				
	G → Q		(HH)	0.331	0.516	0.841	0.003	0.005	0.009				
			(HL)	0.303	0.501	0.822	0.003	0.004	0.007				
	G → QB		(HH)	0.418	0.693	1.140	0.003	0.005	0.008				
			(HL)	0.491	0.773	1.259	0.003	0.004	0.006				
	R → Q		(HL)	0.293	0.494	0.764	0.003	0.004	0.007				
			(LH)	0.337	0.556	0.951	0.003	0.005	0.009				
	R → QB		(HH)	0.403	0.675	1.065	0.003	0.005	0.008				
			(LL)	0.497	0.814	1.369	0.003	0.004	0.006				
	Set up time	D		0.480		0.860							
	Hold time	D		0.000		0.000							
	Release time	R		0.400		0.920							
	Removal time	R		0.000		0.000							
	Min Pulse	G		0.530		1.342							
	Min Pulse	R		0.518		1.510							

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L602	D → Q	(HH)	0.193	0.288	0.440	0.013	0.021	0.034	D	3.9	Q	35
		(LL)	0.149	0.236	0.370	0.010	0.016	0.025	G	1.0		
	G → Q	(HH)	0.250	0.386	0.612	0.013	0.021	0.034	R	1.0		
		(HL)	0.255	0.390	0.603	0.010	0.016	0.025				
	R → Q	(HL)	0.190	0.290	0.440	0.010	0.016	0.025				
		(LH)	0.179	0.290	0.475	0.013	0.021	0.034				
	Set up time	D	0.230		0.320							
	Hold time	D	0.140		0.140							
	Release time	R	0.120		0.190							
	Removal time	R	0.090		0.030							
	Min Pulse	G	0.293		0.697							
	Min Pulse	R	0.271		0.633							
F602NQL	D → Q	(HH)	0.259	0.383	0.613	0.013	0.021	0.034	D	1.0	Q	35
		(LL)	0.209	0.345	0.555	0.010	0.016	0.026	G	1.0		
	G → Q	(HH)	0.257	0.400	0.643	0.013	0.021	0.034	R	1.0		
		(HL)	0.240	0.384	0.611	0.010	0.016	0.026				
	R → Q	(HL)	0.229	0.394	0.606	0.010	0.016	0.026				
		(LH)	0.260	0.434	0.739	0.013	0.021	0.034				
	Set up time	D	0.310		0.510							
	Hold time	D	0.000		0.000							
	Release time	R	0.230		0.520							
	Removal time	R	0.000		0.000							
	Min Pulse	G	0.297		0.725							
	Min Pulse	R	0.335		0.882							
F602NQ	D → Q	(HH)	0.286	0.422	0.680	0.007	0.011	0.017	D	1.0	Q	69
		(LL)	0.231	0.381	0.618	0.005	0.008	0.013	G	1.0		
	G → Q	(HH)	0.280	0.436	0.703	0.007	0.011	0.017	R	1.0		
		(HL)	0.259	0.420	0.676	0.005	0.008	0.013				
	R → Q	(HL)	0.248	0.425	0.653	0.005	0.008	0.013				
		(LH)	0.285	0.472	0.805	0.007	0.011	0.017				
	Set up time	D	0.340		0.560							
	Hold time	D	0.000		0.000							
	Release time	R	0.270		0.600							
	Removal time	R	0.000		0.000							
	Min Pulse	G	0.320		0.786							
	Min Pulse	R	0.354		0.948							
F602NQP	D → Q	(HH)	0.343	0.512	0.834	0.003	0.005	0.009	D	1.0	Q	137
		(LL)	0.281	0.466	0.766	0.003	0.004	0.007	G	1.0		
	G → Q	(HH)	0.334	0.521	0.851	0.003	0.005	0.009	R	1.0		
		(HL)	0.305	0.503	0.826	0.003	0.004	0.007				
	R → Q	(HL)	0.289	0.496	0.766	0.003	0.004	0.007				
		(LH)	0.340	0.562	0.961	0.003	0.005	0.009				
	Set up time	D	0.410		0.690							
	Hold time	D	0.000		0.000							
	Release time	R	0.330		0.750							
	Removal time	R	0.000		0.000							
	Min Pulse	G	0.373		0.934							
	Min Pulse	R	0.399		1.102							
F602NB	D → QB	(HL)	0.325	0.504	0.785	0.005	0.008	0.013	D	1.0	QB	71
		(LH)	0.222	0.361	0.581	0.006	0.010	0.017	G	1.0		
	G → QB	(HH)	0.263	0.413	0.648	0.006	0.010	0.017	R	1.0		
		(HL)	0.370	0.583	0.915	0.005	0.008	0.013				
	R → QB	(HH)	0.148	0.213	0.305	0.006	0.011	0.017				
		(LL)	0.220	0.358	0.575	0.005	0.008	0.013				
	Set up time	D	0.250		0.440							
	Hold time	D	0.000		0.000							

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Release time	R	0.140		0.180							
	Removal time	R	0.070		0.050							
	Min Pulse	G	0.412		1.000							
	Min Pulse	R	0.378		0.774							
F602NBP	D → QB	(HL)	0.405	0.633	0.991	0.003	0.004	0.007	D	1.0	QB	142
		(LH)	0.257	0.415	0.666	0.003	0.005	0.008	G	1.0		
	G → QB	(HH)	0.297	0.465	0.732	0.003	0.005	0.008	R	1.0		
		(HL)	0.450	0.711	1.121	0.003	0.004	0.007				
	R → QB	(HH)	0.185	0.262	0.379	0.003	0.005	0.008				
		(LL)	0.297	0.486	0.782	0.003	0.004	0.007				
	Set up time	D	0.320		0.610							
	Hold time	D	0.000		0.000							
	Release time	R	0.200		0.340							
	Removal time	R	0.010		0.000							
	Min Pulse	G	0.492		1.207							
	Min Pulse	R	0.471		0.996							

Function	D-Latch with R (High Speed)							SSI Family			
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power												
x1	F6R2	7										
x2												
x4												

Logic Diagram for "Normal"



Truth Table for "Normal"

D	G	R	Q	QB
1	1	0	1	0
0	1	0	0	1
X	0	0	Latch	
X	X	1	0	1

X:Irrelevant

Logic Diagram for "Q output"

Truth Table for "Q output"

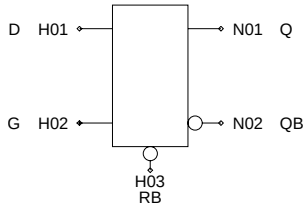
Logic Diagram for "QB output"

Truth Table for "QB output"

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F6R2	D → Q	(HH)	0.280	0.412	0.662	0.007	0.011	0.017	D	1.0	Q	70
		(LL)	0.227	0.374	0.608	0.005	0.008	0.013	G	1.0	QB	72
	D → QB	(HL)	0.383	0.576	0.927	0.005	0.008	0.013	R	1.0		
		(LH)	0.295	0.488	0.800	0.006	0.010	0.017				
	G → Q	(HH)	0.274	0.425	0.684	0.007	0.011	0.017				
		(HL)	0.255	0.414	0.665	0.005	0.008	0.013				
	G → QB	(HH)	0.322	0.528	0.857	0.006	0.010	0.017				
		(HL)	0.377	0.589	0.949	0.005	0.008	0.013				
	R → Q	(HL)	0.247	0.419	0.643	0.005	0.008	0.013				
		(LH)	0.279	0.462	0.787	0.007	0.011	0.017				
	R → QB	(HH)	0.316	0.531	0.832	0.006	0.010	0.017				
		(LL)	0.382	0.626	1.052	0.005	0.008	0.013				
	Set up time	D	0.380		0.630							
	Hold time	D	0.000		0.000							
	Release time	R	0.300		0.690							
	Removal time	R	0.000		0.000							
	Min Pulse	G	0.417		1.032							
	Min Pulse	R	0.418		1.194							

Function	D-Latch with RB							SSI Family			
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	F603NL	5			F603NBL	5			L603	4		
x1	F603	7	F603NQ	5	F603NB	6						
x2	F603NP	8	F603NQP	6	F603NBP	7						
x4												

Logic Diagram for "Normal"

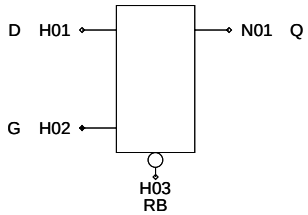


Truth Table for "Normal"

D	G	R	Q	QB
1	1	1	1	0
0	1	1	0	1
X	0	1	Latch	
X	X	0	0	1

X:Irrelevant

Logic Diagram for "Q output"

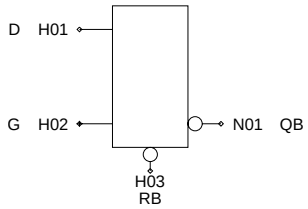


Truth Table for "Q output"

D	G	R	Q	QB
1	1	1	1	0
0	1	1	0	1
X	0	1	Latch	
X	X	0	0	1

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

D	G	R	Q	QB
1	1	1	1	0
0	1	1	0	1
X	0	1	Latch	
X	X	0	0	1

X:Irrelevant

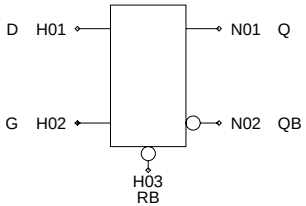
Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F603NL	D → Q	(HH)	0.253	0.372	0.594	0.013	0.021	0.034	D	1.1	Q	35
		(LL)	0.205	0.336	0.540	0.010	0.016	0.026	G	1.0	QB	36
	D → QB	(HL)	0.324	0.483	0.768	0.010	0.016	0.025	RB	1.0		
		(LH)	0.243	0.405	0.659	0.013	0.021	0.034				
	G → Q	(HH)	0.251	0.390	0.624	0.013	0.021	0.034				
		(HL)	0.235	0.376	0.595	0.010	0.016	0.026				
	G → QB	(HH)	0.274	0.444	0.714	0.013	0.021	0.034				
		(HL)	0.321	0.500	0.798	0.010	0.016	0.025				
	RB → Q	(HH)	0.230	0.362	0.608	0.013	0.021	0.034				
		(LL)	0.185	0.324	0.490	0.010	0.016	0.026				
	RB → QB	(HL)	0.300	0.473	0.781	0.010	0.016	0.025				
		(LH)	0.229	0.395	0.608	0.013	0.021	0.034				
	Set up time	D	0.320		0.520							
	Hold time	D	0.000		0.000							
	Release time	RB	0.270		0.470							
	Removal time	RB	0.000		0.000							
	Min Pulse	G	0.361		0.879							
	Min Pulse	RB	0.480		1.049							
F603	D → Q	(HH)	0.403	0.633	1.004	0.006	0.010	0.017	D	1.0	Q	72
		(LL)	0.324	0.525	0.844	0.005	0.008	0.013	G	1.0	QB	71
	D → QB	(HL)	0.341	0.528	0.826	0.005	0.008	0.013	RB	1.0		
		(LH)	0.232	0.378	0.605	0.006	0.010	0.017				
	G → Q	(HH)	0.446	0.710	1.131	0.006	0.010	0.017				
		(HL)	0.361	0.569	0.898	0.005	0.008	0.013				
	G → QB	(HH)	0.269	0.421	0.659	0.006	0.010	0.017				
		(HL)	0.384	0.605	0.953	0.005	0.008	0.013				
	RB → Q	(HH)	0.350	0.567	0.906	0.006	0.010	0.017				
		(LL)	0.258	0.486	0.771	0.005	0.008	0.013				
	RB → QB	(HL)	0.289	0.462	0.728	0.005	0.008	0.013				
		(LH)	0.166	0.265	0.416	0.006	0.010	0.017				
	Set up time	D	0.290		0.520							
	Hold time	D	0.000		0.000							
	Release time	RB	0.210		0.380							
	Removal time	RB	0.000		0.000							
	Min Pulse	G	0.486		1.216							
	Min Pulse	RB	0.406		1.060							
F603NP	D → Q	(HH)	0.337	0.502	0.816	0.003	0.005	0.009	D	1.0	Q	139
		(LL)	0.277	0.460	0.756	0.003	0.004	0.007	G	1.0	QB	143
	D → QB	(HL)	0.492	0.751	1.223	0.003	0.004	0.006	RB	1.0		
		(LH)	0.388	0.646	1.063	0.003	0.005	0.008				
	G → Q	(HH)	0.329	0.512	0.834	0.003	0.005	0.009				
		(HL)	0.301	0.497	0.814	0.003	0.004	0.007				
	G → QB	(HH)	0.412	0.683	1.123	0.003	0.005	0.008				
		(HL)	0.485	0.761	1.241	0.003	0.004	0.006				
	RB → Q	(HH)	0.310	0.490	0.832	0.003	0.005	0.009				
		(LL)	0.246	0.424	0.655	0.003	0.004	0.007				
	RB → QB	(HL)	0.465	0.740	1.237	0.003	0.004	0.006				
		(LH)	0.353	0.600	0.946	0.003	0.005	0.008				
	Set up time	D	0.470		0.850							
	Hold time	D	0.000		0.000							
	Release time	RB	0.410		0.820							
	Removal time	RB	0.000		0.000							
	Min Pulse	G	0.523		1.323							
	Min Pulse	RB	0.688		1.535							

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L603	D → Q	(HH)	0.195	0.291	0.445	0.013	0.021	0.034	D	3.9	Q	35
		(LL)	0.150	0.239	0.374	0.010	0.016	0.025	G	1.0		
	G → Q	(HH)	0.251	0.389	0.616	0.013	0.021	0.034	RB	1.1		
		(HL)	0.256	0.393	0.608	0.010	0.016	0.025				
	RB → Q	(HH)	0.150	0.224	0.357	0.013	0.021	0.034				
		(LL)	0.145	0.227	0.340	0.010	0.016	0.025				
	Set up time	D	0.230		0.320							
	Hold time	D	0.140		0.140							
	Release time	RB	0.100		0.070							
	Removal time	RB	0.110		0.150							
	Min Pulse	G	0.295		0.702							
	Min Pulse	RB	0.289		0.595							
F603NQ	D → Q	(HH)	0.280	0.413	0.665	0.007	0.011	0.017	D	1.0	Q	70
		(LL)	0.226	0.374	0.606	0.005	0.008	0.013	G	1.0		
	G → Q	(HH)	0.275	0.427	0.689	0.007	0.011	0.017	RB	1.0		
		(HL)	0.254	0.413	0.664	0.005	0.008	0.013				
	RB → Q	(HH)	0.255	0.402	0.678	0.007	0.011	0.017				
		(LL)	0.201	0.353	0.539	0.005	0.008	0.013				
	Set up time	D	0.340		0.560							
	Hold time	D	0.000		0.000							
	Release time	RB	0.280		0.500							
	Removal time	RB	0.000		0.000							
	Min Pulse	G	0.315		0.772							
	Min Pulse	RB	0.452		0.960							
F603NQP	D → Q	(HH)	0.337	0.503	0.818	0.003	0.005	0.009	D	1.0	Q	138
		(LL)	0.276	0.459	0.753	0.003	0.004	0.007	G	1.0		
	G → Q	(HH)	0.329	0.513	0.836	0.003	0.005	0.009	RB	1.0		
		(HL)	0.300	0.495	0.813	0.003	0.004	0.007				
	RB → Q	(HH)	0.311	0.491	0.834	0.003	0.005	0.009				
		(LL)	0.241	0.424	0.653	0.003	0.004	0.007				
	Set up time	D	0.400		0.680							
	Hold time	D	0.000		0.000							
	Release time	RB	0.340		0.650							
	Removal time	RB	0.000		0.000							
	Min Pulse	G	0.369		0.919							
	Min Pulse	RB	0.528		1.128							
F603NBL	D → QB	(HL)	0.304	0.468	0.730	0.010	0.016	0.026	D	1.0	QB	35
		(LH)	0.216	0.354	0.570	0.013	0.021	0.034	G	1.0		
	G → QB	(HH)	0.247	0.391	0.616	0.013	0.021	0.034	RB	1.0		
		(HL)	0.339	0.532	0.838	0.010	0.016	0.026				
	RB → QB	(HL)	0.248	0.396	0.622	0.010	0.016	0.026				
		(LH)	0.151	0.244	0.383	0.013	0.021	0.034				
	Set up time	D	0.240		0.450							
	Hold time	D	0.000		0.000							
	Release time	RB	0.150		0.260							
	Removal time	RB	0.060		0.000							
	Min Pulse	G	0.378		0.919							
	Min Pulse	RB	0.306		0.777							
F603NB	D → QB	(HL)	0.331	0.515	0.804	0.005	0.008	0.013	D	1.0	QB	71
		(LH)	0.224	0.364	0.585	0.006	0.010	0.017	G	1.0		
	G → QB	(HH)	0.266	0.417	0.656	0.006	0.010	0.017	RB	1.0		
		(HL)	0.377	0.596	0.936	0.005	0.008	0.013				
	RB → QB	(HL)	0.284	0.456	0.716	0.005	0.008	0.013				
		(LH)	0.164	0.262	0.412	0.006	0.011	0.017				
	Set up time	D	0.250		0.450							
	Hold time	D	0.000		0.000							

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Release time	RB	0.180		0.330							
	Removal time	RB	0.030		0.000							
	Min Pulse	G	0.419		1.022							
	Min Pulse	RB	0.340		0.869							
F603NBP	D → QB	(HL)	0.409	0.642	1.007	0.003	0.004	0.007	D	1.0	QB	142
		(LH)	0.257	0.416	0.669	0.003	0.005	0.008	G	1.0		
	G → QB	(HH)	0.298	0.468	0.738	0.003	0.005	0.008	RB	1.0		
		(HL)	0.455	0.721	1.138	0.003	0.004	0.007				
	RB → QB	(HL)	0.363	0.581	0.918	0.003	0.004	0.007				
		(LH)	0.192	0.306	0.485	0.003	0.005	0.008				
	Set up time	D	0.320		0.610							
	Hold time	D	0.000		0.000							
	Release time	RB	0.240		0.490							
	Removal time	RB	0.000		0.000							
	Min Pulse	G	0.497		1.223							
	Min Pulse	RB	0.416		1.071							

Function	D-Latch with RB (High Speed)							SSI Family			
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power												
x1	F6R5	6										
x2												
x4												

Logic Diagram for "Normal"



Truth Table for "Normal"

D	G	RB	Q	QB
1	1	1	1	0
0	1	1	0	1
X	0	1	Latch	
X	X	0	0	1

X:Irrelevant

Logic Diagram for "Q output"

Truth Table for "Q output"

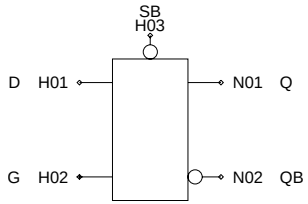
Logic Diagram for "QB output"

Truth Table for "QB output"

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F6R5	D → Q	(HH)	0.278	0.409	0.657	0.007	0.011	0.017	D	1.0	Q	70
		(LL)	0.226	0.373	0.603	0.005	0.008	0.013	G	1.0	QB	72
	D → QB	(HL)	0.377	0.567	0.910	0.005	0.008	0.013	RB	1.0		
		(LH)	0.290	0.480	0.786	0.006	0.010	0.017				
	G → Q	(HH)	0.273	0.423	0.681	0.007	0.011	0.017				
		(HL)	0.253	0.411	0.661	0.005	0.008	0.013				
	G → QB	(HH)	0.318	0.519	0.844	0.006	0.010	0.017				
		(HL)	0.372	0.581	0.936	0.005	0.008	0.013				
	RB → Q	(HH)	0.252	0.398	0.670	0.007	0.011	0.017				
		(LL)	0.202	0.353	0.537	0.005	0.008	0.013				
	RB → QB	(HL)	0.351	0.556	0.924	0.005	0.008	0.013				
		(LH)	0.268	0.460	0.717	0.006	0.010	0.017				
	Set up time	D	0.370		0.620							
	Hold time	D	0.000		0.000							
	Release time	RB	0.320		0.590							
	Removal time	RB	0.000		0.000							
	Min Pulse	G	0.412		1.017							
	Min Pulse	RB	0.549		1.206							

Function	D-Latch with SB							SSI Family					
Block type	Standard type						Low Gate type						
	Normal		Q output		QB output		Normal		Q output		QB output		
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	
Low Power	F60KNL	6	F60KNQL	5									
x1	F60K	7	F60KNQ	6	F60KNB	5							
x2	F60KNP	9	F60KNQP	7	F60KNBP	6							
x4													

Logic Diagram for "Normal"

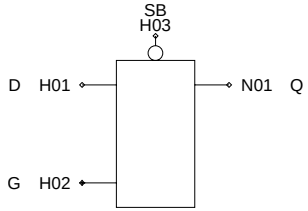


Truth Table for "Normal"

D	G	SB	Q	QB
0	1	1	0	1
1	1	1	1	0
X	0	1	Latch	
X	X	0	1	0

X:Irrelevant

Logic Diagram for "Q output"

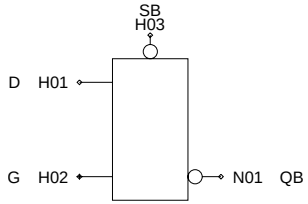


Truth Table for "Q output"

D	G	SB	Q	QB
0	1	1	0	1
1	1	1	1	0
X	0	1	Latch	
X	X	0	1	0

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

D	G	SB	Q	QB
0	1	1	0	1
1	1	1	1	0
X	0	1	Latch	
X	X	0	1	0

X:Irrelevant

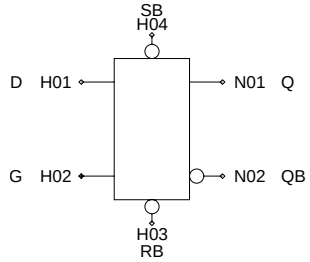
Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_1						
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F60KNL	D → Q		(HH)	0.189	0.284	0.437	0.013	0.021	0.034	D	1.0	Q	35
			(LL)	0.320	0.520	0.846	0.011	0.017	0.027	G	1.0	QB	35
	D → QB		(HL)	0.264	0.401	0.622	0.010	0.016	0.025	SB	1.0		
			(LH)	0.343	0.563	0.929	0.013	0.021	0.034				
	G → Q		(HH)	0.221	0.341	0.536	0.013	0.021	0.034				
			(HL)	0.278	0.453	0.740	0.011	0.017	0.027				
	G → QB		(HH)	0.300	0.496	0.822	0.013	0.021	0.034				
			(HL)	0.295	0.458	0.722	0.010	0.016	0.025				
	SB → Q		(HL)	0.372	0.616	1.004	0.011	0.017	0.027				
			(LH)	0.182	0.295	0.468	0.013	0.021	0.034				
	SB → QB		(HH)	0.394	0.659	1.088	0.013	0.021	0.034				
			(LL)	0.257	0.416	0.657	0.010	0.016	0.025				
	Set up time	D		0.400		0.800							
	Hold time	D		0.020		0.000							
	Release time	SB		0.400		0.930							
	Removal time	SB		0.000		0.000							
	Min Pulse	G		0.342		0.905							
	Min Pulse	SB		0.445		1.244							
F60K	D → Q		(HH)	0.212	0.317	0.492	0.006	0.011	0.017	D	1.0	Q	71
			(LL)	0.356	0.581	0.950	0.006	0.009	0.014	G	1.0	QB	71
	D → QB		(HL)	0.312	0.476	0.748	0.005	0.008	0.013	SB	1.0		
			(LH)	0.415	0.683	1.126	0.006	0.010	0.017				
	G → Q		(HH)	0.239	0.371	0.588	0.006	0.011	0.017				
			(HL)	0.309	0.509	0.840	0.006	0.009	0.014				
	G → QB		(HH)	0.367	0.610	1.016	0.006	0.010	0.017				
			(HL)	0.340	0.531	0.843	0.005	0.008	0.013				
	SB → Q		(HL)	0.408	0.677	1.111	0.006	0.009	0.014				
			(LH)	0.198	0.319	0.506	0.006	0.011	0.017				
	SB → QB		(HH)	0.467	0.779	1.287	0.006	0.010	0.017				
			(LL)	0.298	0.483	0.766	0.005	0.008	0.013				
	Set up time	D		0.470		0.970							
	Hold time	D		0.000		0.000							
	Release time	SB		0.460		1.100							
	Removal time	SB		0.000		0.000							
	Min Pulse	G		0.409		1.099							
	Min Pulse	SB		0.517		1.442							
F60KNP	D → Q		(HH)	0.253	0.380	0.599	0.003	0.005	0.009	D	1.0	Q	141
			(LL)	0.434	0.713	1.173	0.003	0.005	0.008	G	1.0	QB	141
	D → QB		(HL)	0.406	0.624	0.994	0.003	0.004	0.006	SB	1.0		
			(LH)	0.552	0.914	1.507	0.003	0.005	0.008				
	G → Q		(HH)	0.277	0.432	0.691	0.003	0.005	0.009				
			(HL)	0.385	0.637	1.062	0.003	0.005	0.008				
	G → QB		(HH)	0.504	0.838	1.397	0.003	0.005	0.008				
			(HL)	0.431	0.677	1.086	0.003	0.004	0.006				
	SB → Q		(HL)	0.487	0.810	1.335	0.003	0.005	0.008				
			(LH)	0.228	0.367	0.584	0.003	0.005	0.009				
	SB → QB		(HH)	0.607	1.010	1.669	0.003	0.005	0.008				
			(LL)	0.378	0.611	0.978	0.003	0.004	0.006				
	Set up time	D		0.590		1.290							
	Hold time	D		0.000		0.000							
	Release time	SB		0.580		1.420							
	Removal time	SB		0.000		0.000							
	Min Pulse	G		0.544		1.477							
	Min Pulse	SB		0.655		1.825							

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F60KNQL	D → Q	(HH)	0.186	0.278	0.433	0.013	0.021	0.034	D	1.0	Q	35
		(LL)	0.320	0.518	0.840	0.011	0.017	0.027	G	1.0		
	G → Q	(HH)	0.224	0.348	0.548	0.013	0.021	0.034	SB	1.0		
		(HL)	0.289	0.473	0.771	0.011	0.017	0.027				
	SB → Q	(HL)	0.370	0.612	0.998	0.011	0.017	0.027				
		(LH)	0.183	0.296	0.470	0.013	0.021	0.034				
	Set up time	D	0.370		0.740							
	Hold time	D	0.020		0.000							
	Release time	SB	0.370		0.870							
	Removal time	SB	0.000		0.000							
	Min Pulse	G	0.331		0.855							
	Min Pulse	SB	0.420		1.154							
F60KNQ	D → Q	(HH)	0.206	0.306	0.479	0.006	0.011	0.017	D	1.0	Q	70
		(LL)	0.350	0.570	0.931	0.006	0.009	0.014	G	1.0		
	G → Q	(HH)	0.241	0.373	0.591	0.006	0.011	0.017	SB	1.0		
		(HL)	0.317	0.521	0.858	0.006	0.009	0.014				
	SB → Q	(HL)	0.402	0.665	1.089	0.006	0.009	0.014				
		(LH)	0.195	0.315	0.502	0.006	0.011	0.017				
	Set up time	D	0.410		0.840							
	Hold time	D	0.000		0.000							
	Release time	SB	0.410		0.980							
	Removal time	SB	0.000		0.000							
	Min Pulse	G	0.358		0.941							
	Min Pulse	SB	0.451		1.245							
F60KNQP	D → Q	(HH)	0.248	0.370	0.585	0.003	0.005	0.009	D	1.0	Q	140
		(LL)	0.429	0.703	1.156	0.003	0.005	0.007	G	1.0		
	G → Q	(HH)	0.278	0.433	0.692	0.003	0.005	0.009	SB	1.0		
		(HL)	0.394	0.651	1.082	0.003	0.005	0.007				
	SB → Q	(HL)	0.482	0.799	1.316	0.003	0.005	0.007				
		(LH)	0.225	0.362	0.579	0.003	0.005	0.009				
	Set up time	D	0.490		1.060							
	Hold time	D	0.000		0.000							
	Release time	SB	0.480		1.190							
	Removal time	SB	0.000		0.000							
	Min Pulse	G	0.434		1.163							
	Min Pulse	SB	0.530		1.471							
F60KNB	D → QB	(HL)	0.251	0.381	0.586	0.005	0.008	0.013	D	1.0	QB	70
		(LH)	0.266	0.430	0.706	0.006	0.011	0.017	G	1.0		
	G → QB	(HH)	0.302	0.477	0.769	0.006	0.011	0.017	SB	1.0		
		(HL)	0.293	0.453	0.709	0.005	0.008	0.013				
	SB → QB	(HH)	0.164	0.247	0.396	0.006	0.011	0.017				
		(LL)	0.160	0.248	0.371	0.005	0.008	0.013				
	Set up time	D	0.270		0.500							
	Hold time	D	0.020		0.000							
	Release time	SB	0.120		0.100							
	Removal time	SB	0.090		0.120							
	Min Pulse	G	0.345		0.853							
	Min Pulse	SB	0.318		0.650							
F60KNBP	D → QB	(HL)	0.296	0.453	0.700	0.003	0.004	0.007	D	1.0	QB	141
		(LH)	0.315	0.509	0.837	0.003	0.005	0.009	G	1.0		
	G → QB	(HH)	0.351	0.556	0.901	0.003	0.005	0.009	SB	1.0		
		(HL)	0.338	0.525	0.823	0.003	0.004	0.007				
	SB → QB	(HH)	0.210	0.320	0.523	0.003	0.005	0.009				
		(LL)	0.203	0.316	0.482	0.003	0.004	0.007				
	Set up time	D	0.290		0.570							
	Hold time	D	0.000		0.000							

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Release time	SB	0.170		0.200							
	Removal time	SB	0.040		0.020							
	Min Pulse	G	0.395		0.985							
	Min Pulse	SB	0.398		0.810							

Function	D-Latch with RB,SB							SSI Family					
Block type	Standard type						Low Gate type						
	Normal		Q output		QB output		Normal		Q output		QB output		
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	
Low Power	F60JNL	6			F60JNBL	5							
x1	F60J	7	F60JNQ	6	F60JNB	6							
x2	F60JNP	9	F60JNQP	7	F60JNBP	7							
x4													

Logic Diagram for "Normal"

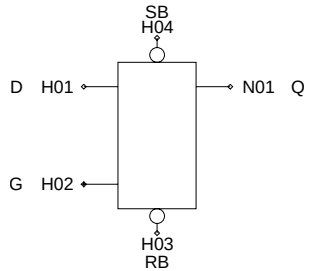


Truth Table for "Normal"

D	G	RB	SB	Q	QB	
0	1	1	1	0	1	
1	1	1	1	1	0	
X	0	1	1	Latch		
X	X	0	1	0	1	
X	X	1	0	1	0	
X	X	0	0	0	1	← Prohibition

X:Irrelevant

Logic Diagram for "Q output"

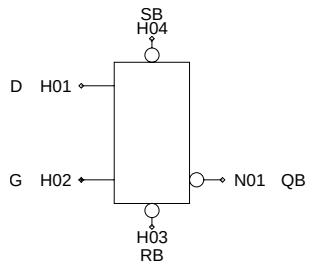


Truth Table for "Q output"

D	G	RB	SB	Q	QB	
0	1	1	1	0	1	
1	1	1	1	1	0	
X	0	1	1	Latch		
X	X	0	1	0	1	
X	X	1	0	1	0	
X	X	0	0	0	1	← Prohibition

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

D	G	RB	SB	Q	QB	
0	1	1	1	0	1	
1	1	1	1	1	0	
X	0	1	1	Latch		
X	X	0	1	0	1	
X	X	1	0	1	0	
X	X	0	0	0	1	← Prohibition

X:Irrelevant

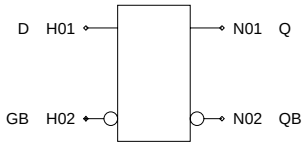
Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_1						
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F60JNL	D → Q		(HH)	0.263	0.392	0.630	0.013	0.021	0.034	D	1.0	Q	34
			(LL)	0.328	0.538	0.880	0.011	0.017	0.027	G	1.0	QB	35
	D → QB		(HL)	0.332	0.498	0.795	0.010	0.016	0.025	RB	1.0		
			(LH)	0.350	0.579	0.958	0.013	0.021	0.034	SB	1.0		
	G → Q		(HH)	0.260	0.405	0.651	0.013	0.021	0.034				
			(HL)	0.287	0.471	0.772	0.011	0.017	0.027				
	G → QB		(HH)	0.307	0.510	0.848	0.013	0.021	0.034				
			(HL)	0.328	0.511	0.816	0.010	0.016	0.025				
	RB → Q		(HH)	0.241	0.381	0.643	0.013	0.021	0.034				
			(LL)	0.196	0.341	0.521	0.010	0.016	0.026				
	RB → QB		(HL)	0.310	0.487	0.808	0.010	0.016	0.025				
			(LH)	0.238	0.406	0.632	0.013	0.021	0.034				
	SB → Q		(HL)	0.386	0.640	1.044	0.011	0.017	0.027				
			(LH)	0.253	0.420	0.701	0.013	0.021	0.034				
	SB → QB		(HH)	0.407	0.680	1.123	0.013	0.021	0.034				
			(LL)	0.325	0.528	0.867	0.010	0.016	0.025				
	Set up time	D		0.390		0.820							
	Hold time	D		0.000		0.000							
	Release time	RB		0.280		0.490							
	Release time	SB		0.410		0.960							
	Removal time	RB		0.000		0.000							
	Removal time	SB		0.000		0.000							
	Min Pulse	G		0.367		0.930							
	Min Pulse	RB		0.497		1.082							
	Min Pulse	SB		0.452		1.277							
F60J	D → Q		(HH)	0.291	0.434	0.703	0.007	0.011	0.017	D	1.0	Q	69
			(LL)	0.363	0.597	0.980	0.006	0.009	0.015	G	1.0	QB	71
	D → QB		(HL)	0.390	0.592	0.955	0.005	0.008	0.013	RB	1.0		
			(LH)	0.421	0.699	1.155	0.006	0.010	0.017	SB	1.0		
	G → Q		(HH)	0.286	0.445	0.719	0.007	0.011	0.017				
			(HL)	0.318	0.524	0.870	0.006	0.009	0.015				
	G → QB		(HH)	0.376	0.625	1.045	0.006	0.010	0.017				
			(HL)	0.385	0.602	0.970	0.005	0.008	0.013				
	RB → Q		(HH)	0.268	0.425	0.717	0.007	0.011	0.017				
			(LL)	0.217	0.374	0.574	0.005	0.008	0.013				
	RB → QB		(HL)	0.368	0.582	0.969	0.005	0.008	0.013				
			(LH)	0.281	0.480	0.752	0.006	0.010	0.017				
	SB → Q		(HL)	0.422	0.700	1.146	0.006	0.009	0.015				
			(LH)	0.277	0.455	0.760	0.006	0.011	0.018				
	SB → QB		(HH)	0.481	0.801	1.321	0.006	0.010	0.017				
			(LL)	0.378	0.618	1.019	0.005	0.008	0.013				
	Set up time	D		0.450		0.990							
	Hold time	D		0.000		0.000							
	Release time	RB		0.320		0.610							
	Release time	SB		0.470		1.130							
	Removal time	RB		0.000		0.000							
	Removal time	SB		0.000		0.000							
	Min Pulse	G		0.425		1.126							
	Min Pulse	RB		0.570		1.252							
	Min Pulse	SB		0.525		1.477							
F60JNP	D → Q		(HH)	0.348	0.525	0.856	0.003	0.005	0.009	D	1.0	Q	138
			(LL)	0.441	0.729	1.205	0.003	0.005	0.008	G	1.0	QB	142
	D → QB		(HL)	0.506	0.776	1.264	0.003	0.004	0.006	RB	1.0		
			(LH)	0.560	0.929	1.539	0.003	0.005	0.008	SB	1.0		
	G → Q		(HH)	0.339	0.531	0.868	0.003	0.005	0.009				
			(HL)	0.394	0.654	1.088	0.003	0.005	0.008				

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	G → QB	(HH)	0.514	0.854	1.423	0.003	0.005	0.008				
		(HL)	0.497	0.783	1.276	0.003	0.004	0.006				
	RB → Q	(HH)	0.323	0.514	0.871	0.003	0.005	0.009				
		(LL)	0.259	0.445	0.688	0.003	0.004	0.007				
	RB → QB	(HL)	0.481	0.766	1.280	0.003	0.004	0.006				
		(LH)	0.365	0.622	0.981	0.003	0.005	0.008				
	SB → Q	(HL)	0.502	0.833	1.370	0.003	0.005	0.008				
		(LH)	0.324	0.530	0.889	0.003	0.005	0.009				
	SB → QB	(HH)	0.620	1.033	1.704	0.003	0.005	0.008				
		(LL)	0.480	0.784	1.302	0.003	0.004	0.006				
	Set up time	D	0.570		1.300							
	Hold time	D	0.000		0.000							
	Release time	RB	0.410		0.820							
	Release time	SB	0.580		1.440							
	Removal time	RB	0.000		0.000							
	Removal time	SB	0.000		0.000							
	Min Pulse	G	0.553		1.504							
	Min Pulse	RB	0.708		1.577							
	Min Pulse	SB	0.663		1.859							
F60JNQ	D → Q	(HH)	0.292	0.437	0.707	0.007	0.011	0.017	D	1.0	Q	68
		(LL)	0.366	0.603	0.990	0.006	0.009	0.014	G	1.0		
	G → Q	(HH)	0.287	0.447	0.723	0.007	0.011	0.017	RB	1.0		
		(HL)	0.321	0.530	0.877	0.006	0.009	0.015	SB	1.0		
	RB → Q	(HH)	0.269	0.427	0.721	0.007	0.011	0.017				
		(LL)	0.215	0.375	0.573	0.005	0.008	0.013				
	SB → Q	(HL)	0.425	0.704	1.154	0.006	0.009	0.014				
		(LH)	0.275	0.456	0.764	0.006	0.011	0.017				
	Set up time	D	0.410		0.890							
	Hold time	D	0.000		0.000							
	Release time	RB	0.290		0.540							
	Release time	SB	0.430		1.030							
	Removal time	RB	0.000		0.000							
	Removal time	SB	0.000		0.000							
	Min Pulse	G	0.362		0.960							
	Min Pulse	RB	0.471		1.005							
	Min Pulse	SB	0.468		1.309							
F60JNQP	D → Q	(HH)	0.349	0.525	0.859	0.003	0.005	0.009	D	1.0	Q	137
		(LL)	0.445	0.735	1.213	0.003	0.005	0.008	G	1.0		
	G → Q	(HH)	0.340	0.532	0.870	0.003	0.005	0.009	RB	1.0		
		(HL)	0.399	0.659	1.098	0.003	0.005	0.008	SB	1.0		
	RB → Q	(HH)	0.324	0.515	0.873	0.003	0.005	0.009				
		(LL)	0.255	0.444	0.685	0.003	0.004	0.007				
	SB → Q	(HL)	0.506	0.838	1.380	0.003	0.005	0.008				
		(LH)	0.322	0.532	0.894	0.003	0.005	0.009				
	Set up time	D	0.490		1.100							
	Hold time	D	0.000		0.000							
	Release time	RB	0.350		0.680							
	Release time	SB	0.500		1.250							
	Removal time	RB	0.000		0.000							
	Removal time	SB	0.000		0.000							
	Min Pulse	G	0.438		1.181							
	Min Pulse	RB	0.544		1.169							
	Min Pulse	SB	0.548		1.536							
F60JNBL	D → QB	(HL)	0.296	0.441	0.695	0.010	0.016	0.025	D	1.0	QB	35
		(LH)	0.253	0.419	0.687	0.013	0.021	0.034	G	1.0		
	G → QB	(HH)	0.286	0.457	0.737	0.013	0.021	0.034	RB	1.0		

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
		(HL)	0.296	0.460	0.728	0.010	0.016	0.025	SB	1.0		
	RB → QB	(HL)	0.274	0.429	0.707	0.010	0.016	0.025				
		(LH)	0.244	0.417	0.662	0.013	0.021	0.034				
	SB → QB	(HH)	0.144	0.214	0.339	0.013	0.021	0.034				
		(LL)	0.137	0.215	0.320	0.010	0.016	0.025				
	Set up time	D	0.280		0.510							
	Hold time	D	0.000		0.000							
	Release time	RB	0.230		0.410							
	Release time	SB	0.070		0.030							
	Removal time	RB	0.000		0.000							
	Removal time	SB	0.140		0.200							
	Min Pulse	G	0.335		0.822							
	Min Pulse	RB	0.431		0.963							
	Min Pulse	SB	0.279		0.569							
F60JNB	D → QB	(HL)	0.319	0.480	0.758	0.005	0.008	0.013	D	1.0	QB	70
		(LH)	0.280	0.461	0.758	0.006	0.011	0.017	G	1.0		
	G → QB	(HH)	0.312	0.496	0.804	0.006	0.011	0.017	RB	1.0		
		(HL)	0.319	0.499	0.788	0.005	0.008	0.013	SB	1.0		
	RB → QB	(HL)	0.298	0.470	0.770	0.005	0.008	0.013				
		(LH)	0.269	0.461	0.736	0.006	0.011	0.017				
	SB → QB	(HH)	0.167	0.251	0.404	0.006	0.011	0.017				
		(LL)	0.160	0.249	0.377	0.005	0.008	0.013				
	Set up time	D	0.300		0.540							
	Hold time	D	0.000		0.000							
	Release time	RB	0.250		0.450							
	Release time	SB	0.100		0.090							
	Removal time	RB	0.000		0.000							
	Removal time	SB	0.110		0.140							
	Min Pulse	G	0.359		0.889							
	Min Pulse	RB	0.458		1.037							
	Min Pulse	SB	0.324		0.661							
F60JNBP	D → QB	(HL)	0.368	0.557	0.881	0.003	0.004	0.007	D	1.0	QB	141
		(LH)	0.330	0.540	0.892	0.003	0.005	0.009	G	1.0		
	G → QB	(HH)	0.361	0.575	0.938	0.003	0.005	0.009	RB	1.0		
		(HL)	0.369	0.574	0.913	0.003	0.004	0.007	SB	1.0		
	RB → QB	(HL)	0.346	0.546	0.895	0.003	0.004	0.007				
		(LH)	0.317	0.543	0.877	0.003	0.005	0.009				
	SB → QB	(HH)	0.213	0.324	0.531	0.003	0.005	0.009				
		(LL)	0.203	0.319	0.487	0.003	0.004	0.007				
	Set up time	D	0.340		0.610							
	Hold time	D	0.000		0.000							
	Release time	RB	0.290		0.540							
	Release time	SB	0.150		0.190							
	Removal time	RB	0.000		0.000							
	Removal time	SB	0.070		0.050							
	Min Pulse	G	0.408		1.022							
	Min Pulse	RB	0.512		1.180							
	Min Pulse	SB	0.403		0.820							

Function	D-Latch (GB)										SSI Family	
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	F604NL	5	F604NQL	4	F604NBL	4			L604	4		
x1	F604	6	F604NQ	5	F604NB	5						
x2	F604NP	8	F604NQP	6	F604NBP	6						
x4												

Logic Diagram for "Normal"

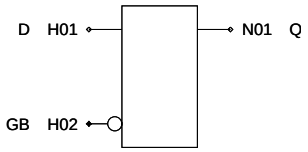


Truth Table for "Normal"

D	GB	Q	QB
1	0	1	0
0	0	0	1
X	1	Latch	

X:Irrelevant

Logic Diagram for "Q output"

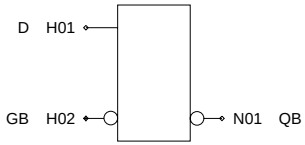


Truth Table for "Q output"

D	GB	Q	QB
1	0	1	0
0	0	0	1
X	1	Latch	

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

D	GB	Q	QB
1	0	1	0
0	0	0	1
X	1	Latch	

X:Irrelevant

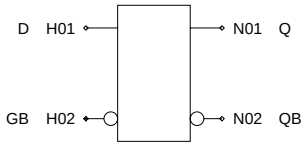
Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F604NL	D → Q	(HH)	0.179	0.264	0.403	0.013	0.021	0.034	D	1.0	Q	35
		(LL)	0.196	0.315	0.503	0.010	0.016	0.026	GB	1.0	QB	36
	D → QB	(HL)	0.252	0.377	0.581	0.010	0.016	0.025				
		(LH)	0.233	0.380	0.617	0.013	0.021	0.034				
	GB → Q	(LH)	0.203	0.320	0.509	0.013	0.021	0.034				
		(LL)	0.233	0.382	0.612	0.010	0.016	0.026				
	GB → QB	(LH)	0.270	0.447	0.725	0.013	0.021	0.034				
		(LL)	0.274	0.434	0.688	0.010	0.016	0.025				
	Set up time	D	0.260		0.420							
	Hold time	D	0.010		0.000							
	Min Pulse	GB	0.313		0.805							
F604	D → Q	(HH)	0.304	0.468	0.735	0.006	0.010	0.017	D	1.0	Q	72
		(LL)	0.310	0.501	0.803	0.005	0.008	0.013	GB	1.0	QB	71
	D → QB	(HL)	0.244	0.370	0.569	0.005	0.008	0.013				
		(LH)	0.221	0.358	0.572	0.006	0.010	0.017				
	GB → Q	(LH)	0.329	0.524	0.835	0.006	0.010	0.017				
		(LL)	0.352	0.571	0.917	0.005	0.008	0.013				
	GB → QB	(LH)	0.263	0.428	0.686	0.006	0.010	0.017				
		(LL)	0.271	0.425	0.669	0.005	0.008	0.013				
	Set up time	D	0.240		0.400							
	Hold time	D	0.020		0.000							
	Min Pulse	GB	0.389		0.997							
F604NP	D → Q	(HH)	0.237	0.351	0.549	0.003	0.005	0.009	D	1.0	Q	142
		(LL)	0.264	0.432	0.704	0.003	0.004	0.007	GB	1.0	QB	144
	D → QB	(HL)	0.390	0.595	0.943	0.003	0.004	0.006				
		(LH)	0.377	0.620	1.015	0.003	0.005	0.008				
	GB → Q	(LH)	0.259	0.410	0.659	0.003	0.005	0.009				
		(LL)	0.292	0.489	0.806	0.003	0.004	0.007				
	GB → QB	(LH)	0.405	0.677	1.118	0.003	0.005	0.008				
		(LL)	0.411	0.654	1.054	0.003	0.004	0.006				
	Set up time	D	0.370		0.680							
	Hold time	D	0.000		0.000							
	Min Pulse	GB	0.451		1.197							
L604	D → Q	(HH)	0.144	0.225	0.337	0.013	0.021	0.034	D	3.6	Q	35
		(LL)	0.146	0.228	0.355	0.010	0.016	0.025	GB	1.0		
	GB → Q	(LH)	0.217	0.349	0.553	0.013	0.021	0.034				
		(LL)	0.228	0.357	0.555	0.010	0.016	0.025				
	Set up time	D	0.150		0.220							
	Hold time	D	0.070		0.070							
	Min Pulse	GB	0.262		0.636							
F604NQL	D → Q	(HH)	0.182	0.268	0.411	0.013	0.021	0.034	D	1.0	Q	35
		(LL)	0.200	0.322	0.514	0.010	0.016	0.026	GB	1.0		
	GB → Q	(LH)	0.202	0.322	0.511	0.013	0.021	0.034				
		(LL)	0.233	0.383	0.617	0.010	0.016	0.026				
	Set up time	D	0.260		0.420							
	Hold time	D	0.000		0.000							
	Min Pulse	GB	0.269		0.694							
F604NQ	D → Q	(HH)	0.196	0.289	0.444	0.006	0.011	0.017	D	1.0	Q	71
		(LL)	0.215	0.349	0.560	0.005	0.008	0.013	GB	1.0		
	GB → Q	(LH)	0.220	0.347	0.553	0.006	0.011	0.017				
		(LL)	0.249	0.414	0.671	0.005	0.008	0.013				
	Set up time	D	0.290		0.460							
	Hold time	D	0.000		0.000							
	Min Pulse	GB	0.289		0.751							

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F604NQP	D → Q	(HH)	0.237	0.352	0.551	0.003	0.005	0.009	D	1.0	Q	141
		(LL)	0.265	0.434	0.707	0.003	0.004	0.007	GB	1.0		
	GB → Q	(LH)	0.259	0.411	0.662	0.003	0.005	0.009				
		(LL)	0.293	0.493	0.812	0.003	0.004	0.007				
	Set up time	D	0.340		0.560							
	Hold time	D	0.000		0.000							
	Min Pulse	GB	0.332		0.891							
F604NBL	D → QB	(HL)	0.226	0.340	0.521	0.010	0.016	0.025	D	1.0	QB	35
		(LH)	0.205	0.334	0.536	0.013	0.021	0.034	GB	1.0		
	GB → QB	(LH)	0.243	0.398	0.642	0.013	0.021	0.034				
		(LL)	0.247	0.390	0.615	0.010	0.016	0.025				
	Set up time	D	0.230		0.380							
	Hold time	D	0.030		0.000							
	Min Pulse	GB	0.283		0.719							
F604NB	D → QB	(HL)	0.245	0.369	0.567	0.005	0.008	0.013	D	1.0	QB	71
		(LH)	0.219	0.354	0.570	0.006	0.010	0.017	GB	1.0		
	GB → QB	(LH)	0.261	0.425	0.682	0.006	0.010	0.017				
		(LL)	0.268	0.423	0.667	0.005	0.008	0.013				
	Set up time	D	0.240		0.390							
	Hold time	D	0.020		0.000							
	Min Pulse	GB	0.307		0.761							
F604NBP	D → QB	(HL)	0.288	0.439	0.680	0.003	0.004	0.006	D	1.0	QB	142
		(LH)	0.253	0.408	0.654	0.003	0.005	0.008	GB	1.0		
	GB → QB	(LH)	0.294	0.477	0.767	0.003	0.005	0.008				
		(LL)	0.313	0.494	0.778	0.003	0.004	0.006				
	Set up time	D	0.250		0.430							
	Hold time	D	0.000		0.000							
	Min Pulse	GB	0.351		0.861							

[MEMO]

Function	D-Latch (GB) (High Speed)						SSI Family					
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power												
x1	F6R8	6										
x2												
x4												

Logic Diagram for "Normal"



Truth Table for "Normal"

D	GB	Q	QB
1	0	1	0
0	0	0	1
X	1	Latch	

X:Irrelevant

Logic Diagram for "Q output"

Truth Table for "Q output"

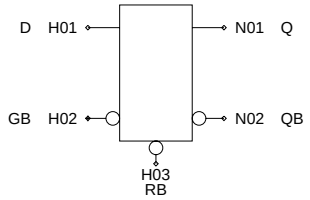
Logic Diagram for "QB output"

Truth Table for "QB output"

Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_1						
	IN	→	OUT	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F6R8	D	→	Q (HH)	0.195	0.287	0.440	0.006	0.010	0.017	D	1.0	Q	71
			(LL)	0.214	0.345	0.555	0.005	0.008	0.013	GB	1.0	QB	72
	D	→	QB (HL)	0.297	0.446	0.697	0.005	0.008	0.013				
			(LH)	0.278	0.455	0.741	0.006	0.010	0.017				
	GB	→	Q (LH)	0.218	0.347	0.550	0.006	0.010	0.017				
			(LL)	0.249	0.410	0.666	0.005	0.008	0.013				
	GB	→	QB (LH)	0.313	0.520	0.849	0.006	0.010	0.017				
			(LL)	0.319	0.506	0.807	0.005	0.008	0.013				
	Set up time		D	0.300		0.500							
	Hold time		D	0.000		0.000							
	Min Pulse		GB	0.359		0.930							

Function	D-Latch (GB) with RB						SSI Family					
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	F605NL	5			F605NBL	5			L605	4		
x1	F605	7	F605NQ	5	F605NB	6						
x2	F605NP	8	F605NQP	6	F605NBP	7						
x4												

Logic Diagram for "Normal"

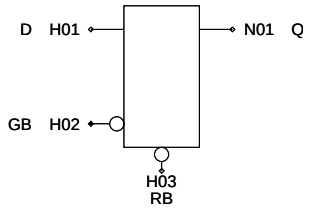


Truth Table for "Normal"

D	GB	RB	Q	QB
1	0	1	1	0
0	0	1	0	1
X	1	1	Latch	
X	X	0	0	1

X:Irrelevant

Logic Diagram for "Q output"

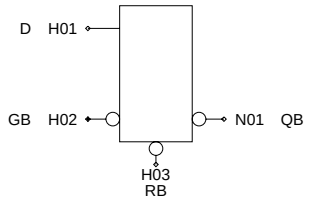


Truth Table for "Q output"

D	GB	RB	Q	QB
1	0	1	1	0
0	0	1	0	1
X	1	1	Latch	
X	X	0	0	1

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

D	GB	RB	Q	QB
1	0	1	1	0
0	0	1	0	1
X	1	1	Latch	
X	X	0	0	1

X:Irrelevant

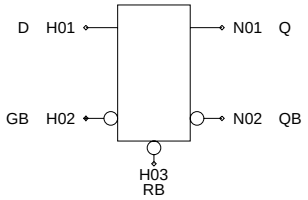
Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_1						
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F605NL	D → Q		(HH)	0.255	0.374	0.597	0.013	0.021	0.034	D	1.0	Q	35
			(LL)	0.204	0.336	0.544	0.010	0.016	0.026	GB	1.0	QB	36
	D → QB		(HL)	0.323	0.480	0.763	0.010	0.016	0.025	RB	1.0		
			(LH)	0.242	0.401	0.658	0.013	0.021	0.034				
	GB → Q		(LH)	0.243	0.386	0.627	0.013	0.021	0.034				
			(LL)	0.238	0.395	0.639	0.010	0.016	0.026				
	GB → QB		(LH)	0.275	0.460	0.753	0.013	0.021	0.034				
			(LL)	0.310	0.492	0.792	0.010	0.016	0.025				
	RB → Q		(HH)	0.231	0.364	0.610	0.013	0.021	0.034				
			(LL)	0.193	0.329	0.502	0.010	0.016	0.026				
	RB → QB		(HL)	0.299	0.470	0.777	0.010	0.016	0.025				
			(LH)	0.237	0.396	0.619	0.013	0.021	0.034				
	Set up time	D		0.370		0.630							
	Hold time	D		0.010		0.000							
	Release time	RB		0.320		0.600							
	Removal time	RB		0.000		0.000							
	Min Pulse	GB		0.349		0.873							
	Min Pulse	RB		0.480		1.043							
F605	D → Q		(HH)	0.403	0.634	1.006	0.006	0.010	0.017	D	1.0	Q	72
			(LL)	0.325	0.527	0.846	0.005	0.008	0.013	GB	1.0	QB	71
	D → QB		(HL)	0.341	0.529	0.827	0.005	0.008	0.013	RB	1.0		
			(LH)	0.232	0.378	0.606	0.006	0.010	0.017				
	GB → Q		(LH)	0.424	0.684	1.096	0.006	0.010	0.017				
			(LL)	0.364	0.591	0.948	0.005	0.008	0.013				
	GB → QB		(LH)	0.271	0.442	0.708	0.006	0.010	0.017				
			(LL)	0.362	0.579	0.917	0.005	0.008	0.013				
	RB → Q		(HH)	0.352	0.568	0.908	0.006	0.010	0.017				
			(LL)	0.260	0.488	0.776	0.005	0.008	0.013				
	RB → QB		(HL)	0.289	0.463	0.730	0.005	0.008	0.013				
			(LH)	0.167	0.265	0.417	0.006	0.010	0.017				
	Set up time	D		0.310		0.570							
	Hold time	D		0.010		0.000							
	Release time	RB		0.220		0.430							
	Removal time	RB		0.000		0.000							
	Min Pulse	GB		0.461		1.178							
	Min Pulse	RB		0.408		1.063							
F605NP	D → Q		(HH)	0.329	0.490	0.795	0.003	0.005	0.009	D	1.0	Q	139
			(LL)	0.270	0.446	0.734	0.003	0.004	0.007	GB	1.0	QB	143
	D → QB		(HL)	0.489	0.748	1.216	0.003	0.004	0.006	RB	1.0		
			(LH)	0.386	0.639	1.056	0.003	0.005	0.008				
	GB → Q		(LH)	0.317	0.503	0.828	0.003	0.005	0.009				
			(LL)	0.294	0.498	0.822	0.003	0.004	0.007				
	GB → QB		(LH)	0.410	0.691	1.143	0.003	0.005	0.008				
			(LL)	0.477	0.760	1.248	0.003	0.004	0.006				
	RB → Q		(HH)	0.304	0.479	0.810	0.003	0.005	0.009				
			(LL)	0.249	0.420	0.646	0.003	0.004	0.007				
	RB → QB		(HL)	0.465	0.737	1.231	0.003	0.004	0.006				
			(LH)	0.360	0.603	0.950	0.003	0.005	0.008				
	Set up time	D		0.510		0.950							
	Hold time	D		0.000		0.000							
	Release time	RB		0.450		0.910							
	Removal time	RB		0.000		0.000							
	Min Pulse	GB		0.516		1.327							
	Min Pulse	RB		0.685		1.525							

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L605	D → Q	(HH)	0.192	0.286	0.437	0.013	0.021	0.034	D	3.8	Q	35
		(LL)	0.147	0.235	0.367	0.010	0.016	0.025	GB	1.0		
	GB → Q	(LH)	0.251	0.405	0.658	0.013	0.021	0.034	RB	1.1		
		(LL)	0.233	0.366	0.569	0.010	0.016	0.025				
	RB → Q	(HH)	0.146	0.220	0.349	0.013	0.021	0.034				
		(LL)	0.142	0.222	0.331	0.010	0.016	0.025				
	Set up time	D	0.200		0.220							
	Hold time	D	0.080		0.010							
	Release time	RB	0.070		0.030							
	Removal time	RB	0.150		0.200							
	Min Pulse	GB	0.285		0.735							
	Min Pulse	RB	0.284		0.584							
F605NQ	D → Q	(HH)	0.276	0.408	0.654	0.007	0.011	0.017	D	1.0	Q	70
		(LL)	0.223	0.366	0.594	0.005	0.008	0.013	GB	1.0		
	GB → Q	(LH)	0.264	0.421	0.685	0.007	0.011	0.017	RB	1.0		
		(LL)	0.253	0.423	0.688	0.005	0.008	0.013				
	RB → Q	(HH)	0.251	0.397	0.668	0.007	0.011	0.017				
		(LL)	0.205	0.352	0.536	0.005	0.008	0.013				
	Set up time	D	0.400		0.660							
	Hold time	D	0.000		0.000							
	Release time	RB	0.340		0.630							
	Removal time	RB	0.000		0.000							
	Min Pulse	GB	0.302		0.766							
	Min Pulse	RB	0.450		0.947							
F605NQP	D → Q	(HH)	0.334	0.497	0.808	0.003	0.005	0.009	D	1.0	Q	138
		(LL)	0.272	0.449	0.740	0.003	0.004	0.007	GB	1.0		
	GB → Q	(LH)	0.321	0.510	0.840	0.003	0.005	0.009	RB	1.0		
		(LL)	0.296	0.501	0.826	0.003	0.004	0.007				
	RB → Q	(HH)	0.308	0.486	0.823	0.003	0.005	0.009				
		(LL)	0.246	0.422	0.651	0.003	0.004	0.007				
	Set up time	D	0.460		0.810							
	Hold time	D	0.000		0.000							
	Release time	RB	0.400		0.780							
	Removal time	RB	0.000		0.000							
	Min Pulse	GB	0.359		0.920							
	Min Pulse	RB	0.524		1.113							
F605NBL	D → QB	(HL)	0.300	0.462	0.720	0.010	0.016	0.026	D	1.0	QB	35
		(LH)	0.211	0.346	0.559	0.013	0.021	0.034	GB	1.0		
	GB → QB	(LH)	0.250	0.411	0.664	0.013	0.021	0.034	RB	1.0		
		(LL)	0.321	0.514	0.814	0.010	0.016	0.026				
	RB → QB	(HL)	0.249	0.396	0.623	0.010	0.016	0.026				
		(LH)	0.152	0.245	0.385	0.013	0.021	0.034				
	Set up time	D	0.260		0.450							
	Hold time	D	0.030		0.000							
	Release time	RB	0.160		0.290							
	Removal time	RB	0.050		0.000							
	Min Pulse	GB	0.357		0.894							
	Min Pulse	RB	0.307		0.777							
F605NB	D → QB	(HL)	0.332	0.517	0.806	0.005	0.008	0.013	D	1.0	QB	71
		(LH)	0.225	0.366	0.587	0.006	0.010	0.017	GB	1.0		
	GB → QB	(LH)	0.270	0.438	0.704	0.006	0.010	0.017	RB	1.0		
		(LL)	0.358	0.573	0.908	0.005	0.008	0.013				
	RB → QB	(HL)	0.283	0.455	0.716	0.005	0.008	0.013				
		(LH)	0.163	0.262	0.413	0.006	0.011	0.017				
	Set up time	D	0.280		0.500							
	Hold time	D	0.030		0.000							

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Release time	RB	0.190		0.360							
	Removal time	RB	0.020		0.000							
	Min Pulse	GB	0.396		0.991							
	Min Pulse	RB	0.340		0.869							
F605NBP	D → QB	(HL)	0.411	0.643	1.008	0.003	0.004	0.007	D	1.0	QB	142
		(LH)	0.259	0.418	0.671	0.003	0.005	0.008	GB	1.0		
	GB → QB	(LH)	0.302	0.490	0.786	0.003	0.005	0.008	RB	1.0		
		(LL)	0.437	0.700	1.109	0.003	0.004	0.007				
	RB → QB	(HL)	0.362	0.582	0.918	0.003	0.004	0.007				
		(LH)	0.192	0.306	0.485	0.003	0.005	0.008				
	Set up time	D	0.330		0.640							
	Hold time	D	0.000		0.000							
	Release time	RB	0.250		0.500							
	Removal time	RB	0.000		0.000							
	Min Pulse	GB	0.474		1.193							
	Min Pulse	RB	0.416		1.071							

Function	D-Latch (GB) with RB (High Speed)						SSI Family					
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power												
x1	F6R9	6										
x2												
x4												

Logic Diagram for "Normal"



Truth Table for "Normal"

D	GB	RB	Q	QB
1	0	1	1	0
0	0	1	0	1
X	1	1	Latch	
X	X	0	0	1

X:Irrelevant

Logic Diagram for "Q output"

Truth Table for "Q output"

Logic Diagram for "QB output"

Truth Table for "QB output"

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F6R9	D → Q	(HH)	0.274	0.403	0.644	0.007	0.011	0.018	D	1.0	Q	70
		(LL)	0.221	0.364	0.591	0.005	0.008	0.013	GB	1.0	QB	72
	D → QB	(HL)	0.375	0.566	0.906	0.005	0.008	0.013	RB	1.0		
		(LH)	0.288	0.478	0.782	0.006	0.010	0.017				
	GB → Q	(LH)	0.262	0.415	0.676	0.007	0.011	0.018				
		(LL)	0.252	0.420	0.684	0.005	0.008	0.013				
	GB → QB	(LH)	0.319	0.533	0.875	0.006	0.010	0.017				
		(LL)	0.364	0.578	0.937	0.005	0.008	0.013				
	RB → Q	(HH)	0.249	0.392	0.658	0.007	0.011	0.018				
		(LL)	0.207	0.352	0.534	0.005	0.008	0.013				
	RB → QB	(HL)	0.350	0.555	0.920	0.005	0.008	0.013				
		(LH)	0.276	0.465	0.723	0.006	0.010	0.017				
	Set up time	D	0.420		0.730							
	Hold time	D	0.000		0.000							
	Release time	RB	0.370		0.700							
	Removal time	RB	0.000		0.000							
	Min Pulse	GB	0.401		1.018							
	Min Pulse	RB	0.546		1.200							

[MEMO]

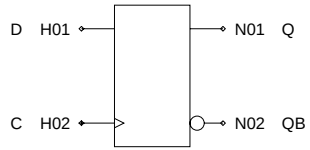
[MEMO]

2.10 D-F/F

[MEMO]

Function	D-F/F										SSI Family	
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power			L611	6								
x1	F611	8										
x2												
x4	F611NT	14	F611NQT	10	F611NBT	10						

Logic Diagram for "Normal"

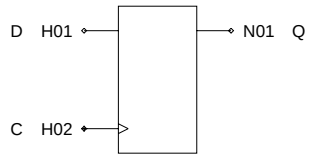


Truth Table for "Normal"

D	C	Q	QB
0	↗	0	1
1	↗	1	0
X	↘	Hold	

X:Irrelevant

Logic Diagram for "Q output"

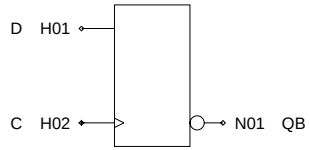


Truth Table for "Q output"

D	C	Q	QB
0	↗	0	1
1	↗	1	0
X	↘	Hold	

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

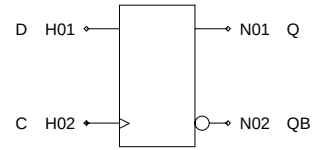
D	C	Q	QB
0	↗	0	1
1	↗	1	0
X	↘	Hold	

X:Irrelevant

Block type	Switching speed									Input		Output	
	Path		t LD0 (ns)			t 1							
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		Symbol	Fanin	Symbol	Fanout
F611	C → Q	(HH)	0.283	0.436	0.674	0.006	0.010	0.017		D	1.0	Q	71
		(HL)	0.326	0.503	0.783	0.005	0.008	0.013		C	1.0	QB	72
	C → QB	(HH)	0.381	0.597	0.941	0.006	0.010	0.017					
		(HL)	0.368	0.572	0.893	0.005	0.008	0.013					
	Set up time	D	0.210		0.360								
	Hold time	D	0.080		0.070								
	Min Pulse	C	0.431		1.040								
F611NT	C → Q	(HH)	0.337	0.529	0.827	0.002	0.003	0.004		D	1.3	Q	288
		(HL)	0.372	0.578	0.904	0.001	0.002	0.003		C	1.3	QB	289
	C → QB	(HH)	0.532	0.834	1.323	0.002	0.003	0.004					
		(HL)	0.556	0.879	1.391	0.001	0.002	0.003					
	Set up time	D	0.210		0.360								
	Hold time	D	0.080		0.050								
	Min Pulse	C	0.609		1.491								
L611	C → Q	(HH)	0.249	0.384	0.596	0.013	0.021	0.034		D	3.5	Q	35
		(HL)	0.257	0.399	0.612	0.010	0.016	0.026		C	1.0		
	Set up time	D	0.150		0.200								
	Hold time	D	0.120		0.230								
	Min Pulse	C	0.309		0.713								
F611NQT	C → Q	(HH)	0.337	0.530	0.831	0.002	0.003	0.004		D	1.3	Q	288
		(HL)	0.373	0.578	0.905	0.001	0.002	0.003		C	1.3		
	Set up time	D	0.210		0.360								
	Hold time	D	0.080		0.060								
	Min Pulse	C	0.423		1.005								
F611NBT	C → QB	(HH)	0.339	0.525	0.827	0.002	0.003	0.004		D	1.3	QB	282
		(HL)	0.358	0.588	0.960	0.001	0.002	0.003		C	1.3		
	Set up time	D	0.240		0.380								
	Hold time	D	0.060		0.000								
	Min Pulse	C	0.410		1.058								

Function	D-F/F											SSI Family	
Block type	Standard type						Low Gate type						
	Normal		Q output		QB output		Normal		Q output		QB output		
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	
Low Power	F641NL	7	F641NQL	7	F641NBL	7							
x1	F641	8	F641NQ	7	F641NB	7							
x2	F641NP	10	F641NQP	8	F641NBP	8							
x4													

Logic Diagram for "Normal"

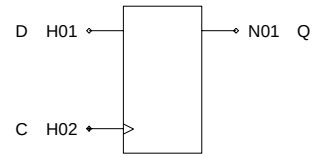


Truth Table for "Normal"

D	C	Q	QB
0	↗	0	1
1	↗	1	0
X	↘	Hold	

X:Irrelevant

Logic Diagram for "Q output"

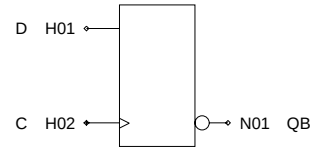


Truth Table for "Q output"

D	C	Q	QB
0	↗	0	1
1	↗	1	0
X	↘	Hold	

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

D	C	Q	QB
0	↗	0	1
1	↗	1	0
X	↘	Hold	

X:Irrelevant

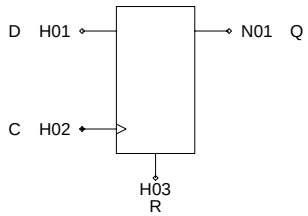
Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F641NL	C → Q	(HH)	0.265	0.408	0.630	0.013	0.021	0.034	D	1.0	Q	36
		(HL)	0.304	0.468	0.727	0.010	0.016	0.025	C	1.0	QB	36
	C → QB	(HH)	0.342	0.534	0.838	0.013	0.021	0.034				
		(HL)	0.326	0.506	0.788	0.010	0.016	0.025				
	Set up time	D	0.210		0.350							
	Hold time	D	0.080		0.070							
	Min Pulse	C	0.391		0.938							
F641	C → Q	(HH)	0.283	0.436	0.674	0.006	0.010	0.017	D	1.0	Q	71
		(HL)	0.326	0.503	0.783	0.005	0.008	0.013	C	1.0	QB	72
	C → QB	(HH)	0.381	0.597	0.941	0.006	0.010	0.017				
		(HL)	0.368	0.572	0.893	0.005	0.008	0.013				
	Set up time	D	0.210		0.360							
	Hold time	D	0.080		0.070							
	Min Pulse	C	0.431		1.040							
F641NP	C → Q	(HH)	0.316	0.489	0.761	0.003	0.005	0.008	D	1.0	Q	144
		(HL)	0.371	0.574	0.896	0.003	0.004	0.006	C	1.0	QB	145
	C → QB	(HH)	0.465	0.730	1.153	0.003	0.005	0.008				
		(HL)	0.449	0.701	1.104	0.003	0.004	0.006				
	Set up time	D	0.210		0.350							
	Hold time	D	0.080		0.070							
	Min Pulse	C	0.514		1.253							
F641NQL	C → Q	(HH)	0.264	0.406	0.629	0.013	0.021	0.034	D	1.0	Q	36
		(HL)	0.302	0.465	0.722	0.010	0.016	0.025	C	1.0		
	Set up time	D	0.210		0.350							
	Hold time	D	0.080		0.070							
	Min Pulse	C	0.352		0.821							
F641NQ	C → Q	(HH)	0.283	0.437	0.680	0.006	0.010	0.017	D	1.0	Q	72
		(HL)	0.326	0.504	0.784	0.005	0.008	0.013	C	1.0		
	Set up time	D	0.210		0.350							
	Hold time	D	0.080		0.070							
	Min Pulse	C	0.376		0.882							
F641NQP	C → Q	(HH)	0.314	0.486	0.757	0.003	0.005	0.008	D	1.0	Q	144
		(HL)	0.368	0.570	0.889	0.003	0.004	0.006	C	1.0		
	Set up time	D	0.210		0.350							
	Hold time	D	0.080		0.070							
	Min Pulse	C	0.418		0.989							
F641NBL	C → QB	(HH)	0.252	0.389	0.606	0.013	0.021	0.034	D	1.0	QB	35
		(HL)	0.261	0.407	0.626	0.010	0.016	0.026	C	1.0		
	Set up time	D	0.210		0.340							
	Hold time	D	0.090		0.070							
	Min Pulse	C	0.313		0.727							
F641NB	C → QB	(HH)	0.272	0.418	0.653	0.006	0.011	0.017	D	1.0	QB	71
		(HL)	0.285	0.455	0.716	0.005	0.008	0.013	C	1.0		
	Set up time	D	0.210		0.350							
	Hold time	D	0.090		0.060							
	Min Pulse	C	0.337		0.817							
F641NBP	C → QB	(HH)	0.304	0.470	0.740	0.003	0.005	0.009	D	1.0	QB	142
		(HL)	0.325	0.531	0.854	0.003	0.004	0.007	C	1.0		
	Set up time	D	0.210		0.350							
	Hold time	D	0.090		0.070							
	Min Pulse	C	0.376		0.956							

Function	D-F/F with R										SSI Family	
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power												
x1												
x2												
x4			F612NQT	11	F612NBT	12						

Logic Diagram for "Normal"

Truth Table for "Normal"

Logic Diagram for "Q output"

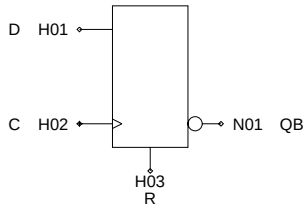


Truth Table for "Q output"

D	C	R	Q	QB
0	↗	0	0	1
1	↗	0	1	0
X	↘	0	Hold	
X	X	1	0	1

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

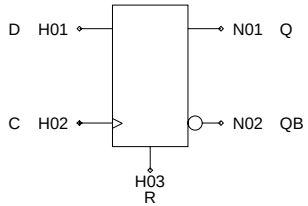
D	C	R	Q	QB
0	↗	0	0	1
1	↗	0	1	0
X	↘	0	Hold	
X	X	1	0	1

X:Irrelevant

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F612NQT	C → Q	(HH)	0.361	0.577	0.920	0.002	0.003	0.004	D	1.3	Q	287
		(HL)	0.376	0.584	0.913	0.001	0.002	0.003	C	1.3		
	R → Q	(HL)	0.311	0.506	0.787	0.001	0.002	0.003	R	2.4		
	Set up time	D	0.240		0.600							
	Hold time	D	0.090		0.080							
	Release time	R	0.110		0.360							
	Removal time	R	0.100		0.070							
	Min Pulse	C	0.427		1.021							
	Min Pulse	R	0.487		1.151							
F612NBT	C → QB	(HH)	0.342	0.530	0.836	0.002	0.003	0.004	D	1.3	QB	279
		(HL)	0.400	0.672	1.111	0.001	0.002	0.004	C	1.3		
	R → QB	(HH)	0.268	0.492	0.784	0.002	0.003	0.004	R	3.7		
	Set up time	D	0.250		0.480							
	Hold time	D	0.070		0.020							
	Release time	R	0.070		0.140							
	Removal time	R	0.130		0.170							
	Min Pulse	C	0.451		1.218							
	Min Pulse	R	0.562		1.203							

Function	D-F/F with R											SSI Family	
Block type	Standard type						Low Gate type						
	Normal		Q output		QB output		Normal		Q output		QB output		
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	
Low Power	F642NL	8	F642NQL	8	F642NBL	8							
x1	F642	9	F642NQ	8	F642NB	8							
x2	F642NP	11	F642NQP	9	F642NBP	9							
x4													

Logic Diagram for "Normal"

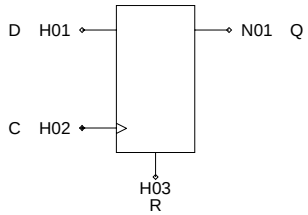


Truth Table for "Normal"

D	C	R	Q	QB
0	↗	0	0	1
1	↗	0	1	0
X	↘	0	Hold	
X	X	1	0	1

X:Irrelevant

Logic Diagram for "Q output"

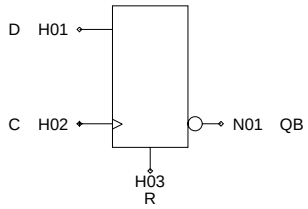


Truth Table for "Q output"

D	C	R	Q	QB
0	↗	0	0	1
1	↗	0	1	0
X	↘	0	Hold	
X	X	1	0	1

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

D	C	R	Q	QB
0	↗	0	0	1
1	↗	0	1	0
X	↘	0	Hold	
X	X	1	0	1

X:Irrelevant

Block type	Switching speed									Input		Output	
	Path		t LD0 (ns)			t 1							
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		Symbol	Fanin	Symbol	Fanout
F642NL	C → Q	(HH)	0.282	0.436	0.682	0.013	0.021	0.034		D	1.0	Q	36
		(HL)	0.311	0.477	0.741	0.010	0.016	0.025		C	1.0	QB	35
	C → QB	(HH)	0.355	0.555	0.874	0.013	0.021	0.034		R	2.6		
		(HL)	0.414	0.654	1.035	0.010	0.016	0.026					
	R → Q	(HL)	0.257	0.389	0.596	0.010	0.016	0.025					
	R → QB	(HH)	0.128	0.246	0.352	0.013	0.021	0.034					
	Set up time	D	0.230		0.590								
	Hold time	D	0.090		0.080								
	Release time	R	0.090		0.340								
	Removal time	R	0.110		0.100								
	Min Pulse	C	0.471		1.140								
	Min Pulse	R	0.392		0.935								
F642	C → Q	(HH)	0.294	0.455	0.713	0.006	0.010	0.017		D	1.0	Q	72
		(HL)	0.328	0.506	0.787	0.005	0.008	0.013		C	1.0	QB	71
	C → QB	(HH)	0.389	0.611	0.963	0.006	0.010	0.017		R	2.4		
		(HL)	0.462	0.729	1.160	0.005	0.008	0.013					
	R → Q	(HL)	0.285	0.449	0.696	0.005	0.008	0.013					
	R → QB	(HH)	0.146	0.259	0.374	0.006	0.011	0.017					
	Set up time	D	0.240		0.620								
	Hold time	D	0.090		0.080								
	Release time	R	0.100		0.390								
	Removal time	R	0.100		0.080								
	Min Pulse	C	0.517		1.264								
	Min Pulse	R	0.450		1.057								
F642NP	C → Q	(HH)	0.332	0.516	0.811	0.003	0.005	0.008		D	1.0	Q	144
		(HL)	0.374	0.579	0.903	0.003	0.004	0.006		C	1.0	QB	143
	C → QB	(HH)	0.472	0.743	1.176	0.003	0.005	0.008		R	2.4		
		(HL)	0.579	0.919	1.463	0.003	0.004	0.007					
	R → Q	(HL)	0.333	0.574	0.897	0.003	0.004	0.006					
	R → QB	(HH)	0.180	0.300	0.440	0.003	0.005	0.009					
	Set up time	D	0.240		0.630								
	Hold time	D	0.090		0.080								
	Release time	R	0.100		0.390								
	Removal time	R	0.100		0.080								
	Min Pulse	C	0.635		1.568								
	Min Pulse	R	0.572		1.305								
F642NQL	C → Q	(HH)	0.282	0.436	0.683	0.013	0.021	0.034		D	1.0	Q	36
		(HL)	0.310	0.478	0.741	0.010	0.016	0.025		C	1.0		
	R → Q	(HL)	0.239	0.384	0.590	0.010	0.016	0.025		R	2.6		
	Set up time	D	0.230		0.590								
	Hold time	D	0.090		0.080								
	Release time	R	0.090		0.340								
	Removal time	R	0.110		0.100								
	Min Pulse	C	0.360		0.846								
	Min Pulse	R	0.386		0.928								
F642NQ	C → Q	(HH)	0.294	0.456	0.715	0.006	0.010	0.017		D	1.0	Q	71
		(HL)	0.327	0.505	0.786	0.005	0.008	0.013		C	1.0		
	R → Q	(HL)	0.259	0.426	0.657	0.005	0.008	0.013		R	2.4		
	Set up time	D	0.240		0.620								
	Hold time	D	0.090		0.080								
	Release time	R	0.100		0.390								
	Removal time	R	0.100		0.080								
	Min Pulse	C	0.376		0.888								
	Min Pulse	R	0.415		1.000								

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F642NQP	C → Q	(HH)	0.328	0.511	0.804	0.003	0.005	0.008	D	1.0	Q	143
		(HL)	0.369	0.572	0.891	0.003	0.004	0.006	C	1.0		
	R → Q	(HL)	0.301	0.494	0.764	0.003	0.004	0.006	R	2.4		
	Set up time	D	0.240		0.640							
	Hold time	D	0.090		0.080							
	Release time	R	0.100		0.390							
	Removal time	R	0.100		0.080							
	Min Pulse	C	0.418		0.993							
	Min Pulse	R	0.456		1.107							
F642NBL	C → QB	(HH)	0.260	0.400	0.622	0.013	0.021	0.034	D	1.0	QB	35
		(HL)	0.293	0.464	0.731	0.011	0.017	0.026	C	1.0		
	R → QB	(HH)	0.195	0.318	0.487	0.013	0.021	0.034	R	2.6		
	Set up time	D	0.240		0.540							
	Hold time	D	0.090		0.080							
	Release time	R	0.100		0.290							
	Removal time	R	0.100		0.090							
	Min Pulse	C	0.347		0.833							
	Min Pulse	R	0.361		0.845							
F642NB	C → QB	(HH)	0.269	0.414	0.646	0.006	0.011	0.017	D	1.0	QB	70
		(HL)	0.308	0.503	0.812	0.006	0.009	0.014	C	1.0		
	R → QB	(HH)	0.211	0.347	0.535	0.006	0.011	0.017	R	2.5		
	Set up time	D	0.240		0.560							
	Hold time	D	0.090		0.080							
	Release time	R	0.120		0.310							
	Removal time	R	0.090		0.050							
	Min Pulse	C	0.361		0.914							
	Min Pulse	R	0.403		0.915							
F642NBP	C → QB	(HH)	0.304	0.470	0.741	0.003	0.005	0.009	D	1.0	QB	141
		(HL)	0.368	0.613	1.018	0.003	0.005	0.007	C	1.0		
	R → QB	(HH)	0.249	0.402	0.629	0.003	0.005	0.009	R	2.5		
	Set up time	D	0.250		0.580							
	Hold time	D	0.100		0.090							
	Release time	R	0.140		0.330							
	Removal time	R	0.070		0.030							
	Min Pulse	C	0.420		1.118							
	Min Pulse	R	0.470		1.035							

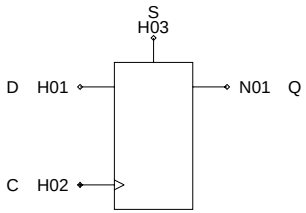
[MEMO]

Function	D-F/F with S										SSI Family	
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power												
x1												
x2												
x4			F613NQT	12	F613NBT	11						

Logic Diagram for "Normal"

Truth Table for "Normal"

Logic Diagram for "Q output"

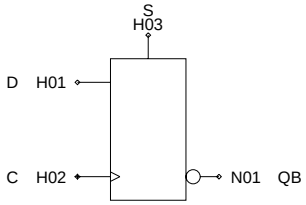


Truth Table for "Q output"

D	C	S	Q	QB
0	↗	0	0	1
1	↗	0	1	0
X	↘	0	Hold	
X	X	1	1	0

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

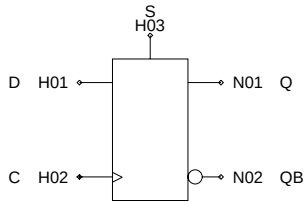
D	C	S	Q	QB
0	↗	0	0	1
1	↗	0	1	0
X	↘	0	Hold	
X	X	1	1	0

X:Irrelevant

Block type	Switching speed									Input		Output	
	Path		t LD0 (ns)			t 1							
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		Symbol	Fanin	Symbol	Fanout
F613NQT	C → Q	(HH)	0.348	0.550	0.865	0.002	0.003	0.004		D	1.3	Q	287
		(HL)	0.487	0.768	1.211	0.001	0.002	0.003		C	1.3		
	S → Q	(HH)	0.177	0.251	0.362	0.002	0.003	0.004		S	3.9		
	Set up time	D	0.210		0.360								
	Hold time	D	0.080		0.060								
	Release time	S	0.000		0.000								
	Removal time	S	0.370		0.630								
	Min Pulse	C	0.537		1.312								
	Min Pulse	S	0.310		0.707								
F613NBT	C → QB	(HH)	0.339	0.526	0.828	0.002	0.003	0.004		D	1.3	QB	283
		(HL)	0.361	0.594	0.966	0.001	0.002	0.003		C	1.3		
	S → QB	(HL)	0.409	0.690	1.155	0.001	0.002	0.004		S	2.7		
	Set up time	D	0.240		0.380								
	Hold time	D	0.060		0.000								
	Release time	S	0.000		0.000								
	Removal time	S	0.390		0.680								
	Min Pulse	C	0.412		1.068								
	Min Pulse	S	0.552		1.453								

Function	D-F/F with S						SSI Family					
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	F643NL	8	F643NQL	7	F643NBL	7						
x1	F643	9	F643NQ	8	F643NB	8						
x2	F643NP	11	F643NQP	9	F643NBP	9						
x4												

Logic Diagram for "Normal"

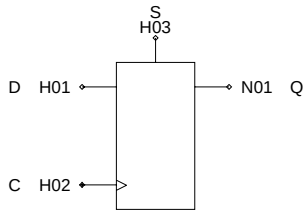


Truth Table for "Normal"

D	C	S	Q	QB
0	↗	0	0	1
1	↗	0	1	0
X	↘	0	Hold	
X	X	1	1	0

X:Irrelevant

Logic Diagram for "Q output"

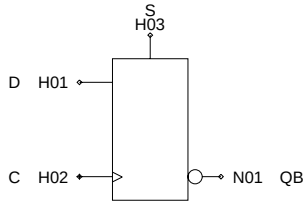


Truth Table for "Q output"

D	C	S	Q	QB
0	↗	0	0	1
1	↗	0	1	0
X	↘	0	Hold	
X	X	1	1	0

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

D	C	S	Q	QB
0	↗	0	0	1
1	↗	0	1	0
X	↘	0	Hold	
X	X	1	1	0

X:Irrelevant

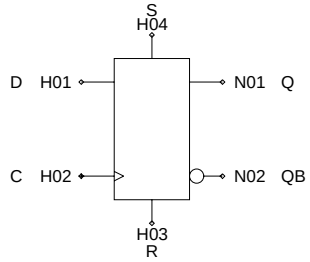
Block type	Switching speed									Input		Output	
	Path		t_{LD0} (ns)			t_1							
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		Symbol	Fanin	Symbol	Fanout
F643NL	C → Q	(HH)	0.273	0.422	0.655	0.013	0.021	0.034		D	1.0	Q	36
		(HL)	0.378	0.591	0.928	0.010	0.016	0.026		C	1.0	QB	36
	C → QB	(HH)	0.411	0.650	1.032	0.013	0.021	0.034		S	2.5		
		(HL)	0.338	0.525	0.821	0.010	0.016	0.025					
	S → Q	(HH)	0.133	0.194	0.280	0.013	0.021	0.034					
	S → QB	(HL)	0.197	0.378	0.574	0.010	0.016	0.026					
	Set up time	D	0.210		0.360								
	Hold time	D	0.080		0.070								
	Release time	S	0.000		0.000								
	Removal time	S	0.390		0.650								
	Min Pulse	C	0.462		1.134								
	Min Pulse	S	0.325		0.833								
F643	C → Q	(HH)	0.286	0.442	0.686	0.006	0.010	0.017		D	1.0	Q	71
		(HL)	0.410	0.643	1.008	0.005	0.008	0.013		C	1.0	QB	72
	C → QB	(HH)	0.467	0.740	1.174	0.006	0.010	0.017		S	2.6		
		(HL)	0.374	0.582	0.914	0.005	0.008	0.013					
	S → Q	(HH)	0.150	0.215	0.307	0.006	0.010	0.017					
	S → QB	(HL)	0.237	0.432	0.656	0.005	0.008	0.013					
	Set up time	D	0.210		0.370								
	Hold time	D	0.080		0.060								
	Release time	S	0.000		0.000								
	Removal time	S	0.390		0.650								
	Min Pulse	C	0.517		1.276								
	Min Pulse	S	0.392		0.958								
F643NP	C → Q	(HH)	0.321	0.497	0.774	0.003	0.005	0.008		D	1.0	Q	144
		(HL)	0.491	0.774	1.217	0.003	0.004	0.007		C	1.0	QB	144
	C → QB	(HH)	0.597	0.949	1.508	0.003	0.005	0.008		S	2.6		
		(HL)	0.457	0.713	1.124	0.003	0.004	0.006					
	S → Q	(HH)	0.187	0.264	0.382	0.003	0.005	0.008					
	S → QB	(HL)	0.321	0.554	0.851	0.003	0.004	0.007					
	Set up time	D	0.210		0.370								
	Hold time	D	0.080		0.060								
	Release time	S	0.000		0.000								
	Removal time	S	0.390		0.650								
	Min Pulse	C	0.646		1.609								
	Min Pulse	S	0.524		1.223								
F643NQL	C → Q	(HH)	0.276	0.425	0.662	0.013	0.021	0.034		D	1.0	Q	35
		(HL)	0.384	0.599	0.940	0.010	0.016	0.026		C	1.0		
	S → Q	(HH)	0.135	0.199	0.286	0.013	0.021	0.034		S	2.5		
	Set up time	D	0.200		0.360								
	Hold time	D	0.080		0.070								
	Release time	S	0.000		0.000								
	Removal time	S	0.390		0.650								
	Min Pulse	C	0.434		1.042								
	Min Pulse	S	0.213		0.550								
F643NQ	C → Q	(HH)	0.286	0.442	0.688	0.006	0.010	0.017		D	1.0	Q	71
		(HL)	0.410	0.645	1.010	0.005	0.008	0.013		C	1.0		
	S → Q	(HH)	0.150	0.215	0.308	0.006	0.010	0.017		S	2.6		
	Set up time	D	0.210		0.370								
	Hold time	D	0.080		0.060								
	Release time	S	0.000		0.000								
	Removal time	S	0.390		0.650								
	Min Pulse	C	0.461		1.111								
	Min Pulse	S	0.251		0.606								

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F643NQP	C → Q	(HH)	0.320	0.495	0.774	0.003	0.005	0.008	D	1.0	Q	143
		(HL)	0.488	0.771	1.211	0.003	0.004	0.007	C	1.0		
	S → Q	(HH)	0.185	0.262	0.380	0.003	0.005	0.008	S	2.6		
	Set up time	D	0.210		0.370							
	Hold time	D	0.080		0.060							
	Release time	S	0.000		0.000							
	Removal time	S	0.390		0.650							
	Min Pulse	C	0.538		1.312							
	Min Pulse	S	0.327		0.738							
F643NBL	C → QB	(HH)	0.252	0.388	0.604	0.013	0.021	0.034	D	1.0	QB	35
		(HL)	0.263	0.407	0.626	0.010	0.016	0.026	C	1.0		
	S → QB	(HL)	0.251	0.518	0.830	0.010	0.016	0.026	S	2.5		
	Set up time	D	0.210		0.350							
	Hold time	D	0.080		0.070							
	Release time	S	0.000		0.000							
	Removal time	S	0.370		0.630							
	Min Pulse	C	0.316		0.727							
	Min Pulse	S	0.431		1.129							
F643NB	C → QB	(HH)	0.266	0.410	0.639	0.006	0.011	0.017	D	1.0	QB	71
		(HL)	0.281	0.448	0.703	0.005	0.008	0.013	C	1.0		
	S → QB	(HL)	0.270	0.565	0.909	0.005	0.008	0.013	S	2.6		
	Set up time	D	0.210		0.360							
	Hold time	D	0.080		0.060							
	Release time	S	0.000		0.000							
	Removal time	S	0.350		0.610							
	Min Pulse	C	0.334		0.805							
	Min Pulse	S	0.462		1.208							
F643NBP	C → QB	(HH)	0.304	0.469	0.739	0.003	0.005	0.009	D	1.0	QB	142
		(HL)	0.326	0.533	0.859	0.003	0.004	0.007	C	1.0		
	S → QB	(HL)	0.320	0.651	1.062	0.003	0.004	0.007	S	2.6		
	Set up time	D	0.210		0.360							
	Hold time	D	0.080		0.060							
	Release time	S	0.000		0.000							
	Removal time	S	0.320		0.580							
	Min Pulse	C	0.377		0.958							
	Min Pulse	S	0.512		1.358							

[MEMO]

Function	D-F/F with R,S										SSI Family	
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power			L614	8								
x1	F614	10										
x2												
x4			F614NQT	13	F614NBT	13						

Logic Diagram for "Normal"

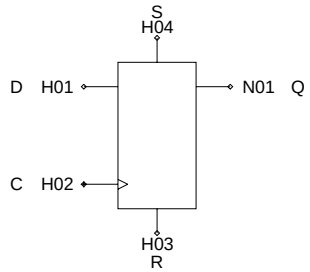


Truth Table for "Normal"

D	C	R	S	Q	QB	
0	↗	0	0	0	1	
1	↗	0	0	1	0	
X	↘	0	0	Hold		
X	X	0	1	1	0	
X	X	1	0	0	1	
X	X	1	1	1	1	← Prohibition

X:Irrelevant

Logic Diagram for "Q output"

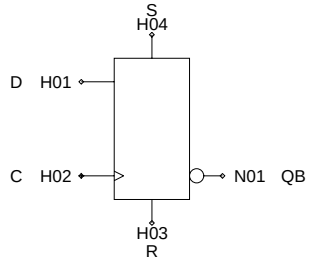


Truth Table for "Q output"

D	C	R	S	Q	QB	
0	↗	0	0	0	1	
1	↗	0	0	1	0	
X	↘	0	0	Hold		
X	X	0	1	1	0	
X	X	1	0	0	1	
X	X	1	1	1	1	← Prohibition

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

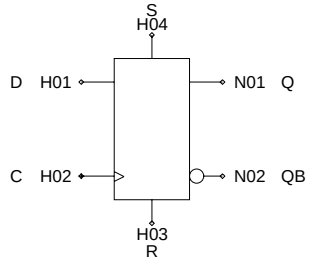
D	C	R	S	Q	QB	
0	↗	0	0	0	1	
1	↗	0	0	1	0	
X	↘	0	0	Hold		
X	X	0	1	1	0	
X	X	1	0	0	1	
X	X	1	1	1	1	← Prohibition

X:Irrelevant

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F614	C → Q	(HH)	0.306	0.477	0.750	0.006	0.010	0.017	D	1.0	Q	72
		(HL)	0.416	0.654	1.027	0.005	0.008	0.013	C	1.0	QB	71
	C → QB	(HH)	0.479	0.765	1.216	0.006	0.010	0.017	R	2.5		
		(HL)	0.479	0.760	1.208	0.005	0.008	0.013	S	2.6		
	R → Q	(HL)	0.364	0.590	0.923	0.005	0.008	0.013				
	R → QB	(HH)	0.148	0.263	0.381	0.006	0.010	0.017				
	S → Q	(HH)	0.151	0.218	0.310	0.006	0.010	0.017				
	S → QB	(HL)	0.324	0.646	1.005	0.005	0.009	0.014				
	Set up time	D	0.230		0.590							
	Hold time	D	0.080		0.070							
	Release time	R	0.100		0.350							
	Release time	S	0.000		0.000							
	Removal time	R	0.110		0.100							
	Removal time	S	0.400		0.680							
	Min Pulse	C	0.534		1.314							
	Min Pulse	R	0.549		1.291							
	Min Pulse	S	0.526		1.301							
L614	C → Q	(HH)	0.252	0.388	0.603	0.013	0.021	0.034	D	3.6	Q	35
		(HL)	0.289	0.460	0.724	0.011	0.017	0.026	C	1.0		
	R → Q	(HL)	0.339	0.696	1.128	0.010	0.017	0.026	R	2.4		
	S → Q	(HH)	0.189	0.309	0.472	0.013	0.021	0.034	S	2.6		
	Set up time	D	0.190		0.340							
	Hold time	D	0.150		0.260							
	Release time	R	0.000		0.000							
	Release time	S	0.090		0.260							
	Removal time	R	0.400		0.670							
	Removal time	S	0.110		0.110							
	Min Pulse	C	0.342		0.826							
	Min Pulse	R	0.538		1.414							
	Min Pulse	S	0.350		0.822							
F614NQT	C → Q	(HH)	0.375	0.605	0.968	0.002	0.003	0.004	D	1.3	Q	286
		(HL)	0.492	0.776	1.222	0.001	0.002	0.003	C	1.3		
	R → Q	(HL)	0.425	0.686	1.078	0.001	0.002	0.003	R	2.5		
	S → Q	(HH)	0.178	0.253	0.363	0.002	0.003	0.004	S	3.8		
	Set up time	D	0.230		0.560							
	Hold time	D	0.090		0.080							
	Release time	R	0.100		0.320							
	Release time	S	0.000		0.000							
	Removal time	R	0.110		0.090							
	Removal time	S	0.390		0.650							
	Min Pulse	C	0.543		1.325							
	Min Pulse	R	0.596		1.433							
	Min Pulse	S	0.313		0.709							
F614NBT	C → QB	(HH)	0.344	0.533	0.838	0.002	0.003	0.004	D	1.3	QB	279
		(HL)	0.406	0.681	1.124	0.001	0.002	0.004	C	1.3		
	R → QB	(HH)	0.269	0.498	0.794	0.002	0.003	0.004	R	3.7		
	S → QB	(HL)	0.528	1.034	1.695	0.001	0.002	0.004	S	2.7		
	Set up time	D	0.250		0.460							
	Hold time	D	0.070		0.030							
	Release time	R	0.060		0.110							
	Release time	S	0.000		0.000							
	Removal time	R	0.140		0.180							
	Removal time	S	0.400		0.700							
	Min Pulse	C	0.457		1.231							
	Min Pulse	R	0.569		1.216							
	Min Pulse	S	0.765		1.982							

Function	D-F/F with R,S							SSI Family				
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	F644NL	9	F644NQL	9	F644NBL	9						
x1	F644	10	F644NQ	9	F644NB	9						
x2	F644NP	12	F644NQP	10	F644NBP	10						
x4												

Logic Diagram for "Normal"

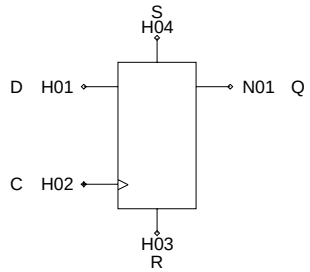


Truth Table for "Normal"

D	C	R	S	Q	QB	
0	↗	0	0	0	1	
1	↗	0	0	1	0	
X	↘	0	0	Hold		
X	X	0	1	1	0	
X	X	1	0	0	1	
X	X	1	1	1	1	← Prohibition

X:Irrelevant

Logic Diagram for "Q output"

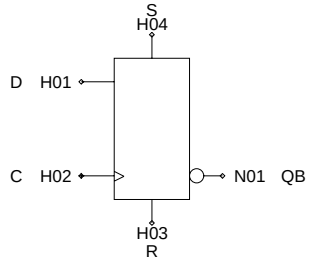


Truth Table for "Q output"

D	C	R	S	Q	QB	
0	↗	0	0	0	1	
1	↗	0	0	1	0	
X	↘	0	0	Hold		
X	X	0	1	1	0	
X	X	1	0	0	1	
X	X	1	1	1	1	← Prohibition

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

D	C	R	S	Q	QB	
0	↗	0	0	0	1	
1	↗	0	0	1	0	
X	↘	0	0	Hold		
X	X	0	1	1	0	
X	X	1	0	0	1	
X	X	1	1	1	1	← Prohibition

X:Irrelevant

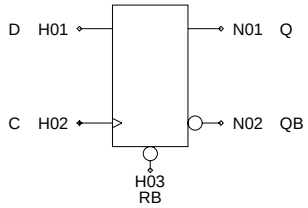
Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F644NL	C → Q	(HH)	0.286	0.445	0.697	0.013	0.021	0.034	D	1.0	Q	36
		(HL)	0.378	0.592	0.927	0.010	0.016	0.026	C	1.0	QB	35
	C → QB	(HH)	0.413	0.656	1.043	0.013	0.021	0.034	R	2.4		
		(HL)	0.413	0.654	1.036	0.010	0.016	0.026	S	2.8		
	R → Q	(HL)	0.322	0.499	0.774	0.010	0.016	0.026				
	R → QB	(HH)	0.127	0.240	0.345	0.013	0.021	0.034				
	S → Q	(HH)	0.133	0.195	0.281	0.013	0.021	0.034				
	S → QB	(HL)	0.260	0.553	0.861	0.010	0.016	0.026				
	Set up time	D	0.230		0.580							
	Hold time	D	0.080		0.070							
	Release time	R	0.090		0.330							
	Release time	S	0.000		0.000							
	Removal time	R	0.110		0.100							
	Removal time	S	0.410		0.680							
	Min Pulse	C	0.469		1.142							
	Min Pulse	R	0.464		1.112							
	Min Pulse	S	0.437		1.110							
F644	C → Q	(HH)	0.306	0.477	0.750	0.006	0.010	0.017	D	1.0	Q	72
		(HL)	0.416	0.654	1.027	0.005	0.008	0.013	C	1.0	QB	71
	C → QB	(HH)	0.479	0.765	1.216	0.006	0.010	0.017	R	2.5		
		(HL)	0.479	0.760	1.208	0.005	0.008	0.013	S	2.6		
	R → Q	(HL)	0.364	0.590	0.923	0.005	0.008	0.013				
	R → QB	(HH)	0.148	0.263	0.381	0.006	0.010	0.017				
	S → Q	(HH)	0.151	0.218	0.310	0.006	0.010	0.017				
	S → QB	(HL)	0.324	0.646	1.005	0.005	0.009	0.014				
	Set up time	D	0.230		0.590							
	Hold time	D	0.080		0.070							
	Release time	R	0.100		0.350							
	Release time	S	0.000		0.000							
	Removal time	R	0.110		0.100							
	Removal time	S	0.400		0.680							
	Min Pulse	C	0.534		1.314							
	Min Pulse	R	0.549		1.291							
	Min Pulse	S	0.526		1.301							
F644NP	C → Q	(HH)	0.342	0.534	0.843	0.003	0.005	0.008	D	1.0	Q	143
		(HL)	0.490	0.773	1.214	0.003	0.004	0.007	C	1.0	QB	143
	C → QB	(HH)	0.598	0.958	1.524	0.003	0.005	0.008	R	2.5		
		(HL)	0.597	0.951	1.515	0.003	0.004	0.007	S	2.6		
	R → Q	(HL)	0.443	0.766	1.208	0.003	0.004	0.007				
	R → QB	(HH)	0.184	0.308	0.451	0.003	0.005	0.008				
	S → Q	(HH)	0.185	0.262	0.378	0.003	0.005	0.008				
	S → QB	(HL)	0.438	0.817	1.276	0.003	0.004	0.007				
	Set up time	D	0.230		0.590							
	Hold time	D	0.080		0.080							
	Release time	R	0.100		0.350							
	Release time	S	0.000		0.000							
	Removal time	R	0.110		0.100							
	Removal time	S	0.400		0.680							
	Min Pulse	C	0.651		1.627							
	Min Pulse	R	0.704		1.622							
	Min Pulse	S	0.683		1.639							
F644NQL	C → Q	(HH)	0.286	0.445	0.698	0.013	0.021	0.034	D	1.0	Q	36
		(HL)	0.378	0.593	0.925	0.010	0.016	0.026	C	1.0		
	R → Q	(HL)	0.305	0.491	0.765	0.010	0.016	0.026	R	2.4		
	S → Q	(HH)	0.133	0.195	0.282	0.013	0.021	0.034	S	2.8		
	Set up time	D	0.230		0.580							

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Hold time	D	0.080		0.070							
	Release time	R	0.090		0.330							
	Release time	S	0.000		0.000							
	Removal time	R	0.110		0.110							
	Removal time	S	0.410		0.680							
	Min Pulse	C	0.429		1.028							
	Min Pulse	R	0.456		1.099							
	Min Pulse	S	0.210		0.540							
F644NQ	C → Q	(HH)	0.308	0.481	0.756	0.006	0.010	0.017	D	1.0	Q	72
		(HL)	0.417	0.657	1.032	0.005	0.008	0.013	C	1.0		
	R → Q	(HL)	0.347	0.559	0.873	0.005	0.008	0.013	R	2.5		
	S → Q	(HH)	0.153	0.220	0.316	0.006	0.010	0.017	S	2.6		
	Set up time	D	0.230		0.590							
	Hold time	D	0.080		0.070							
	Release time	R	0.100		0.350							
	Release time	S	0.000		0.000							
	Removal time	R	0.110		0.100							
	Removal time	S	0.400		0.680							
	Min Pulse	C	0.467		1.131							
	Min Pulse	R	0.498		1.209							
	Min Pulse	S	0.253		0.615							
F644NQP	C → Q	(HH)	0.342	0.535	0.847	0.003	0.005	0.008	D	1.0	Q	142
		(HL)	0.491	0.777	1.222	0.003	0.004	0.007	C	1.0		
	R → Q	(HL)	0.421	0.679	1.065	0.003	0.004	0.007	R	2.5		
	S → Q	(HH)	0.185	0.263	0.380	0.003	0.005	0.008	S	2.6		
	Set up time	D	0.230		0.600							
	Hold time	D	0.080		0.080							
	Release time	R	0.100		0.350							
	Release time	S	0.000		0.000							
	Removal time	R	0.110		0.100							
	Removal time	S	0.400		0.680							
	Min Pulse	C	0.540		1.319							
	Min Pulse	R	0.569		1.397							
	Min Pulse	S	0.329		0.739							
F644NBL	C → QB	(HH)	0.253	0.390	0.605	0.013	0.021	0.034	D	1.0	QB	35
		(HL)	0.289	0.459	0.723	0.011	0.017	0.026	C	1.0		
	R → QB	(HH)	0.192	0.313	0.478	0.013	0.021	0.034	R	2.4		
	S → QB	(HL)	0.353	0.718	1.161	0.010	0.017	0.026	S	2.7		
	Set up time	D	0.240		0.540							
	Hold time	D	0.090		0.070							
	Release time	R	0.100		0.290							
	Release time	S	0.000		0.000							
	Removal time	R	0.110		0.090							
	Removal time	S	0.380		0.650							
	Min Pulse	C	0.343		0.826							
	Min Pulse	R	0.356		0.833							
	Min Pulse	S	0.557		1.455							
F644NB	C → QB	(HH)	0.271	0.418	0.653	0.006	0.011	0.017	D	1.0	QB	71
		(HL)	0.317	0.518	0.838	0.006	0.009	0.014	C	1.0		
	R → QB	(HH)	0.215	0.344	0.531	0.006	0.011	0.017	R	2.5		
	S → QB	(HL)	0.394	0.790	1.286	0.005	0.009	0.014	S	2.6		
	Set up time	D	0.240		0.530							
	Hold time	D	0.090		0.080							
	Release time	R	0.110		0.290							
	Release time	S	0.000		0.000							
	Removal time	R	0.100		0.070							

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Removal time	S	0.360		0.630							
	Min Pulse	C	0.369		0.939							
	Min Pulse	R	0.400		0.908							
	Min Pulse	S	0.594		1.577							
F644NBP	C → QB	(HH)	0.306	0.474	0.747	0.003	0.005	0.009	D	1.0	QB	142
		(HL)	0.379	0.628	1.046	0.003	0.005	0.007	C	1.0		
	R → QB	(HH)	0.253	0.402	0.628	0.003	0.005	0.009	R	2.5		
	S → QB	(HL)	0.472	0.920	1.508	0.003	0.005	0.007	S	2.6		
	Set up time	D	0.250		0.550							
	Hold time	D	0.100		0.090							
	Release time	R	0.120		0.300							
	Release time	S	0.000		0.000							
	Removal time	R	0.090		0.050							
	Removal time	S	0.330		0.600							
	Min Pulse	C	0.430		1.145							
	Min Pulse	R	0.471		1.034							
	Min Pulse	S	0.671		1.797							

Function	D-F/F with RB							SSI Family				
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	F615NL	8	F615NQL	8	F615NBL	8						
x1	F615	9	F615NQ	8	F615NB	8						
x2	F615NP	11	F615NQP	9	F615NBP	9						
x4	F615NT	16	F615NQT	12	F615NBT	11						

Logic Diagram for "Normal"

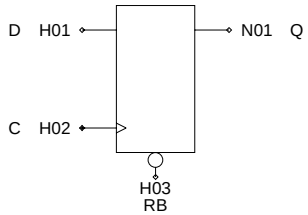


Truth Table for "Normal"

D	C	RB	Q	QB
0	↗	1	0	1
1	↗	1	1	0
X	↘	1	Hold	
X	X	0	0	1

X:Irrelevant

Logic Diagram for "Q output"

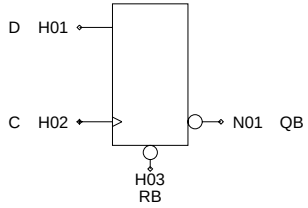


Truth Table for "Q output"

D	C	RB	Q	QB
0	↗	1	0	1
1	↗	1	1	0
X	↘	1	Hold	
X	X	0	0	1

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

D	C	RB	Q	QB
0	↗	1	0	1
1	↗	1	1	0
X	↘	1	Hold	
X	X	0	0	1

X:Irrelevant

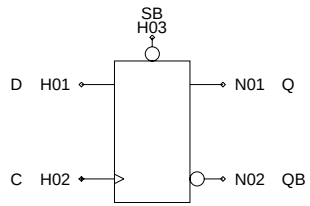
Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_1						
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F615NL	C → Q		(HH)	0.301	0.467	0.739	0.013	0.021	0.034	D	1.0	Q	35
			(HL)	0.308	0.478	0.743	0.010	0.016	0.025	C	1.0	QB	36
	C → QB		(HH)	0.348	0.548	0.861	0.013	0.021	0.034	RB	2.5		
			(HL)	0.365	0.570	0.904	0.010	0.016	0.025				
	RB → Q		(LL)	0.141	0.219	0.328	0.010	0.016	0.025				
	RB → QB		(LH)	0.181	0.345	0.537	0.013	0.021	0.034				
	Set up time	D		0.210		0.370							
	Hold time	D		0.080		0.060							
	Release time	RB		0.000		0.000							
	Removal time	RB		0.330		0.570							
	Min Pulse	C		0.418		1.007							
	Min Pulse	RB		0.304		0.780							
F615	C → Q		(HH)	0.324	0.503	0.799	0.006	0.011	0.017	D	1.0	Q	71
			(HL)	0.329	0.509	0.793	0.005	0.008	0.013	C	1.0	QB	71
	C → QB		(HH)	0.385	0.604	0.952	0.006	0.010	0.017	RB	2.6		
			(HL)	0.412	0.645	1.027	0.005	0.008	0.013				
	RB → Q		(LL)	0.161	0.249	0.374	0.005	0.008	0.013				
	RB → QB		(LH)	0.219	0.402	0.627	0.006	0.010	0.017				
	Set up time	D		0.210		0.370							
	Hold time	D		0.080		0.060							
	Release time	RB		0.000		0.000							
	Removal time	RB		0.330		0.570							
	Min Pulse	C		0.464		1.130							
	Min Pulse	RB		0.368		0.904							
F615NP	C → Q		(HH)	0.377	0.590	0.945	0.003	0.005	0.009	D	1.0	Q	142
			(HL)	0.377	0.585	0.914	0.003	0.004	0.006	C	1.0	QB	143
	C → QB		(HH)	0.472	0.742	1.174	0.003	0.005	0.008	RB	2.6		
			(HL)	0.516	0.814	1.309	0.003	0.004	0.006				
	RB → Q		(LL)	0.205	0.320	0.489	0.003	0.004	0.006				
	RB → QB		(LH)	0.302	0.540	0.846	0.003	0.005	0.008				
	Set up time	D		0.210		0.370							
	Hold time	D		0.080		0.060							
	Release time	RB		0.000		0.000							
	Removal time	RB		0.330		0.570							
	Min Pulse	C		0.569		1.412							
	Min Pulse	RB		0.485		1.177							
F615NT	C → Q		(HH)	0.397	0.628	1.008	0.002	0.003	0.004	D	1.3	Q	285
			(HL)	0.381	0.592	0.929	0.001	0.002	0.003	C	1.3	QB	285
	C → QB		(HH)	0.544	0.854	1.357	0.002	0.003	0.004	RB	3.9		
			(HL)	0.630	1.000	1.610	0.001	0.002	0.003				
	RB → Q		(LL)	0.190	0.295	0.450	0.001	0.002	0.003				
	RB → QB		(LH)	0.352	0.635	0.998	0.002	0.003	0.004				
	Set up time	D		0.220		0.370							
	Hold time	D		0.080		0.060							
	Release time	RB		0.000		0.000							
	Removal time	RB		0.310		0.540							
	Min Pulse	C		0.683		1.709							
	Min Pulse	RB		0.544		1.320							
F615NQL	C → Q		(HH)	0.297	0.463	0.731	0.013	0.021	0.034	D	1.0	Q	35
			(HL)	0.307	0.475	0.738	0.010	0.016	0.025	C	1.0		
	RB → Q		(LL)	0.137	0.217	0.321	0.010	0.016	0.025	RB	2.5		
	Set up time	D		0.210		0.380							
	Hold time	D		0.080		0.060							
	Release time	RB		0.000		0.000							
	Removal time	RB		0.330		0.570							
	Min Pulse	C		0.357		0.839							

Block type	Path IN → OUT		Switching speed t LD0 (ns) MIN.	TYP.	MAX.	t 1 MIN.	TYP.	MAX.	Input Symbol	Fanin	Output Symbol	Fanout
	Min Pulse	RB	0.219		0.557							
F615NQ	C → Q	(HH)	0.328	0.511	0.813	0.006	0.011	0.017	D	1.0	Q	71
		(HL)	0.331	0.513	0.800	0.005	0.008	0.013	C	1.0		
	RB → Q	(LL)	0.163	0.253	0.380	0.005	0.008	0.013	RB	2.6		
	Set up time	D	0.210		0.370							
	Hold time	D	0.080		0.060							
	Release time	RB	0.000		0.000							
	Removal time	RB	0.330		0.570							
	Min Pulse	C	0.381		0.915							
	Min Pulse	RB	0.255		0.652							
F615NQP	C → Q	(HH)	0.372	0.582	0.935	0.003	0.005	0.009	D	1.0	Q	141
		(HL)	0.373	0.579	0.904	0.003	0.004	0.006	C	1.0		
	RB → Q	(LL)	0.202	0.314	0.480	0.003	0.004	0.006	RB	2.7		
	Set up time	D	0.210		0.370							
	Hold time	D	0.080		0.060							
	Release time	RB	0.000		0.000							
	Removal time	RB	0.330		0.570							
	Min Pulse	C	0.424		1.037							
	Min Pulse	RB	0.323		0.792							
F615NQT	C → Q	(HH)	0.398	0.630	1.012	0.002	0.003	0.004	D	1.3	Q	284
		(HL)	0.382	0.593	0.930	0.001	0.002	0.003	C	1.3		
	RB → Q	(LL)	0.191	0.295	0.450	0.001	0.002	0.003	RB	3.9		
	Set up time	D	0.220		0.370							
	Hold time	D	0.080		0.060							
	Release time	RB	0.000		0.000							
	Removal time	RB	0.310		0.540							
	Min Pulse	C	0.449		1.111							
	Min Pulse	RB	0.299		0.754							
F615NBL	C → QB	(HH)	0.253	0.390	0.609	0.013	0.021	0.034	D	1.0	QB	35
		(HL)	0.259	0.404	0.621	0.010	0.016	0.026	C	1.0		
	RB → QB	(LH)	0.213	0.486	0.794	0.013	0.021	0.034	RB	2.5		
	Set up time	D	0.220		0.360							
	Hold time	D	0.080		0.050							
	Release time	RB	0.000		0.000							
	Removal time	RB	0.320		0.550							
	Min Pulse	C	0.312		0.721							
	Min Pulse	RB	0.392		1.048							
F615NB	C → QB	(HH)	0.272	0.419	0.655	0.006	0.011	0.017	D	1.0	QB	70
		(HL)	0.284	0.452	0.712	0.005	0.008	0.013	C	1.0		
	RB → QB	(LH)	0.235	0.533	0.875	0.006	0.011	0.017	RB	2.6		
	Set up time	D	0.220		0.370							
	Hold time	D	0.090		0.050							
	Release time	RB	0.000		0.000							
	Removal time	RB	0.290		0.520							
	Min Pulse	C	0.336		0.814							
	Min Pulse	RB	0.442		1.135							
F615NBP	C → QB	(HH)	0.306	0.472	0.743	0.003	0.005	0.009	D	1.0	QB	141
		(HL)	0.324	0.530	0.854	0.003	0.004	0.007	C	1.0		
	RB → QB	(LH)	0.269	0.592	0.973	0.003	0.005	0.009	RB	2.6		
	Set up time	D	0.220		0.370							
	Hold time	D	0.090		0.060							
	Release time	RB	0.000		0.000							
	Removal time	RB	0.270		0.490							
	Min Pulse	C	0.375		0.953							
	Min Pulse	RB	0.480		1.234							

Block type	Path IN → OUT		Switching speed t LD0 (ns) MIN.	TYP.	MAX.	t 1 MIN.	TYP.	MAX.	Input Symbol	Fanin	Output Symbol	Fanout
F615NBT	C → QB	(HH)	0.340	0.526	0.829	0.002	0.003	0.004	D	1.3	QB	279
		(HL)	0.358	0.589	0.958	0.001	0.002	0.003	C	1.3		
	RB → QB	(LH)	0.342	0.646	1.072	0.002	0.003	0.004	RB	2.7		
	Set up time	D	0.240		0.390							
	Hold time	D	0.070		0.010							
	Release time	RB	0.000		0.000							
	Removal time	RB	0.320		0.600							
	Min Pulse	C	0.410		1.061							
	Min Pulse	RB	0.513		1.333							

Function	D-F/F with SB							SSI Family				
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	F616NL	8	F616NQL	8	F616NBL	8						
x1	F616	9	F616NQ	8	F616NB	8						
x2	F616NP	11	F616NQP	9	F616NBP	9						
x4			F616NQT	11	F616NBT	12						

Logic Diagram for "Normal"

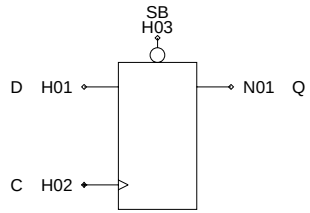


Truth Table for "Normal"

D	C	SB	Q	QB
0	↗	1	0	1
1	↗	1	1	0
X	↘	1	Hold	
X	X	0	1	0

X:Irrelevant

Logic Diagram for "Q output"

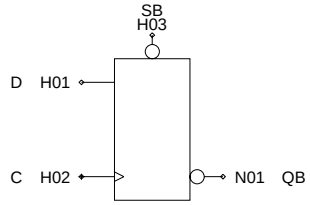


Truth Table for "Q output"

D	C	SB	Q	QB
0	↗	1	0	1
1	↗	1	1	0
X	↘	1	Hold	
X	X	0	1	0

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

D	C	SB	Q	QB
0	↗	1	0	1
1	↗	1	1	0
X	↘	1	Hold	
X	X	0	1	0

X:Irrelevant

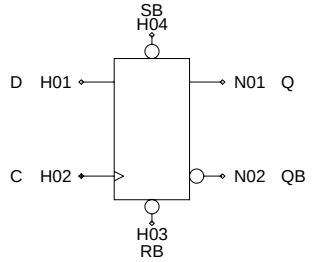
Block type	Switching speed									Input		Output	
	Path		t_{LD0} (ns)			t_1							
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		Symbol	Fanin	Symbol	Fanout
F616NL	C → Q	(HH)	0.271	0.417	0.645	0.013	0.021	0.034		D	1.0	Q	36
		(HL)	0.324	0.502	0.787	0.010	0.016	0.025		C	1.0	QB	36
	C → QB	(HH)	0.394	0.620	0.996	0.013	0.021	0.034		SB	2.5		
		(HL)	0.338	0.525	0.818	0.010	0.016	0.025					
	SB → Q	(LH)	0.247	0.410	0.659	0.013	0.021	0.034					
	SB → QB	(LL)	0.131	0.284	0.430	0.010	0.016	0.026					
	Set up time	D	0.210		0.400								
	Hold time	D	0.070		0.050								
	Release time	SB	0.090		0.070								
	Removal time	SB	0.120		0.160								
	Min Pulse	C	0.443		1.096								
	Min Pulse	SB	0.357		0.948								
F616	C → Q	(HH)	0.282	0.434	0.673	0.006	0.010	0.017		D	1.0	Q	71
		(HL)	0.346	0.538	0.843	0.005	0.008	0.013		C	1.0	QB	72
	C → QB	(HH)	0.442	0.696	1.117	0.006	0.010	0.017		SB	2.4		
		(HL)	0.369	0.574	0.900	0.005	0.008	0.013					
	SB → Q	(LH)	0.271	0.475	0.759	0.006	0.010	0.017					
	SB → QB	(LL)	0.150	0.302	0.459	0.005	0.008	0.013					
	Set up time	D	0.210		0.410								
	Hold time	D	0.070		0.060								
	Release time	SB	0.090		0.100								
	Removal time	SB	0.110		0.150								
	Min Pulse	C	0.491		1.218								
	Min Pulse	SB	0.423		1.067								
F616NP	C → Q	(HH)	0.314	0.485	0.754	0.003	0.005	0.008		D	1.0	Q	144
		(HL)	0.391	0.609	0.959	0.003	0.004	0.006		C	1.0	QB	144
	C → QB	(HH)	0.544	0.858	1.384	0.003	0.005	0.008		SB	2.4		
		(HL)	0.450	0.702	1.105	0.003	0.004	0.006					
	SB → Q	(LH)	0.303	0.607	0.970	0.003	0.005	0.008					
	SB → QB	(LL)	0.193	0.366	0.563	0.003	0.004	0.007					
	Set up time	D	0.210		0.420								
	Hold time	D	0.070		0.060								
	Release time	SB	0.090		0.100								
	Removal time	SB	0.110		0.150								
	Min Pulse	C	0.595		1.483								
	Min Pulse	SB	0.533		1.315								
F616NQL	C → Q	(HH)	0.273	0.422	0.655	0.013	0.021	0.034		D	1.0	Q	35
		(HL)	0.326	0.505	0.791	0.010	0.016	0.025		C	1.0		
	SB → Q	(LH)	0.229	0.405	0.653	0.013	0.021	0.034		SB	2.4		
	Set up time	D	0.210		0.400								
	Hold time	D	0.070		0.050								
	Release time	SB	0.090		0.070								
	Removal time	SB	0.120		0.160								
	Min Pulse	C	0.376		0.892								
	Min Pulse	SB	0.339		0.943								
F616NQ	C → Q	(HH)	0.281	0.433	0.672	0.006	0.010	0.017		D	1.0	Q	71
		(HL)	0.345	0.534	0.838	0.005	0.008	0.013		C	1.0		
	SB → Q	(LH)	0.238	0.437	0.701	0.006	0.010	0.017		SB	2.4		
	Set up time	D	0.210		0.420								
	Hold time	D	0.070		0.060								
	Release time	SB	0.090		0.100								
	Removal time	SB	0.110		0.150								
	Min Pulse	C	0.394		0.938								
	Min Pulse	SB	0.357		1.000								

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F616NQP	C → Q	(HH)	0.311	0.481	0.751	0.003	0.005	0.008	D	1.0	Q	142
		(HL)	0.389	0.605	0.950	0.003	0.004	0.006	C	1.0		
	SB → Q	(LH)	0.269	0.490	0.783	0.003	0.005	0.008	SB	2.4		
	Set up time	D	0.210		0.420							
	Hold time	D	0.070		0.060							
	Release time	SB	0.090		0.100							
	Removal time	SB	0.110		0.150							
	Min Pulse	C	0.439		1.050							
	Min Pulse	SB	0.422		1.082							
F616NQT	C → Q	(HH)	0.341	0.535	0.837	0.002	0.003	0.004	D	1.3	Q	286
		(HL)	0.404	0.628	0.993	0.001	0.002	0.003	C	1.3		
	SB → Q	(LH)	0.292	0.530	0.852	0.002	0.003	0.004	SB	2.4		
	Set up time	D	0.210		0.430							
	Hold time	D	0.080		0.070							
	Release time	SB	0.100		0.120							
	Removal time	SB	0.100		0.120							
	Min Pulse	C	0.455		1.095							
	Min Pulse	SB	0.449		1.172							
F616NBL	C → QB	(HH)	0.282	0.436	0.690	0.013	0.021	0.034	D	1.0	QB	35
		(HL)	0.267	0.418	0.645	0.010	0.016	0.026	C	1.0		
	SB → QB	(LL)	0.215	0.389	0.621	0.010	0.016	0.026	SB	2.4		
	Set up time	D	0.210		0.410							
	Hold time	D	0.070		0.050							
	Release time	SB	0.090		0.080							
	Removal time	SB	0.110		0.150							
	Min Pulse	C	0.332		0.791							
	Min Pulse	SB	0.328		0.927							
F616NB	C → QB	(HH)	0.304	0.469	0.746	0.007	0.011	0.017	D	1.0	QB	70
		(HL)	0.286	0.456	0.715	0.005	0.008	0.013	C	1.0		
	SB → QB	(LL)	0.230	0.432	0.695	0.005	0.008	0.013	SB	2.4		
	Set up time	D	0.210		0.430							
	Hold time	D	0.080		0.060							
	Release time	SB	0.110		0.110							
	Removal time	SB	0.100		0.120							
	Min Pulse	C	0.354		0.847							
	Min Pulse	SB	0.390		1.021							
F616NBP	C → QB	(HH)	0.350	0.541	0.869	0.003	0.005	0.009	D	1.0	QB	139
		(HL)	0.325	0.531	0.855	0.003	0.004	0.007	C	1.0		
	SB → QB	(LL)	0.275	0.505	0.820	0.003	0.004	0.007	SB	2.4		
	Set up time	D	0.210		0.440							
	Hold time	D	0.080		0.060							
	Release time	SB	0.110		0.130							
	Removal time	SB	0.090		0.110							
	Min Pulse	C	0.400		0.969							
	Min Pulse	SB	0.457		1.164							
F616NBT	C → QB	(HH)	0.378	0.586	0.938	0.002	0.003	0.004	D	1.3	QB	279
		(HL)	0.363	0.597	0.968	0.001	0.002	0.003	C	1.3		
	SB → QB	(LL)	0.299	0.616	1.027	0.001	0.002	0.003	SB	3.6		
	Set up time	D	0.230		0.420							
	Hold time	D	0.050		0.000							
	Release time	SB	0.050		0.010							
	Removal time	SB	0.150		0.230							
	Min Pulse	C	0.428		1.071							
	Min Pulse	SB	0.554		1.380							

[MEMO]

Function	D-F/F with RB,SB							SSI Family				
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power			L617	8								
x1	F617	10										
x2												
x4			F617NQT	13	F617NBT	13						

Logic Diagram for "Normal"

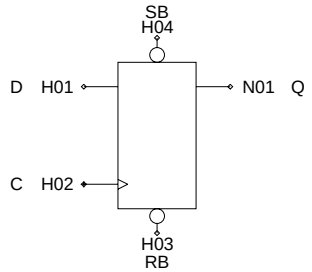


Truth Table for "Normal"

D	C	RB	SB	Q	QB	
0	↗	1	1	0	1	
1	↗	1	1	1	0	
X	↘	1	1	Hold		
X	X	0	1	0	1	
X	X	1	0	1	0	
X	X	0	0	0	0	← Prohibition

X:Irrelevant

Logic Diagram for "Q output"

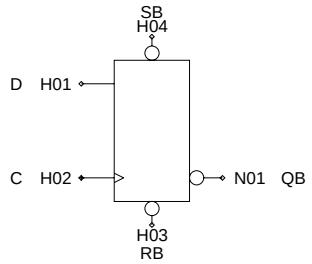


Truth Table for "Q output"

D	C	RB	SB	Q	QB	
0	↗	1	1	0	1	
1	↗	1	1	1	0	
X	↘	1	1	Hold		
X	X	0	1	0	1	
X	X	1	0	1	0	
X	X	0	0	0	0	← Prohibition

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

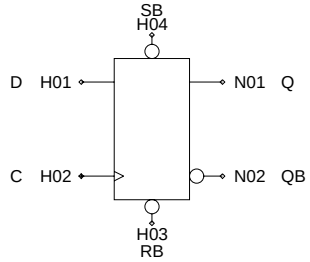
D	C	RB	SB	Q	QB	
0	↗	1	1	0	1	
1	↗	1	1	1	0	
X	↘	1	1	Hold		
X	X	0	1	0	1	
X	X	1	0	1	0	
X	X	0	0	0	0	← Prohibition

X:Irrelevant

Block type	Switching speed									Input		Output	
	Path		t_{LD0} (ns)			t_1							
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		Symbol	Fanin	Symbol	Fanout
F617	C → Q	(HH)	0.326	0.508	0.807	0.006	0.011	0.017		D	1.0	Q	71
		(HL)	0.348	0.541	0.848	0.005	0.008	0.013		C	1.0	QB	70
	C → QB	(HH)	0.445	0.702	1.127	0.006	0.010	0.017		RB	2.6		
		(HL)	0.416	0.654	1.043	0.005	0.008	0.013		SB	2.5		
	RB → Q	(LL)	0.159	0.245	0.370	0.005	0.008	0.013					
	RB → QB	(LH)	0.257	0.499	0.802	0.006	0.011	0.017					
	SB → Q	(LH)	0.307	0.550	0.890	0.006	0.010	0.017					
	SB → QB	(LL)	0.153	0.310	0.472	0.005	0.008	0.013					
	Set up time	D	0.210		0.410								
	Hold time	D	0.070		0.060								
	Release time	RB	0.000		0.000								
	Release time	SB	0.080		0.080								
	Removal time	RB	0.350		0.600								
	Removal time	SB	0.130		0.170								
	Min Pulse	C	0.495		1.229								
	Min Pulse	RB	0.437		1.080								
	Min Pulse	SB	0.478		1.209								
L617	C → Q	(HH)	0.278	0.430	0.678	0.013	0.021	0.034		D	3.6	Q	35
		(HL)	0.260	0.404	0.622	0.010	0.016	0.026		C	1.0		
	RB → Q	(LL)	0.214	0.387	0.617	0.010	0.016	0.026		RB	2.6		
	SB → Q	(LH)	0.277	0.615	1.023	0.013	0.021	0.034		SB	2.4		
	Set up time	D	0.220		0.250								
	Hold time	D	0.120		0.230								
	Release time	RB	0.090		0.100								
	Release time	SB	0.000		0.000								
	Removal time	RB	0.120		0.160								
	Removal time	SB	0.320		0.550								
	Min Pulse	C	0.328		0.779								
	Min Pulse	RB	0.365		0.931								
	Min Pulse	SB	0.496		1.299								
F617NQT	C → Q	(HH)	0.403	0.637	1.024	0.002	0.003	0.004		D	1.3	Q	283
		(HL)	0.415	0.646	1.025	0.001	0.002	0.003		C	1.3		
	RB → Q	(LL)	0.193	0.299	0.456	0.001	0.002	0.003		RB	3.8		
	SB → Q	(LH)	0.357	0.615	1.006	0.002	0.003	0.004		SB	2.5		
	Set up time	D	0.210		0.410								
	Hold time	D	0.080		0.070								
	Release time	RB	0.000		0.000								
	Release time	SB	0.090		0.100								
	Removal time	RB	0.330		0.560								
	Removal time	SB	0.120		0.150								
	Min Pulse	C	0.465		1.128								
	Min Pulse	RB	0.316		0.762								
	Min Pulse	SB	0.523		1.322								
F617NBT	C → QB	(HH)	0.380	0.590	0.941	0.002	0.003	0.004		D	1.3	QB	270
		(HL)	0.364	0.598	0.972	0.001	0.002	0.003		C	1.3		
	RB → QB	(LH)	0.449	0.780	1.310	0.002	0.003	0.004		RB	2.6		
	SB → QB	(LL)	0.295	0.623	1.037	0.001	0.002	0.003		SB	3.7		
	Set up time	D	0.230		0.410								
	Hold time	D	0.060		0.010								
	Release time	RB	0.000		0.000								
	Release time	SB	0.040		0.000								
	Removal time	RB	0.330		0.610								
	Removal time	SB	0.170		0.260								
	Min Pulse	C	0.431		1.072								
	Min Pulse	RB	0.600		1.577								
	Min Pulse	SB	0.570		1.393								

Function	D-F/F with RB,SB							SSI Family				
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	F647NL	9	F647NQL	9	F647NBL	9						
x1	F647	10	F647NQ	9	F647NB	9						
x2	F647NP	12	F647NQP	10	F647NBP	10						
x4												

Logic Diagram for "Normal"

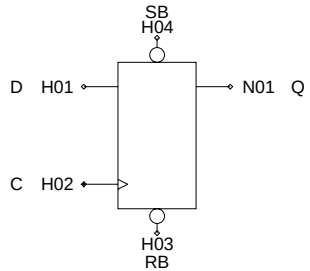


Truth Table for "Normal"

D	C	RB	SB	Q	QB	
0	↗	1	1	0	1	
1	↗	1	1	1	0	
X	↘	1	1	Hold		
X	X	0	1	0	1	
X	X	1	0	1	0	
X	X	0	0	0	0	← Prohibition

X:Irrelevant

Logic Diagram for "Q output"

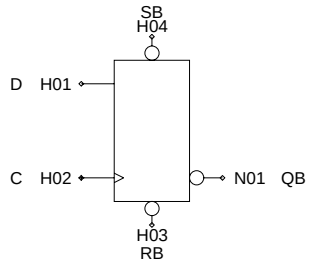


Truth Table for "Q output"

D	C	RB	SB	Q	QB	
0	↗	1	1	0	1	
1	↗	1	1	1	0	
X	↘	1	1	Hold		
X	X	0	1	0	1	
X	X	1	0	1	0	
X	X	0	0	0	0	← Prohibition

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

D	C	RB	SB	Q	QB	
0	↗	1	1	0	1	
1	↗	1	1	1	0	
X	↘	1	1	Hold		
X	X	0	1	0	1	
X	X	1	0	1	0	
X	X	0	0	0	0	← Prohibition

X:Irrelevant

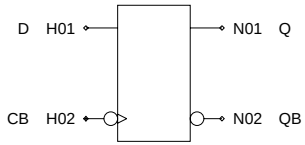
Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F647NL	C → Q	(HH)	0.300	0.465	0.733	0.013	0.021	0.034	D	1.2	Q	36
		(HL)	0.323	0.502	0.788	0.010	0.016	0.025	C	1.0	QB	35
	C → QB	(HH)	0.396	0.623	1.004	0.013	0.021	0.034	RB	2.6		
		(HL)	0.368	0.575	0.909	0.010	0.016	0.025	SB	2.5		
	RB → Q	(LL)	0.137	0.214	0.319	0.010	0.016	0.025				
	RB → QB	(LH)	0.211	0.427	0.689	0.013	0.021	0.034				
	SB → Q	(LH)	0.279	0.463	0.752	0.013	0.021	0.034				
	SB → QB	(LL)	0.132	0.283	0.428	0.010	0.016	0.026				
	Set up time	D	0.210		0.400							
	Hold time	D	0.080		0.060							
	Release time	RB	0.000		0.000							
	Release time	SB	0.080		0.080							
	Removal time	RB	0.350		0.590							
	Removal time	SB	0.130		0.170							
	Min Pulse	C	0.448		1.105							
	Min Pulse	RB	0.367		0.929							
	Min Pulse	SB	0.416		1.046							
F647	C → Q	(HH)	0.326	0.508	0.807	0.006	0.011	0.017	D	1.0	Q	71
		(HL)	0.348	0.541	0.848	0.005	0.008	0.013	C	1.0	QB	70
	C → QB	(HH)	0.445	0.702	1.127	0.006	0.010	0.017	RB	2.6		
		(HL)	0.416	0.654	1.043	0.005	0.008	0.013	SB	2.5		
	RB → Q	(LL)	0.159	0.245	0.370	0.005	0.008	0.013				
	RB → QB	(LH)	0.257	0.499	0.802	0.006	0.011	0.017				
	SB → Q	(LH)	0.307	0.550	0.890	0.006	0.010	0.017				
	SB → QB	(LL)	0.153	0.310	0.472	0.005	0.008	0.013				
	Set up time	D	0.210		0.410							
	Hold time	D	0.070		0.060							
	Release time	RB	0.000		0.000							
	Release time	SB	0.080		0.080							
	Removal time	RB	0.350		0.600							
	Removal time	SB	0.130		0.170							
	Min Pulse	C	0.495		1.229							
	Min Pulse	RB	0.437		1.080							
	Min Pulse	SB	0.478		1.209							
F647NP	C → Q	(HH)	0.370	0.577	0.923	0.003	0.005	0.009	D	1.0	Q	142
		(HL)	0.391	0.611	0.961	0.003	0.004	0.006	C	1.0	QB	141
	C → QB	(HH)	0.548	0.865	1.397	0.003	0.005	0.008	RB	2.6		
		(HL)	0.513	0.809	1.299	0.003	0.004	0.006	SB	2.5		
	RB → Q	(LL)	0.200	0.309	0.472	0.003	0.004	0.006				
	RB → QB	(LH)	0.356	0.656	1.060	0.003	0.005	0.009				
	SB → Q	(LH)	0.351	0.710	1.151	0.003	0.005	0.009				
	SB → QB	(LL)	0.196	0.376	0.577	0.003	0.004	0.007				
	Set up time	D	0.210		0.410							
	Hold time	D	0.070		0.050							
	Release time	RB	0.000		0.000							
	Release time	SB	0.080		0.080							
	Removal time	RB	0.350		0.600							
	Removal time	SB	0.130		0.180							
	Min Pulse	C	0.599		1.497							
	Min Pulse	RB	0.576		1.387							
	Min Pulse	SB	0.601		1.503							
F647NQL	C → Q	(HH)	0.301	0.468	0.740	0.013	0.021	0.034	D	1.0	Q	35
		(HL)	0.325	0.506	0.792	0.010	0.016	0.025	C	1.0		
	RB → Q	(LL)	0.138	0.215	0.322	0.010	0.016	0.025	RB	2.6		
	SB → Q	(LH)	0.257	0.455	0.741	0.013	0.021	0.034	SB	2.4		
	Set up time	D	0.210		0.400							

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Hold time	D	0.080		0.060							
	Release time	RB	0.000		0.000							
	Release time	SB	0.080		0.080							
	Removal time	RB	0.350		0.590							
	Removal time	SB	0.130		0.170							
	Min Pulse	C	0.377		0.894							
	Min Pulse	RB	0.226		0.560							
	Min Pulse	SB	0.400		1.036							
F647NQ	C → Q	(HH)	0.325	0.505	0.804	0.006	0.011	0.017	D	1.0	Q	70
		(HL)	0.347	0.541	0.848	0.005	0.008	0.013	C	1.0		
	RB → Q	(LL)	0.158	0.246	0.370	0.005	0.008	0.013	RB	2.6		
	SB → Q	(LH)	0.281	0.494	0.804	0.006	0.011	0.017	SB	2.5		
	Set up time	D	0.210		0.410							
	Hold time	D	0.070		0.060							
	Release time	RB	0.000		0.000							
	Release time	SB	0.080		0.080							
	Removal time	RB	0.350		0.600							
	Removal time	SB	0.130		0.180							
	Min Pulse	C	0.398		0.949							
	Min Pulse	RB	0.255		0.637							
	Min Pulse	SB	0.429		1.096							
F647NQP	C → Q	(HH)	0.371	0.579	0.929	0.003	0.005	0.009	D	1.0	Q	141
		(HL)	0.393	0.612	0.962	0.003	0.004	0.006	C	1.0		
	RB → Q	(LL)	0.200	0.310	0.474	0.003	0.004	0.006	RB	2.6		
	SB → Q	(LH)	0.329	0.571	0.933	0.003	0.005	0.009	SB	2.5		
	Set up time	D	0.210		0.410							
	Hold time	D	0.070		0.060							
	Release time	RB	0.000		0.000							
	Release time	SB	0.080		0.080							
	Removal time	RB	0.350		0.600							
	Removal time	SB	0.130		0.180							
	Min Pulse	C	0.443		1.064							
	Min Pulse	RB	0.331		0.785							
	Min Pulse	SB	0.477		1.226							
F647NBL	C → QB	(HH)	0.282	0.436	0.688	0.013	0.021	0.034	D	1.0	QB	35
		(HL)	0.264	0.411	0.633	0.010	0.016	0.026	C	1.0		
	RB → QB	(LH)	0.261	0.600	0.998	0.013	0.021	0.034	RB	2.6		
	SB → QB	(LL)	0.209	0.384	0.615	0.010	0.016	0.026	SB	2.4		
	Set up time	D	0.210		0.410							
	Hold time	D	0.080		0.060							
	Release time	RB	0.000		0.000							
	Release time	SB	0.090		0.090							
	Removal time	RB	0.320		0.560							
	Removal time	SB	0.120		0.160							
	Min Pulse	C	0.332		0.791							
	Min Pulse	RB	0.485		1.266							
	Min Pulse	SB	0.360		0.925							
F647NB	C → QB	(HH)	0.301	0.465	0.737	0.007	0.011	0.017	D	1.0	QB	70
		(HL)	0.282	0.448	0.701	0.005	0.008	0.013	C	1.0		
	RB → QB	(LH)	0.281	0.641	1.068	0.006	0.011	0.017	RB	2.6		
	SB → QB	(LL)	0.228	0.413	0.664	0.005	0.008	0.013	SB	2.4		
	Set up time	D	0.220		0.420							
	Hold time	D	0.080		0.050							
	Release time	RB	0.000		0.000							
	Release time	SB	0.090		0.090							
	Removal time	RB	0.310		0.540							

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Removal time	SB	0.110		0.150							
	Min Pulse	C	0.351		0.838							
	Min Pulse	RB	0.512		1.343							
	Min Pulse	SB	0.387		0.984							
F647NBP	C → QB	(HH)	0.354	0.547	0.878	0.003	0.005	0.009	D	1.0	QB	140
		(HL)	0.327	0.534	0.860	0.003	0.004	0.007	C	1.0		
	RB → QB	(LH)	0.338	0.735	1.230	0.003	0.005	0.009	RB	2.6		
	SB → QB	(LL)	0.277	0.498	0.810	0.003	0.004	0.007	SB	2.4		
	Set up time	D	0.220		0.440							
	Hold time	D	0.090		0.060							
	Release time	RB	0.000		0.000							
	Release time	SB	0.100		0.110							
	Removal time	RB	0.270		0.490							
	Removal time	SB	0.100		0.130							
	Min Pulse	C	0.404		0.980							
	Min Pulse	RB	0.571		1.505							
	Min Pulse	SB	0.471		1.150							

Function	D-F/F (CB)							SSI Family			
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power			L631	6								
x1	F631	8										
x2												
x4	F631NT	14	F631NQT	10	F631NBT	10						

Logic Diagram for "Normal"

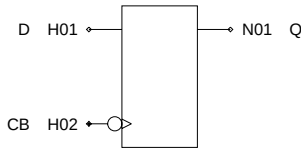


Truth Table for "Normal"

D	C	Q	QB
0	↘	0	1
1	↘	1	0
X	↗	Hold	

X:Irrelevant

Logic Diagram for "Q output"

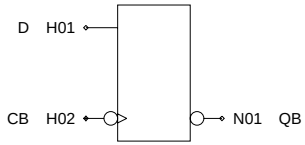


Truth Table for "Q output"

D	C	Q	QB
0	↘	0	1
1	↘	1	0
X	↗	Hold	

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

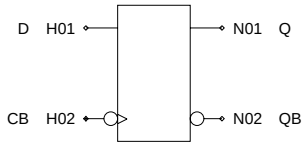
D	CB	Q	QB
0	↘	0	1
1	↘	1	0
X	↗	Hold	

X:Irrelevant

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F631	CB → Q	(LH)	0.296	0.481	0.770	0.006	0.010	0.017	D	1.0	Q	71
		(LL)	0.293	0.461	0.728	0.005	0.008	0.013	CB	1.0	QB	72
	CB → QB	(LH)	0.349	0.555	0.885	0.006	0.010	0.017				
		(LL)	0.380	0.617	0.989	0.005	0.008	0.013				
	Set up time	D	0.200		0.370							
	Hold time	D	0.100		0.150							
	Min Pulse	CB	0.424		1.081							
F631NT	CB → Q	(LH)	0.340	0.554	0.893	0.002	0.003	0.004	D	1.3	Q	288
		(LL)	0.344	0.542	0.861	0.001	0.002	0.003	CB	1.3	QB	288
	CB → QB	(LH)	0.506	0.803	1.285	0.002	0.003	0.004				
		(LL)	0.562	0.908	1.461	0.001	0.002	0.003				
	Set up time	D	0.210		0.400							
	Hold time	D	0.090		0.140							
	Min Pulse	CB	0.606		1.551							
L631	CB → Q	(LH)	0.221	0.349	0.553	0.013	0.021	0.034	D	3.6	Q	35
		(LL)	0.258	0.420	0.670	0.010	0.016	0.026	CB	1.0		
	Set up time	D	0.140		0.230							
	Hold time	D	0.210		0.330							
	Min Pulse	CB	0.301		0.762							
F631NQT	CB → Q	(LH)	0.339	0.553	0.892	0.002	0.003	0.004	D	1.3	Q	287
		(LL)	0.346	0.545	0.865	0.001	0.002	0.003	CB	1.3		
	Set up time	D	0.210		0.400							
	Hold time	D	0.090		0.140							
	Min Pulse	CB	0.390		0.983							
F631NBT	CB → QB	(LH)	0.322	0.511	0.821	0.002	0.003	0.004	D	1.3	QB	282
		(LL)	0.347	0.584	0.968	0.001	0.002	0.003	CB	1.3		
	Set up time	D	0.220		0.440							
	Hold time	D	0.070		0.100							
	Min Pulse	CB	0.393		1.056							

Function	D-F/F (CB)										SSI Family	
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	F661NL	7	F661NQL	7	F661NBL	7						
x1	F661	8	F661NQ	7	F661NB	7						
x2	F661NP	10	F661NQP	8	F661NBP	8						
x4												

Logic Diagram for "Normal"

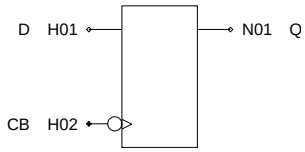


Truth Table for "Normal"

D	CB	Q	QB
0	↘	0	1
1	↘	1	0
X	↗	Hold	

X:Irrelevant

Logic Diagram for "Q output"

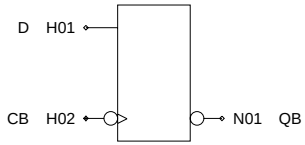


Truth Table for "Q output"

D	CB	Q	QB
0	↘	0	1
1	↘	1	0
X	↗	Hold	

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

D	CB	Q	QB
0	↘	0	1
1	↘	1	0
X	↗	Hold	

X:Irrelevant

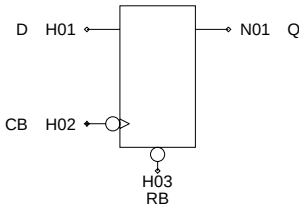
Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F661NL	CB → Q	(LH)	0.276	0.447	0.718	0.013	0.021	0.034	D	1.0	Q	36
		(LL)	0.267	0.420	0.660	0.010	0.016	0.025	CB	1.0	QB	36
	CB → QB	(LH)	0.304	0.483	0.771	0.013	0.021	0.034				
		(LL)	0.336	0.545	0.875	0.010	0.016	0.025				
	Set up time	D	0.200		0.390							
	Hold time	D	0.100		0.150							
	Min Pulse	CB	0.379		0.965							
F661	CB → Q	(LH)	0.296	0.481	0.770	0.006	0.010	0.017	D	1.0	Q	71
		(LL)	0.293	0.461	0.728	0.005	0.008	0.013	CB	1.0	QB	72
	CB → QB	(LH)	0.349	0.555	0.885	0.006	0.010	0.017				
		(LL)	0.380	0.617	0.989	0.005	0.008	0.013				
	Set up time	D	0.200		0.370							
	Hold time	D	0.100		0.150							
	Min Pulse	CB	0.424		1.081							
F661NP	CB → Q	(LH)	0.329	0.531	0.852	0.003	0.005	0.008	D	1.0	Q	143
		(LL)	0.337	0.530	0.836	0.003	0.004	0.006	CB	1.0	QB	144
	CB → QB	(LH)	0.431	0.686	1.095	0.003	0.005	0.008				
		(LL)	0.462	0.743	1.196	0.003	0.004	0.006				
	Set up time	D	0.200		0.370							
	Hold time	D	0.100		0.150							
	Min Pulse	CB	0.504		1.282							
F661NQL	CB → Q	(LH)	0.276	0.447	0.719	0.013	0.021	0.034	D	1.0	Q	36
		(LL)	0.266	0.420	0.662	0.010	0.016	0.025	CB	1.0		
	Set up time	D	0.200		0.390							
	Hold time	D	0.100		0.150							
	Min Pulse	CB	0.318		0.807							
F661NQ	CB → Q	(LH)	0.294	0.477	0.767	0.006	0.010	0.017	D	1.0	Q	72
		(LL)	0.290	0.457	0.722	0.005	0.008	0.013	CB	1.0		
	Set up time	D	0.200		0.370							
	Hold time	D	0.100		0.150							
	Min Pulse	CB	0.337		0.854							
F661NQP	CB → Q	(LH)	0.327	0.529	0.849	0.003	0.005	0.008	D	1.0	Q	144
		(LL)	0.333	0.527	0.833	0.003	0.004	0.006	CB	1.0		
	Set up time	D	0.200		0.370							
	Hold time	D	0.100		0.150							
	Min Pulse	CB	0.377		0.935							
F661NBL	CB → QB	(LH)	0.225	0.356	0.564	0.013	0.021	0.034	D	1.0	QB	35
		(LL)	0.263	0.428	0.684	0.010	0.016	0.026	CB	1.0		
	Set up time	D	0.200		0.390							
	Hold time	D	0.100		0.150							
	Min Pulse	CB	0.306		0.775							
F661NB	CB → QB	(LH)	0.244	0.386	0.616	0.006	0.011	0.017	D	1.0	QB	71
		(LL)	0.278	0.459	0.740	0.005	0.008	0.013	CB	1.0		
	Set up time	D	0.200		0.380							
	Hold time	D	0.110		0.160							
	Min Pulse	CB	0.323		0.830							
F661NBP	CB → QB	(LH)	0.285	0.453	0.730	0.003	0.005	0.009	D	1.0	QB	141
		(LL)	0.320	0.536	0.879	0.003	0.004	0.007	CB	1.0		
	Set up time	D	0.200		0.370							
	Hold time	D	0.110		0.160							
	Min Pulse	CB	0.366		0.967							

Function	D-F/F (CB) with RB							SSI Family				
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power												
x1												
x2												
x4			F635NQT	12	F635NBT	11						

Logic Diagram for "Normal"

Truth Table for "Normal"

Logic Diagram for "Q output"

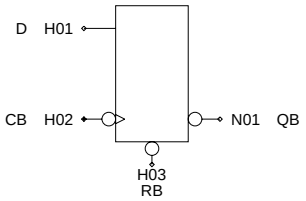


Truth Table for "Q output"

D	CB	RB	Q	QB
0	↘	1	0	1
1	↘	1	1	0
X	↗	1	Hold	
X	X	0	0	1

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

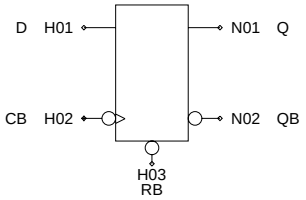
D	CB	RB	Q	QB
0	↘	1	0	1
1	↘	1	1	0
X	↗	1	Hold	
X	X	0	0	1

X:Irrelevant

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F635NQT	CB → Q	(LH)	0.403	0.656	1.076	0.002	0.003	0.004	D	1.3	Q	284
		(LL)	0.358	0.566	0.902	0.001	0.002	0.003	CB	1.3		
	RB → Q	(LL)	0.193	0.299	0.455	0.001	0.002	0.003	RB	3.9		
	Set up time	D	0.200		0.390							
	Hold time	D	0.090		0.140							
	Release time	RB	0.000		0.000							
	Removal time	RB	0.310		0.600							
	Min Pulse	CB	0.446		1.166							
	Min Pulse	RB	0.338		0.761							
F635NBT	CB → QB	(LH)	0.322	0.512	0.823	0.002	0.003	0.004	D	1.3	QB	279
		(LL)	0.347	0.585	0.967	0.001	0.002	0.003	CB	1.3		
	RB → QB	(LH)	0.343	0.642	1.065	0.002	0.003	0.004	RB	2.7		
	Set up time	D	0.210		0.440							
	Hold time	D	0.070		0.100							
	Release time	RB	0.000		0.000							
	Removal time	RB	0.330		0.650							
	Min Pulse	CB	0.394		1.057							
	Min Pulse	RB	0.506		1.325							

Function	D-F/F (CB) with RB						SSI Family					
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	F665NL	8	F665NQL	7	F665NBL	7						
x1	F665	9	F665NQ	8	F665NB	8						
x2	F665NP	11	F665NQP	9	F665NBP	9						
x4												

Logic Diagram for "Normal"

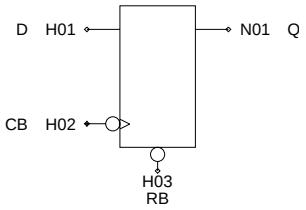


Truth Table for "Normal"

D	CB	RB	Q	QB
0	↘	1	0	1
1	↘	1	1	0
X	↗	1	Hold	
X	X	0	0	1

X:Irrelevant

Logic Diagram for "Q output"

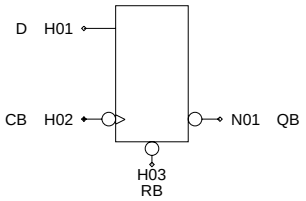


Truth Table for "Q output"

D	CB	RB	Q	QB
0	↘	1	0	1
1	↘	1	1	0
X	↗	1	Hold	
X	X	0	0	1

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

D	CB	RB	Q	QB
0	↘	1	0	1
1	↘	1	1	0
X	↗	1	Hold	
X	X	0	0	1

X:Irrelevant

Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_1						
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F665NL	CB → Q		(LH)	0.318	0.517	0.841	0.013	0.021	0.034	D	1.0	Q	35
			(LL)	0.277	0.436	0.688	0.010	0.016	0.025	CB	1.0	QB	35
	CB → QB		(LH)	0.318	0.505	0.807	0.013	0.021	0.034	RB	2.5		
			(LL)	0.383	0.620	1.006	0.010	0.016	0.025				
	RB → Q		(LL)	0.142	0.220	0.328	0.010	0.016	0.025				
	RB → QB		(LH)	0.183	0.346	0.537	0.013	0.021	0.034				
	Set up time	D		0.200		0.390							
	Hold time	D		0.100		0.150							
	Release time	RB		0.000		0.000							
	Removal time	RB		0.340		0.650							
	Min Pulse	CB		0.427		1.099							
	Min Pulse	RB		0.311		0.781							
F665	CB → Q		(LH)	0.338	0.549	0.895	0.006	0.010	0.017	D	1.0	Q	71
			(LL)	0.296	0.467	0.738	0.005	0.008	0.013	CB	1.0	QB	72
	CB → QB		(LH)	0.352	0.563	0.897	0.006	0.010	0.017	RB	2.6		
			(LL)	0.425	0.688	1.123	0.005	0.008	0.013				
	RB → Q		(LL)	0.161	0.249	0.373	0.005	0.008	0.013				
	RB → QB		(LH)	0.218	0.402	0.626	0.006	0.010	0.017				
	Set up time	D		0.200		0.400							
	Hold time	D		0.090		0.140							
	Release time	RB		0.000		0.000							
	Removal time	RB		0.330		0.630							
	Min Pulse	CB		0.469		1.207							
	Min Pulse	RB		0.368		0.904							
F665NP	CB → Q		(LH)	0.387	0.627	1.027	0.003	0.005	0.009	D	1.0	Q	142
			(LL)	0.341	0.538	0.850	0.003	0.004	0.006	CB	1.0	QB	143
	CB → QB		(LH)	0.437	0.695	1.110	0.003	0.005	0.008	RB	2.6		
			(LL)	0.527	0.851	1.390	0.003	0.004	0.006				
	RB → Q		(LL)	0.203	0.318	0.485	0.003	0.004	0.006				
	RB → QB		(LH)	0.300	0.536	0.841	0.003	0.005	0.008				
	Set up time	D		0.200		0.400							
	Hold time	D		0.090		0.140							
	Release time	RB		0.000		0.000							
	Removal time	RB		0.330		0.630							
	Min Pulse	CB		0.568		1.476							
	Min Pulse	RB		0.484		1.172							
F665NQL	CB → Q		(LH)	0.326	0.531	0.865	0.013	0.021	0.034	D	1.0	Q	35
			(LL)	0.284	0.447	0.708	0.010	0.016	0.025	CB	1.0		
	RB → Q		(LL)	0.149	0.231	0.348	0.010	0.016	0.025	RB	2.6		
	Set up time	D		0.200		0.390							
	Hold time	D		0.100		0.150							
	Release time	RB		0.000		0.000							
	Removal time	RB		0.340		0.650							
	Min Pulse	CB		0.370		0.957							
	Min Pulse	RB		0.243		0.599							
F665NQ	CB → Q		(LH)	0.339	0.550	0.899	0.006	0.011	0.017	D	1.0	Q	70
			(LL)	0.297	0.468	0.741	0.005	0.008	0.013	CB	1.0		
	RB → Q		(LL)	0.162	0.251	0.377	0.005	0.008	0.013	RB	2.6		
	Set up time	D		0.200		0.400							
	Hold time	D		0.090		0.140							
	Release time	RB		0.000		0.000							
	Removal time	RB		0.330		0.630							
	Min Pulse	CB		0.382		0.985							
	Min Pulse	RB		0.268		0.648							

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F665NQP	CB → Q	(LH)	0.384	0.621	1.020	0.003	0.005	0.009	D	1.0	Q	141
		(LL)	0.339	0.534	0.844	0.003	0.004	0.006	CB	1.0		
	RB → Q	(LL)	0.201	0.311	0.476	0.003	0.004	0.006	RB	2.7		
	Set up time	D	0.200		0.400							
	Hold time	D	0.090		0.140							
	Release time	RB	0.000		0.000							
	Removal time	RB	0.330		0.630							
	Min Pulse	CB	0.426		1.105							
	Min Pulse	RB	0.328		0.787							
F665NBL	CB → QB	(LH)	0.234	0.370	0.591	0.013	0.021	0.034	D	1.3	QB	35
		(LL)	0.271	0.444	0.711	0.010	0.016	0.026	CB	1.2		
	RB → QB	(LH)	0.220	0.500	0.816	0.013	0.021	0.034	RB	2.6		
	Set up time	D	0.200		0.390							
	Hold time	D	0.100		0.150							
	Release time	RB	0.000		0.000							
	Removal time	RB	0.320		0.620							
	Min Pulse	CB	0.317		0.803							
	Min Pulse	RB	0.418		1.075							
F665NB	CB → QB	(LH)	0.247	0.391	0.625	0.006	0.011	0.017	D	1.0	QB	70
		(LL)	0.280	0.461	0.744	0.005	0.008	0.013	CB	1.0		
	RB → QB	(LH)	0.231	0.531	0.870	0.006	0.011	0.017	RB	2.6		
	Set up time	D	0.210		0.400							
	Hold time	D	0.100		0.150							
	Release time	RB	0.000		0.000							
	Removal time	RB	0.290		0.570							
	Min Pulse	CB	0.325		0.834							
	Min Pulse	RB	0.441		1.129							
F665NBP	CB → QB	(LH)	0.285	0.452	0.729	0.003	0.005	0.009	D	1.0	QB	141
		(LL)	0.318	0.532	0.872	0.003	0.004	0.007	CB	1.0		
	RB → QB	(LH)	0.267	0.591	0.970	0.003	0.005	0.009	RB	2.6		
	Set up time	D	0.210		0.400							
	Hold time	D	0.100		0.150							
	Release time	RB	0.000		0.000							
	Removal time	RB	0.270		0.530							
	Min Pulse	CB	0.363		0.961							
	Min Pulse	RB	0.479		1.232							

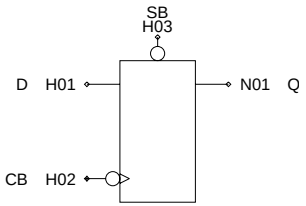
[MEMO]

Function	D-F/F (CB) with SB										SSI Family	
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power												
x1												
x2												
x4			F636NQT	11	F636NBT	12						

Logic Diagram for "Normal"

Truth Table for "Normal"

Logic Diagram for "Q output"

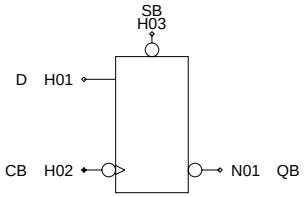


Truth Table for "Q output"

D	CB	SB	Q	QB
0	↘	1	0	1
1	↘	1	1	0
X	↗	1	Hold	
X	X	0	1	0

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

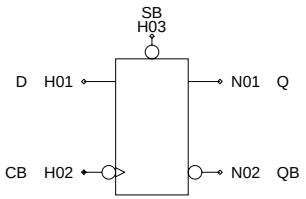
D	CB	SB	Q	QB
0	↘	1	0	1
1	↘	1	1	0
X	↗	1	Hold	
X	X	0	1	0

X:Irrelevant

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F636NQT	CB → Q	(LH)	0.342	0.559	0.903	0.002	0.003	0.004	D	1.3	Q	286
		(LL)	0.373	0.589	0.944	0.001	0.002	0.003	CB	1.3		
	SB → Q	(LH)	0.295	0.526	0.847	0.002	0.003	0.004	SB	2.4		
	Set up time	D	0.240		0.450							
	Hold time	D	0.110		0.160							
	Release time	SB	0.090		0.120							
	Removal time	SB	0.120		0.180							
	Min Pulse	CB	0.418		1.037							
	Min Pulse	SB	0.448		1.165							
F636NBT	CB → QB	(LH)	0.358	0.569	0.926	0.002	0.003	0.004	D	1.3	QB	279
		(LL)	0.349	0.587	0.974	0.001	0.002	0.003	CB	1.3		
	SB → QB	(LL)	0.298	0.618	1.030	0.001	0.002	0.003	SB	3.6		
	Set up time	D	0.250		0.490							
	Hold time	D	0.080		0.120							
	Release time	SB	0.050		0.010							
	Removal time	SB	0.150		0.260							
	Min Pulse	CB	0.405		1.067							
	Min Pulse	SB	0.554		1.383							

Function	D-F/F (CB) with SB											SSI Family	
Block type	Standard type						Low Gate type						
	Normal		Q output		QB output		Normal		Q output		QB output		
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	
Low Power	F666NL	8	F666NQL	7	F666NBL	7							
x1	F666	9	F666NQ	8	F666NB	8							
x2	F666NP	11	F666NQP	9	F666NBP	9							
x4													

Logic Diagram for "Normal"

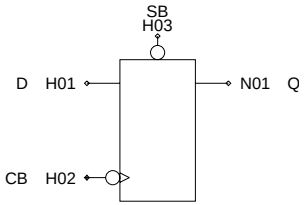


Truth Table for "Normal"

D	CB	SB	Q	QB
0	↘	1	0	1
1	↘	1	1	0
X	↗	1	Hold	
X	X	0	1	0

X:Irrelevant

Logic Diagram for "Q output"

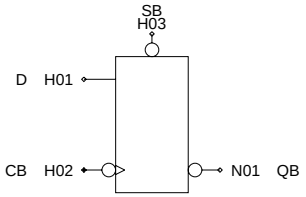


Truth Table for "Q output"

D	CB	SB	Q	QB
0	↘	1	0	1
1	↘	1	1	0
X	↗	1	Hold	
X	X	0	1	0

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

D	CB	SB	Q	QB
0	↘	1	0	1
1	↘	1	1	0
X	↗	1	Hold	
X	X	0	1	0

X:Irrelevant

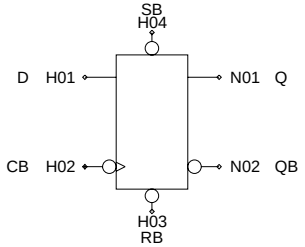
Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_1						
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F666NL	CB → Q		(LH)	0.281	0.458	0.739	0.013	0.021	0.034	D	1.0	Q	36
			(LL)	0.287	0.453	0.719	0.010	0.016	0.025	CB	1.0	QB	36
	CB → QB		(LH)	0.356	0.568	0.925	0.013	0.021	0.034	SB	2.5		
			(LL)	0.347	0.563	0.908	0.010	0.016	0.025				
	SB → Q		(LH)	0.246	0.404	0.648	0.013	0.021	0.034				
	SB → QB		(LL)	0.129	0.277	0.420	0.010	0.016	0.026				
	Set up time	D		0.230		0.440							
	Hold time	D		0.110		0.160							
	Release time	SB		0.070		0.090							
	Removal time	SB		0.130		0.210							
	Min Pulse	CB		0.401		1.018							
	Min Pulse	SB		0.363		0.941							
F666	CB → Q		(LH)	0.293	0.476	0.764	0.006	0.010	0.017	D	1.0	Q	71
			(LL)	0.305	0.481	0.764	0.005	0.008	0.013	CB	1.0	QB	72
	CB → QB		(LH)	0.400	0.638	1.036	0.006	0.010	0.017	SB	2.4		
			(LL)	0.380	0.615	0.989	0.005	0.008	0.013				
	SB → Q		(LH)	0.269	0.471	0.753	0.006	0.010	0.017				
	SB → QB		(LL)	0.149	0.301	0.458	0.005	0.008	0.013				
	Set up time	D		0.240		0.460							
	Hold time	D		0.100		0.150							
	Release time	SB		0.080		0.110							
	Removal time	SB		0.120		0.190							
	Min Pulse	CB		0.445		1.127							
	Min Pulse	SB		0.421		1.060							
F666NP	CB → Q		(LH)	0.329	0.531	0.850	0.003	0.005	0.008	D	1.0	Q	143
			(LL)	0.353	0.558	0.887	0.003	0.004	0.006	CB	1.0	QB	144
	CB → QB		(LH)	0.507	0.807	1.313	0.003	0.005	0.008	SB	2.3		
			(LL)	0.463	0.747	1.200	0.003	0.004	0.006				
	SB → Q		(LH)	0.303	0.606	0.969	0.003	0.005	0.008				
	SB → QB		(LL)	0.193	0.366	0.562	0.003	0.004	0.007				
	Set up time	D		0.240		0.460							
	Hold time	D		0.100		0.150							
	Release time	SB		0.080		0.120							
	Removal time	SB		0.120		0.190							
	Min Pulse	CB		0.551		1.403							
	Min Pulse	SB		0.533		1.314							
F666NQL	CB → Q		(LH)	0.287	0.468	0.757	0.013	0.021	0.034	D	1.0	Q	35
			(LL)	0.295	0.465	0.742	0.010	0.016	0.025	CB	1.0		
	SB → Q		(LH)	0.227	0.413	0.664	0.013	0.021	0.034	SB	2.6		
	Set up time	D		0.230		0.440							
	Hold time	D		0.110		0.160							
	Release time	SB		0.070		0.090							
	Removal time	SB		0.130		0.210							
	Min Pulse	CB		0.339		0.844							
	Min Pulse	SB		0.347		0.956							
F666NQ	CB → Q		(LH)	0.292	0.475	0.763	0.006	0.010	0.017	D	1.0	Q	71
			(LL)	0.307	0.482	0.767	0.005	0.008	0.013	CB	1.0		
	SB → Q		(LH)	0.237	0.436	0.699	0.006	0.010	0.017	SB	2.4		
	Set up time	D		0.240		0.460							
	Hold time	D		0.100		0.150							
	Release time	SB		0.080		0.110							
	Removal time	SB		0.120		0.190							
	Min Pulse	CB		0.350		0.858							
	Min Pulse	SB		0.357		0.997							

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F666NQP	CB → Q	(LH)	0.324	0.524	0.844	0.003	0.005	0.008	D	1.0	Q	142
		(LL)	0.351	0.554	0.879	0.003	0.004	0.006	CB	1.0		
	SB → Q	(LH)	0.269	0.490	0.782	0.003	0.005	0.008	SB	2.4		
	Set up time	D	0.240		0.460							
	Hold time	D	0.100		0.150							
	Release time	SB	0.080		0.110							
	Removal time	SB	0.120		0.190							
	Min Pulse	CB	0.394		0.971							
	Min Pulse	SB	0.421		1.082							
F666NBL	CB → QB	(LH)	0.263	0.417	0.676	0.013	0.021	0.034	D	1.3	QB	35
		(LL)	0.276	0.452	0.728	0.010	0.016	0.026	CB	1.2		
	SB → QB	(LL)	0.216	0.401	0.642	0.010	0.016	0.026	SB	2.6		
	Set up time	D	0.230		0.440							
	Hold time	D	0.110		0.160							
	Release time	SB	0.080		0.080							
	Removal time	SB	0.130		0.210							
	Min Pulse	CB	0.320		0.819							
	Min Pulse	SB	0.361		0.956							
F666NB	CB → QB	(LH)	0.276	0.437	0.708	0.006	0.011	0.017	D	1.0	QB	70
		(LL)	0.280	0.462	0.749	0.005	0.008	0.013	CB	1.0		
	SB → QB	(LL)	0.229	0.430	0.692	0.005	0.008	0.013	SB	2.4		
	Set up time	D	0.240		0.460							
	Hold time	D	0.110		0.160							
	Release time	SB	0.090		0.110							
	Removal time	SB	0.110		0.180							
	Min Pulse	CB	0.325		0.839							
	Min Pulse	SB	0.389		1.017							
F666NBP	CB → QB	(LH)	0.328	0.519	0.850	0.003	0.005	0.009	D	1.0	QB	139
		(LL)	0.317	0.532	0.875	0.003	0.004	0.007	CB	1.0		
	SB → QB	(LL)	0.274	0.504	0.819	0.003	0.004	0.007	SB	2.4		
	Set up time	D	0.240		0.460							
	Hold time	D	0.110		0.160							
	Release time	SB	0.100		0.120							
	Removal time	SB	0.110		0.170							
	Min Pulse	CB	0.373		0.965							
	Min Pulse	SB	0.457		1.163							

[MEMO]

Function	D-F/F (CB) with RB,SB							SSI Family				
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power			L637	8								
x1	F637	10										
x2												
x4			F637NQT	13	F637NBT	13						

Logic Diagram for "Normal"

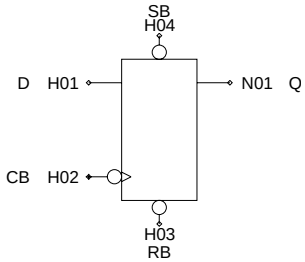


Truth Table for "Normal"

D	C	RB	SB	Q	QB	
0	↘	1	1	0	1	
1	↘	1	1	1	0	
X	↗	1	1	Hold		
X	X	0	1	0	1	
X	X	1	0	1	0	
X	X	0	0	0	0	← Prohibition

X:Irrelevant

Logic Diagram for "Q output"

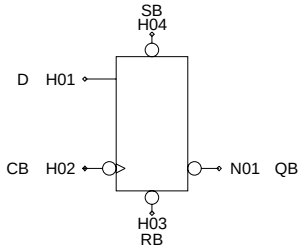


Truth Table for "Q output"

D	CB	RB	SB	Q	QB	
0	↘	1	1	0	1	
1	↘	1	1	1	0	
X	↗	1	1	Hold		
X	X	0	1	0	1	
X	X	1	0	1	0	
X	X	0	0	0	0	← Prohibition

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

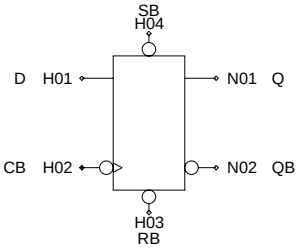
D	CB	RB	SB	Q	QB	
0	↘	1	1	0	1	
1	↘	1	1	1	0	
X	↗	1	1	Hold		
X	X	0	1	0	1	
X	X	1	0	1	0	
X	X	0	0	0	0	← Prohibition

X:Irrelevant

Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_1						
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F637	CB → Q		(LH)	0.338	0.548	0.896	0.006	0.011	0.017	D	1.0	Q	71
			(LL)	0.314	0.494	0.787	0.005	0.008	0.013	CB	1.0	QB	70
	CB → QB		(LH)	0.411	0.655	1.066	0.006	0.010	0.017	RB	2.6		
			(LL)	0.428	0.694	1.130	0.005	0.008	0.013	SB	2.5		
	RB → Q		(LL)	0.158	0.245	0.369	0.005	0.008	0.013				
	RB → QB		(LH)	0.257	0.497	0.800	0.006	0.011	0.017				
	SB → Q		(LH)	0.307	0.548	0.888	0.006	0.010	0.017				
	SB → QB		(LL)	0.152	0.309	0.471	0.005	0.008	0.013				
	Set up time	D		0.230		0.450							
	Hold time	D		0.100		0.150							
	Release time	RB		0.000		0.000							
	Release time	SB		0.070		0.090							
	Removal time	RB		0.340		0.660							
	Removal time	SB		0.140		0.220							
	Min Pulse	CB		0.470		1.220							
	Min Pulse	RB		0.435		1.077							
	Min Pulse	SB		0.478		1.206							
L637	CB → Q		(LH)	0.248	0.392	0.631	0.013	0.021	0.034	D	3.6	Q	35
			(LL)	0.259	0.422	0.675	0.010	0.016	0.026	CB	1.0		
	RB → Q		(LL)	0.213	0.387	0.617	0.010	0.016	0.026	RB	2.6		
	SB → Q		(LH)	0.277	0.615	1.023	0.013	0.021	0.034	SB	2.4		
	Set up time	D		0.210		0.300							
	Hold time	D		0.230		0.330							
	Release time	RB		0.080		0.110							
	Release time	SB		0.000		0.000							
	Removal time	RB		0.130		0.180							
	Removal time	SB		0.330		0.630							
	Min Pulse	CB		0.302		0.766							
	Min Pulse	RB		0.365		0.931							
	Min Pulse	SB		0.496		1.298							
F637NQT	CB → Q		(LH)	0.404	0.659	1.082	0.002	0.003	0.004	D	1.3	Q	283
			(LL)	0.384	0.609	0.978	0.001	0.002	0.003	CB	1.3		
	RB → Q		(LL)	0.193	0.299	0.456	0.001	0.002	0.003	RB	3.8		
	SB → Q		(LH)	0.357	0.616	1.007	0.002	0.003	0.004	SB	2.5		
	Set up time	D		0.230		0.450							
	Hold time	D		0.110		0.160							
	Release time	RB		0.000		0.000							
	Release time	SB		0.080		0.100							
	Removal time	RB		0.320		0.620							
	Removal time	SB		0.130		0.200							
	Min Pulse	CB		0.449		1.172							
	Min Pulse	RB		0.316		0.762							
	Min Pulse	SB		0.523		1.322							
F637NBT	CB → QB		(LH)	0.360	0.572	0.933	0.002	0.003	0.004	D	1.3	QB	271
			(LL)	0.350	0.589	0.976	0.001	0.002	0.003	CB	1.3		
	RB → QB		(LH)	0.449	0.779	1.310	0.002	0.003	0.004	RB	2.6		
	SB → QB		(LL)	0.295	0.623	1.037	0.001	0.002	0.003	SB	3.7		
	Set up time	D		0.240		0.480							
	Hold time	D		0.080		0.130							
	Release time	RB		0.000		0.000							
	Release time	SB		0.040		0.000							
	Removal time	RB		0.330		0.660							
	Removal time	SB		0.170		0.280							
	Min Pulse	CB		0.407		1.065							
	Min Pulse	RB		0.600		1.577							
	Min Pulse	SB		0.570		1.393							

Function	D-F/F (CB) with RB,SB										SSI Family	
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	F667NL	9	F667NQL	9	F667NBL	9						
x1	F667	10	F667NQ	9	F667NB	9						
x2	F667NP	12	F667NQP	10	F667NBP	10						
x4												

Logic Diagram for "Normal"

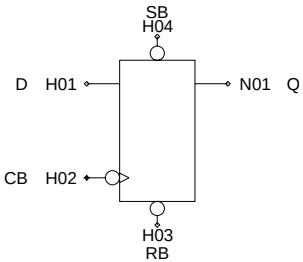


Truth Table for "Normal"

D	CB	RB	SB	Q	QB	
0	↘	1	1	0	1	
1	↘	1	1	1	0	
X	↗	1	1	Hold		
X	X	0	1	0	1	
X	X	1	0	1	0	
X	X	0	0	0	0	← Prohibition

X:Irrelevant

Logic Diagram for "Q output"

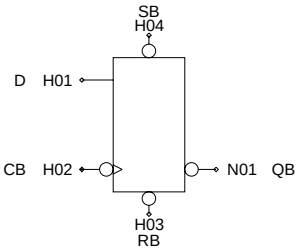


Truth Table for "Q output"

D	CB	RB	SB	Q	QB	
0	↘	1	1	0	1	
1	↘	1	1	1	0	
X	↗	1	1	Hold		
X	X	0	1	0	1	
X	X	1	0	1	0	
X	X	0	0	0	0	← Prohibition

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

D	CB	RB	SB	Q	QB	
0	↘	1	1	0	1	
1	↘	1	1	1	0	
X	↗	1	1	Hold		
X	X	0	1	0	1	
X	X	1	0	1	0	
X	X	0	0	0	0	← Prohibition

X:Irrelevant

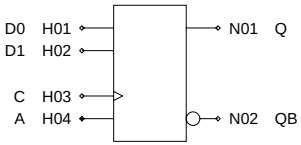
Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F667NL	CB → Q	(LH)	0.312	0.507	0.826	0.013	0.021	0.034	D	1.0	Q	35
		(LL)	0.288	0.455	0.723	0.010	0.016	0.025	CB	1.0	QB	35
	CB → QB	(LH)	0.361	0.577	0.938	0.013	0.021	0.034	RB	2.6		
		(LL)	0.380	0.617	1.003	0.010	0.016	0.025	SB	2.5		
	RB → Q	(LL)	0.137	0.214	0.319	0.010	0.016	0.025				
	RB → QB	(LH)	0.210	0.427	0.689	0.013	0.021	0.034				
	SB → Q	(LH)	0.279	0.463	0.752	0.013	0.021	0.034				
	SB → QB	(LL)	0.132	0.283	0.428	0.010	0.016	0.026				
	Set up time	D	0.230		0.440							
	Hold time	D	0.100		0.150							
	Release time	RB	0.000		0.000							
	Release time	SB	0.070		0.080							
	Removal time	RB	0.340		0.660							
	Removal time	SB	0.140		0.220							
	Min Pulse	CB	0.424		1.092							
	Min Pulse	RB	0.367		0.929							
	Min Pulse	SB	0.415		1.046							
F667	CB → Q	(LH)	0.338	0.548	0.896	0.006	0.011	0.017	D	1.0	Q	71
		(LL)	0.314	0.494	0.787	0.005	0.008	0.013	CB	1.0	QB	70
	CB → QB	(LH)	0.411	0.655	1.066	0.006	0.010	0.017	RB	2.6		
		(LL)	0.428	0.694	1.130	0.005	0.008	0.013	SB	2.5		
	RB → Q	(LL)	0.158	0.245	0.369	0.005	0.008	0.013				
	RB → QB	(LH)	0.257	0.497	0.800	0.006	0.011	0.017				
	SB → Q	(LH)	0.307	0.548	0.888	0.006	0.010	0.017				
	SB → QB	(LL)	0.152	0.309	0.471	0.005	0.008	0.013				
	Set up time	D	0.230		0.450							
	Hold time	D	0.100		0.150							
	Release time	RB	0.000		0.000							
	Release time	SB	0.070		0.090							
	Removal time	RB	0.340		0.660							
	Removal time	SB	0.140		0.220							
	Min Pulse	CB	0.470		1.220							
	Min Pulse	RB	0.435		1.077							
	Min Pulse	SB	0.478		1.206							
F667NP	CB → Q	(LH)	0.383	0.621	1.018	0.003	0.005	0.009	D	1.0	Q	142
		(LL)	0.357	0.561	0.894	0.003	0.004	0.006	CB	1.0	QB	141
	CB → QB	(LH)	0.514	0.816	1.331	0.003	0.005	0.008	RB	2.6		
		(LL)	0.526	0.852	1.394	0.003	0.004	0.006	SB	2.4		
	RB → Q	(LL)	0.199	0.309	0.471	0.003	0.004	0.006				
	RB → QB	(LH)	0.356	0.655	1.058	0.003	0.005	0.009				
	SB → Q	(LH)	0.350	0.711	1.148	0.003	0.005	0.009				
	SB → QB	(LL)	0.196	0.376	0.577	0.003	0.004	0.007				
	Set up time	D	0.230		0.450							
	Hold time	D	0.100		0.150							
	Release time	RB	0.000		0.000							
	Release time	SB	0.070		0.090							
	Removal time	RB	0.340		0.660							
	Removal time	SB	0.140		0.220							
	Min Pulse	CB	0.567		1.482							
	Min Pulse	RB	0.575		1.385							
	Min Pulse	SB	0.600		1.501							
F667NQL	CB → Q	(LH)	0.312	0.509	0.831	0.013	0.021	0.034	D	1.0	Q	35
		(LL)	0.291	0.459	0.730	0.010	0.016	0.025	CB	1.0		
	RB → Q	(LL)	0.138	0.215	0.322	0.010	0.016	0.025	RB	2.6		
	SB → Q	(LH)	0.257	0.455	0.740	0.013	0.021	0.034	SB	2.4		
	Set up time	D	0.230		0.440							

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Hold time	D	0.100		0.150							
	Release time	RB	0.000		0.000							
	Release time	SB	0.070		0.080							
	Removal time	RB	0.340		0.660							
	Removal time	SB	0.140		0.220							
	Min Pulse	CB	0.356		0.920							
	Min Pulse	RB	0.226		0.560							
	Min Pulse	SB	0.400		1.036							
F667NQ	CB → Q	(LH)	0.338	0.549	0.899	0.006	0.011	0.017	D	1.0	Q	71
		(LL)	0.314	0.495	0.789	0.005	0.008	0.013	CB	1.0		
	RB → Q	(LL)	0.160	0.248	0.373	0.005	0.008	0.013	RB	2.6		
	SB → Q	(LH)	0.283	0.496	0.808	0.006	0.011	0.017	SB	2.4		
	Set up time	D	0.230		0.450							
	Hold time	D	0.100		0.150							
	Release time	RB	0.000		0.000							
	Release time	SB	0.070		0.090							
	Removal time	RB	0.340		0.660							
	Removal time	SB	0.140		0.220							
	Min Pulse	CB	0.380		0.988							
	Min Pulse	RB	0.257		0.641							
	Min Pulse	SB	0.431		1.102							
F667NQP	CB → Q	(LH)	0.382	0.620	1.019	0.003	0.005	0.009	D	1.0	Q	141
		(LL)	0.358	0.563	0.899	0.003	0.004	0.006	CB	1.0		
	RB → Q	(LL)	0.199	0.310	0.472	0.003	0.004	0.006	RB	2.6		
	SB → Q	(LH)	0.329	0.570	0.931	0.003	0.005	0.009	SB	2.4		
	Set up time	D	0.230		0.450							
	Hold time	D	0.100		0.150							
	Release time	RB	0.000		0.000							
	Release time	SB	0.070		0.090							
	Removal time	RB	0.340		0.660							
	Removal time	SB	0.140		0.220							
	Min Pulse	CB	0.425		1.107							
	Min Pulse	RB	0.331		0.783							
	Min Pulse	SB	0.478		1.224							
F667NBL	CB → QB	(LH)	0.253	0.401	0.648	0.013	0.021	0.034	D	1.0	QB	35
		(LL)	0.264	0.432	0.694	0.010	0.016	0.026	CB	1.0		
	RB → QB	(LH)	0.262	0.601	1.000	0.013	0.021	0.034	RB	2.6		
	SB → QB	(LL)	0.209	0.385	0.615	0.010	0.016	0.026	SB	2.4		
	Set up time	D	0.230		0.440							
	Hold time	D	0.110		0.160							
	Release time	RB	0.000		0.000							
	Release time	SB	0.070		0.080							
	Removal time	RB	0.320		0.610							
	Removal time	SB	0.130		0.210							
	Min Pulse	CB	0.309		0.783							
	Min Pulse	RB	0.485		1.268							
	Min Pulse	SB	0.361		0.926							
F667NB	CB → QB	(LH)	0.275	0.435	0.705	0.007	0.011	0.017	D	1.0	QB	70
		(LL)	0.277	0.457	0.741	0.005	0.008	0.013	CB	1.0		
	RB → QB	(LH)	0.281	0.641	1.068	0.006	0.011	0.017	RB	2.6		
	SB → QB	(LL)	0.227	0.412	0.664	0.005	0.008	0.013	SB	2.4		
	Set up time	D	0.230		0.450							
	Hold time	D	0.100		0.160							
	Release time	RB	0.000		0.000							
	Release time	SB	0.080		0.090							
	Removal time	RB	0.300		0.590							

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Removal time	SB	0.130		0.210							
	Min Pulse	CB	0.321		0.829							
	Min Pulse	RB	0.512		1.342							
	Min Pulse	SB	0.387		0.983							
F667NBP	CB → QB	(LH)	0.331	0.526	0.862	0.003	0.005	0.009	D	1.0	QB	139
		(LL)	0.319	0.534	0.879	0.003	0.004	0.007	CB	1.0		
	RB → QB	(LH)	0.336	0.733	1.227	0.003	0.005	0.009	RB	2.6		
	SB → QB	(LL)	0.277	0.495	0.806	0.003	0.004	0.007	SB	2.4		
	Set up time	D	0.240		0.460							
	Hold time	D	0.110		0.160							
	Release time	RB	0.000		0.000							
	Release time	SB	0.080		0.090							
	Removal time	RB	0.270		0.540							
	Removal time	SB	0.130		0.200							
	Min Pulse	CB	0.376		0.967							
	Min Pulse	RB	0.570		1.502							
	Min Pulse	SB	0.466		1.147							

Function	D-F/F with 2 to 1 Selector										SSI Family	
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power												
x1												
x2												
x4	F611ST	17	F611SQT	13	F611SBT	13						

Logic Diagram for "Normal"

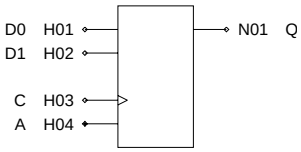


Truth Table for "Normal"

D0	D1	C	A	Q	QB
0	X	↗	0	0	1
1	X	↗	0	1	0
X	0	↗	1	0	1
X	1	↗	1	1	0
X	X	↘	0	Hold	
X	X	↘	1	Hold	

X:Irrelevant

Logic Diagram for "Q output"

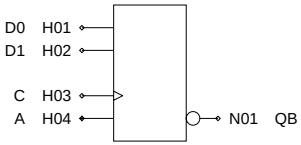


Truth Table for "Q output"

D0	D1	C	A	Q	QB
0	X	↗	0	0	1
1	X	↗	0	1	0
X	0	↗	1	0	1
X	1	↗	1	1	0
X	X	↘	0	Hold	
X	X	↘	1	Hold	

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

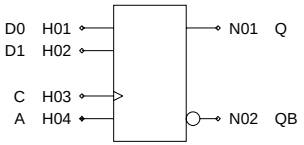
D0	D1	C	A	Q	QB
0	X	↗	0	0	1
1	X	↗	0	1	0
X	0	↗	1	0	1
X	1	↗	1	1	0
X	X	↘	0	Hold	
X	X	↘	1	Hold	

X:Irrelevant

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F611ST	C → Q	(HH)	0.336	0.538	0.857	0.002	0.003	0.004	D0	1.3	Q	289
		(HL)	0.361	0.558	0.876	0.001	0.002	0.003	D1	1.3	QB	288
	C → QB	(HH)	0.514	0.806	1.283	0.002	0.003	0.004	C	1.3		
		(HL)	0.554	0.886	1.416	0.001	0.002	0.003	A	1.3		
	Set up time	D0	0.300		0.590							
	Set up time	D1	0.310		0.610							
	Set up time	A	0.310		0.690							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Min Pulse	C	0.607		1.515							
F611SQT	C → Q	(HH)	0.334	0.536	0.852	0.002	0.003	0.004	D0	1.3	Q	288
		(HL)	0.358	0.554	0.869	0.001	0.002	0.003	D1	1.3		
	Set up time	D0	0.300		0.590				C	1.3		
	Set up time	D1	0.310		0.610				A	1.3		
	Set up time	A	0.310		0.690							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Min Pulse	C	0.407		0.970							
F611SBT	C → QB	(HH)	0.327	0.507	0.794	0.002	0.003	0.004	D0	1.3	QB	283
		(HL)	0.343	0.558	0.903	0.001	0.002	0.003	D1	1.3		
	Set up time	D0	0.350		0.680				C	1.4		
	Set up time	D1	0.360		0.700				A	1.3		
	Set up time	A	0.360		0.780							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Min Pulse	C	0.395		1.005							

Function	D-F/F with 2 to 1 Selector										SSI Family	
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	F641SL	9										
x1	F641S	10	F641SQ	9	F641SB	9						
x2	F641SP	12	F641SQP	10	F641SBP	10						
x4												

Logic Diagram for "Normal"

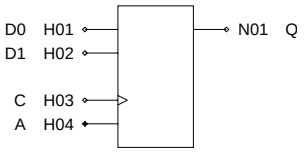


Truth Table for "Normal"

D0	D1	C	A	Q	QB
0	X	↗	0	0	1
1	X	↗	0	1	0
X	0	↗	1	0	1
X	1	↗	1	1	0
X	X	↘	0	Hold	
X	X	↘	1	Hold	

X:Irrelevant

Logic Diagram for "Q output"

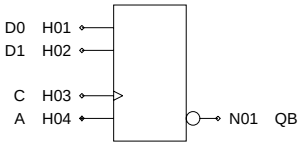


Truth Table for "Q output"

D0	D1	C	A	Q	QB
0	X	↗	0	0	1
1	X	↗	0	1	0
X	0	↗	1	0	1
X	1	↗	1	1	0
X	X	↘	0	Hold	
X	X	↘	1	Hold	

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

D0	D1	C	A	Q	QB
0	X	↗	0	0	1
1	X	↗	0	1	0
X	0	↗	1	0	1
X	1	↗	1	1	0
X	X	↘	0	Hold	
X	X	↘	1	Hold	

X:Irrelevant

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F641SL	C → Q	(HH)	0.262	0.402	0.624	0.013	0.021	0.034	D0	1.0	Q	35
		(HL)	0.301	0.466	0.722	0.010	0.016	0.025	D1	1.0	QB	36
	C → QB	(HH)	0.338	0.531	0.832	0.013	0.021	0.034	C	1.0		
		(HL)	0.323	0.500	0.780	0.010	0.016	0.025	A	1.0		
	Set up time	D0	0.300		0.580							
	Set up time	D1	0.300		0.590							
	Set up time	A	0.310		0.670							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Min Pulse	C	0.388		0.931							
F641S	C → Q	(HH)	0.281	0.435	0.673	0.006	0.010	0.017	D0	1.0	Q	71
		(HL)	0.325	0.502	0.784	0.005	0.008	0.013	D1	1.0	QB	72
	C → QB	(HH)	0.381	0.597	0.943	0.006	0.010	0.017	C	1.0		
		(HL)	0.366	0.571	0.891	0.005	0.008	0.013	A	1.0		
	Set up time	D0	0.300		0.580							
	Set up time	D1	0.300		0.590							
	Set up time	A	0.310		0.670							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Min Pulse	C	0.431		1.042							
F641SP	C → Q	(HH)	0.315	0.487	0.758	0.003	0.005	0.008	D0	1.0	Q	143
		(HL)	0.371	0.575	0.898	0.003	0.004	0.007	D1	1.0	QB	144
	C → QB	(HH)	0.464	0.729	1.153	0.003	0.005	0.008	C	1.0		
		(HL)	0.446	0.696	1.096	0.003	0.004	0.006	A	1.0		
	Set up time	D0	0.300		0.580							
	Set up time	D1	0.300		0.600							
	Set up time	A	0.310		0.670							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Min Pulse	C	0.513		1.252							
F641SQ	C → Q	(HH)	0.280	0.432	0.671	0.006	0.010	0.017	D0	1.0	Q	72
		(HL)	0.324	0.501	0.781	0.005	0.008	0.013	D1	1.0		
	Set up time	D0	0.300		0.580				C	1.0		
	Set up time	D1	0.300		0.590				A	1.0		
	Set up time	A	0.310		0.670							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Min Pulse	C	0.374		0.880							
F641SQP	C → Q	(HH)	0.314	0.484	0.756	0.003	0.005	0.008	D0	1.0	Q	142
		(HL)	0.368	0.571	0.893	0.003	0.004	0.007	D1	1.0		
	Set up time	D0	0.300		0.580				C	1.0		
	Set up time	D1	0.300		0.590				A	1.0		
	Set up time	A	0.310		0.670							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Min Pulse	C	0.418		0.992							
F641SB	C → QB	(HH)	0.268	0.413	0.646	0.006	0.011	0.017	D0	1.0	QB	70
		(HL)	0.282	0.448	0.705	0.005	0.008	0.013	D1	1.0		
	Set up time	D0	0.300		0.590				C	1.0		
	Set up time	D1	0.310		0.610				A	1.0		
	Set up time	A	0.310		0.690							

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Min Pulse	C	0.333		0.805							
F641SBP	C → QB	(HH)	0.305	0.471	0.744	0.003	0.005	0.009	D0	1.0	QB	141
		(HL)	0.326	0.532	0.859	0.003	0.004	0.007	D1	1.0		
	Set up time	D0	0.300		0.600				C	1.0		
	Set up time	D1	0.310		0.620				A	1.0		
	Set up time	A	0.310		0.700							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Min Pulse	C	0.376		0.958							

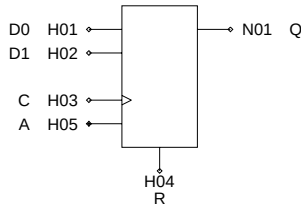
[MEMO]

Function	D-F/F with R,2 to 1 Selector							SSI Family			
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power												
x1												
x2												
x4			F612SQT	14	F612SBT	14						

Logic Diagram for "Normal"

Truth Table for "Normal"

Logic Diagram for "Q output"

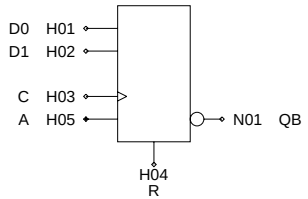


Truth Table for "Q output"

D0	D1	C	R	A	Q	QB
0	X	↗	0	0	0	1
1	X	↗	0	0	1	0
X	X	↘	0	0	Hold	
X	0	↗	0	1	0	1
X	1	↗	0	1	1	0
X	X	↘	0	1	Hold	
X	X	X	1	X	0	1

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

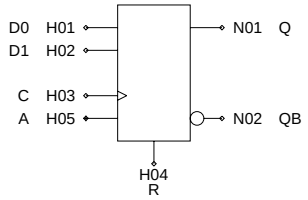
D0	D1	C	R	A	Q	QB
0	X	↗	0	0	0	1
1	X	↗	0	0	1	0
X	X	↘	0	0	Hold	
X	0	↗	0	1	0	1
X	1	↗	0	1	1	0
X	X	↘	0	1	Hold	
X	X	X	1	X	0	1

X:Irrelevant

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F612SQT	C → Q	(HH)	0.360	0.580	0.926	0.002	0.003	0.004	D0	1.3	Q	287
		(HL)	0.373	0.580	0.907	0.001	0.002	0.003	D1	1.3		
	R → Q	(HL)	0.307	0.503	0.783	0.001	0.002	0.003	C	1.4		
	Set up time	D0	0.330		0.780				R	2.6		
	Set up time	D1	0.340		0.800				A	1.3		
	Set up time	A	0.340		0.900							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Release time	R	0.110		0.350							
	Removal time	R	0.090		0.070							
	Min Pulse	C	0.422		1.028							
	Min Pulse	R	0.486		1.147							
F612SBT	C → QB	(HH)	0.341	0.528	0.833	0.002	0.003	0.004	D0	1.3	QB	279
		(HL)	0.400	0.670	1.115	0.001	0.002	0.004	D1	1.3		
	R → QB	(HH)	0.268	0.496	0.792	0.002	0.003	0.004	C	1.3		
	Set up time	D0	0.340		0.690				R	3.8		
	Set up time	D1	0.350		0.700				A	1.3		
	Set up time	A	0.350		0.790							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Release time	R	0.070		0.140							
	Removal time	R	0.130		0.160							
	Min Pulse	C	0.451		1.219							
	Min Pulse	R	0.566		1.212							

Function	D-F/F with R,2 to 1 Selector							SSI Family			
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	F642SL	10										
x1	F642S	11	F642SQ	10	F642SB	10						
x2	F642SP	13	F642SQP	11	F642SBP	11						
x4												

Logic Diagram for "Normal"

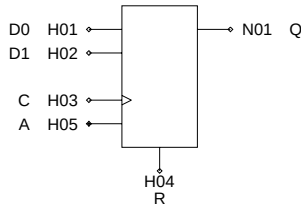


Truth Table for "Normal"

D0	D1	C	R	A	Q	QB
0	X	↗	0	0	0	1
1	X	↗	0	0	1	0
X	X	↘	0	0	Hold	
X	0	↗	0	1	0	1
X	1	↗	0	1	1	0
X	X	↘	0	1	Hold	
X	X	X	1	X	0	1

X:Irrelevant

Logic Diagram for "Q output"

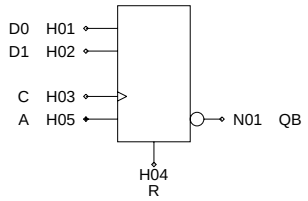


Truth Table for "Q output"

D0	D1	C	R	A	Q	QB
0	X	↗	0	0	0	1
1	X	↗	0	0	1	0
X	X	↘	0	0	Hold	
X	0	↗	0	1	0	1
X	1	↗	0	1	1	0
X	X	↘	0	1	Hold	
X	X	X	1	X	0	1

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

D0	D1	C	R	A	Q	QB
0	X	↗	0	0	0	1
1	X	↗	0	0	1	0
X	X	↘	0	0	Hold	
X	0	↗	0	1	0	1
X	1	↗	0	1	1	0
X	X	↘	0	1	Hold	
X	X	X	1	X	0	1

X:Irrelevant

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F642SL	C → Q	(HH)	0.279	0.432	0.674	0.013	0.021	0.034	D0	1.0	Q	36
		(HL)	0.308	0.476	0.736	0.010	0.016	0.025	D1	1.0	QB	35
	C → QB	(HH)	0.352	0.553	0.867	0.013	0.021	0.034	C	1.0		
		(HL)	0.408	0.644	1.018	0.010	0.016	0.026	R	2.5		
	R → Q	(HL)	0.261	0.392	0.602	0.010	0.016	0.025	A	1.0		
	R → QB	(HH)	0.127	0.241	0.348	0.013	0.021	0.034				
	Set up time	D0	0.320		0.800							
	Set up time	D1	0.330		0.820							
	Set up time	A	0.340		0.910							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Release time	R	0.100		0.350							
	Removal time	R	0.110		0.090							
	Min Pulse	C	0.464		1.125							
	Min Pulse	R	0.393		0.939							
F642S	C → Q	(HH)	0.298	0.462	0.724	0.006	0.010	0.017	D0	1.0	Q	72
		(HL)	0.330	0.509	0.793	0.005	0.008	0.013	D1	1.0	QB	71
	C → QB	(HH)	0.391	0.615	0.970	0.006	0.010	0.017	C	1.0		
		(HL)	0.467	0.738	1.170	0.005	0.008	0.013	R	2.5		
	R → Q	(HL)	0.285	0.451	0.697	0.005	0.008	0.013	A	1.0		
	R → QB	(HH)	0.146	0.260	0.376	0.006	0.011	0.017				
	Set up time	D0	0.320		0.810							
	Set up time	D1	0.330		0.820							
	Set up time	A	0.340		0.920							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Release time	R	0.100		0.360							
	Removal time	R	0.110		0.090							
	Min Pulse	C	0.522		1.274							
	Min Pulse	R	0.452		1.059							
F642SP	C → Q	(HH)	0.336	0.523	0.823	0.003	0.005	0.008	D0	1.0	Q	143
		(HL)	0.375	0.581	0.907	0.003	0.004	0.007	D1	1.0	QB	142
	C → QB	(HH)	0.473	0.745	1.182	0.003	0.005	0.008	C	1.0		
		(HL)	0.585	0.928	1.476	0.003	0.004	0.007	R	2.5		
	R → Q	(HL)	0.333	0.575	0.898	0.003	0.004	0.007	A	1.0		
	R → QB	(HH)	0.182	0.305	0.448	0.003	0.005	0.009				
	Set up time	D0	0.320		0.820							
	Set up time	D1	0.330		0.830							
	Set up time	A	0.340		0.920							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Release time	R	0.100		0.370							
	Removal time	R	0.110		0.090							
	Min Pulse	C	0.641		1.583							
	Min Pulse	R	0.575		1.308							
F642SQ	C → Q	(HH)	0.297	0.461	0.723	0.006	0.010	0.017	D0	1.0	Q	71
		(HL)	0.329	0.507	0.786	0.005	0.008	0.013	D1	1.0		
	R → Q	(HL)	0.261	0.424	0.653	0.005	0.008	0.013	C	1.0		
	Set up time	D0	0.320		0.810				R	2.5		
	Set up time	D1	0.330		0.820				A	1.0		
	Set up time	A	0.340		0.910							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Hold time	A	0.000		0.000							
	Release time	R	0.100		0.360							
	Removal time	R	0.110		0.090							
	Min Pulse	C	0.378		0.889							
	Min Pulse	R	0.411		0.993							
F642SQP	C → Q	(HH)	0.335	0.520	0.820	0.003	0.005	0.008	D0	1.0	Q	143
		(HL)	0.373	0.577	0.898	0.003	0.004	0.007	D1	1.0		
	R → Q	(HL)	0.306	0.494	0.768	0.003	0.004	0.007	C	1.0		
	Set up time	D0	0.320		0.820				R	2.5		
	Set up time	D1	0.330		0.830				A	1.0		
	Set up time	A	0.340		0.920							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Release time	R	0.100		0.370							
	Removal time	R	0.110		0.090							
	Min Pulse	C	0.422		1.001							
	Min Pulse	R	0.454		1.106							
F642SB	C → QB	(HH)	0.272	0.418	0.652	0.006	0.011	0.017	D0	1.0	QB	71
		(HL)	0.312	0.508	0.821	0.006	0.009	0.014	D1	1.0		
	R → QB	(HH)	0.214	0.346	0.535	0.006	0.011	0.017	C	1.0		
	Set up time	D0	0.330		0.740				R	2.4		
	Set up time	D1	0.330		0.760				A	1.0		
	Set up time	A	0.340		0.850							
	Hold time	D0	0.010		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Release time	R	0.110		0.300							
	Removal time	R	0.090		0.060							
	Min Pulse	C	0.365		0.924							
	Min Pulse	R	0.401		0.911							
F642SBP	C → QB	(HH)	0.309	0.477	0.751	0.003	0.005	0.009	D0	1.0	QB	141
		(HL)	0.376	0.623	1.035	0.003	0.005	0.007	D1	1.0		
	R → QB	(HH)	0.254	0.405	0.634	0.003	0.005	0.009	C	1.0		
	Set up time	D0	0.340		0.780				R	2.5		
	Set up time	D1	0.340		0.790				A	1.0		
	Set up time	A	0.350		0.870							
	Hold time	D0	0.010		0.000							
	Hold time	D1	0.010		0.000							
	Hold time	A	0.000		0.000							
	Release time	R	0.130		0.330							
	Removal time	R	0.080		0.040							
	Min Pulse	C	0.427		1.136							
	Min Pulse	R	0.472		1.037							

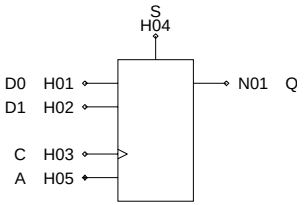
[MEMO]

Function	D-F/F with S,2 to 1 Selector							SSI Family				
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power												
x1												
x2												
x4			F613SQT	14	F613SBT	14						

Logic Diagram for "Normal"

Truth Table for "Normal"

Logic Diagram for "Q output"

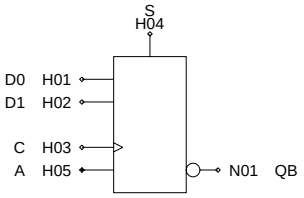


Truth Table for "Q output"

D0	D1	C	S	A	Q	QB
0	X	↗	0	0	0	1
1	X	↗	0	0	1	0
X	X	↘	0	0	Hold	
X	0	↗	0	1	0	1
X	1	↗	0	1	1	0
X	X	↘	0	1	Hold	
X	X	X	1	X	1	0

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

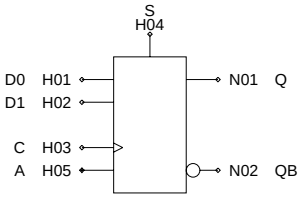
D0	D1	C	S	A	Q	QB
0	X	↗	0	0	0	1
1	X	↗	0	0	1	0
X	X	↘	0	0	Hold	
X	0	↗	0	1	0	1
X	1	↗	0	1	1	0
X	X	↘	0	1	Hold	
X	X	X	1	X	1	0

X:Irrelevant

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F613SQT	C → Q	(HH)	0.344	0.542	0.852	0.002	0.003	0.004	D0	1.3	Q	288
		(HL)	0.485	0.763	1.202	0.001	0.002	0.003	D1	1.3		
	S → Q	(HH)	0.177	0.250	0.361	0.002	0.003	0.004	C	1.4		
	Set up time	D0	0.300		0.610				S	3.7		
	Set up time	D1	0.310		0.630				A	1.3		
	Set up time	A	0.310		0.710							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Release time	S	0.000		0.000							
	Removal time	S	0.370		0.630							
	Min Pulse	C	0.534		1.303							
	Min Pulse	S	0.309		0.705							
F613SBT	C → QB	(HH)	0.328	0.508	0.793	0.002	0.003	0.004	D0	1.3	QB	284
		(HL)	0.345	0.561	0.909	0.001	0.002	0.003	D1	1.3		
	S → QB	(HL)	0.398	0.691	1.132	0.001	0.002	0.004	C	1.3		
	Set up time	D0	0.350		0.710				S	2.6		
	Set up time	D1	0.360		0.730				A	1.3		
	Set up time	A	0.360		0.810							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Release time	S	0.000		0.000							
	Removal time	S	0.440		0.760							
	Min Pulse	C	0.397		1.009							
	Min Pulse	S	0.568		1.442							

Function	D-F/F with S,2 to 1 Selector							SSI Family			
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	F643SL	10										
x1	F643S	11	F643SQ	10	F643SB	10						
x2	F643SP	13	F643SQP	11	F643SBP	11						
x4												

Logic Diagram for "Normal"

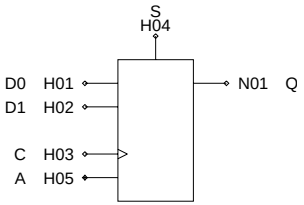


Truth Table for "Normal"

D0	D1	C	S	A	Q	QB
0	X	↗	0	0	0	1
1	X	↗	0	0	1	0
X	X	↘	0	0	Hold	
X	0	↗	0	1	0	1
X	1	↗	0	1	1	0
X	X	↘	0	1	Hold	
X	X	X	1	X	1	0

X:Irrelevant

Logic Diagram for "Q output"

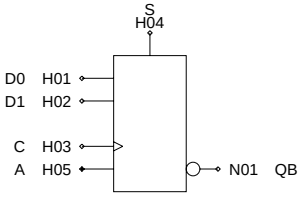


Truth Table for "Q output"

D0	D1	C	S	A	Q	QB
0	X	↗	0	0	0	1
1	X	↗	0	0	1	0
X	X	↘	0	0	Hold	
X	0	↗	0	1	0	1
X	1	↗	0	1	1	0
X	X	↘	0	1	Hold	
X	X	X	1	X	1	0

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

D0	D1	C	S	A	Q	QB
0	X	↗	0	0	0	1
1	X	↗	0	0	1	0
X	X	↘	0	0	Hold	
X	0	↗	0	1	0	1
X	1	↗	0	1	1	0
X	X	↘	0	1	Hold	
X	X	X	1	X	1	0

X:Irrelevant

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F643SL	C → Q	(HH)	0.272	0.419	0.649	0.013	0.021	0.034	D0	1.0	Q	36
		(HL)	0.381	0.597	0.935	0.010	0.016	0.026	D1	1.0	QB	36
	C → QB	(HH)	0.410	0.651	1.031	0.013	0.021	0.034	C	1.0		
		(HL)	0.334	0.519	0.807	0.010	0.016	0.025	S	2.5		
	S → Q	(HH)	0.136	0.199	0.286	0.013	0.021	0.034	A	1.0		
	S → QB	(HL)	0.198	0.375	0.568	0.010	0.016	0.026				
	Set up time	D0	0.300		0.590							
	Set up time	D1	0.300		0.610							
	Set up time	A	0.310		0.690							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Release time	S	0.000		0.000							
	Removal time	S	0.390		0.650							
	Min Pulse	C	0.461		1.132							
	Min Pulse	S	0.326		0.832							
F643S	C → Q	(HH)	0.288	0.443	0.688	0.006	0.010	0.017	D0	1.0	Q	71
		(HL)	0.417	0.655	1.027	0.005	0.008	0.013	D1	1.0	QB	72
	C → QB	(HH)	0.475	0.753	1.196	0.006	0.010	0.017	C	1.0		
		(HL)	0.377	0.586	0.918	0.005	0.008	0.013	S	2.5		
	S → Q	(HH)	0.154	0.222	0.317	0.006	0.010	0.017	A	1.0		
	S → QB	(HL)	0.244	0.437	0.665	0.005	0.008	0.013				
	Set up time	D0	0.300		0.590							
	Set up time	D1	0.300		0.610							
	Set up time	A	0.310		0.700							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Release time	S	0.000		0.000							
	Removal time	S	0.390		0.650							
	Min Pulse	C	0.525		1.296							
	Min Pulse	S	0.396		0.971							
F643SP	C → Q	(HH)	0.321	0.495	0.770	0.003	0.005	0.008	D0	1.0	Q	143
		(HL)	0.494	0.779	1.225	0.003	0.004	0.007	D1	1.0	QB	143
	C → QB	(HH)	0.601	0.956	1.520	0.003	0.005	0.008	C	1.0		
		(HL)	0.458	0.712	1.123	0.003	0.004	0.006	S	2.5		
	S → Q	(HH)	0.189	0.268	0.388	0.003	0.005	0.008	A	1.0		
	S → QB	(HL)	0.326	0.557	0.855	0.003	0.004	0.007				
	Set up time	D0	0.300		0.590							
	Set up time	D1	0.300		0.610							
	Set up time	A	0.310		0.700							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Release time	S	0.000		0.000							
	Removal time	S	0.390		0.650							
	Min Pulse	C	0.651		1.620							
	Min Pulse	S	0.526		1.228							
F643SQ	C → Q	(HH)	0.288	0.444	0.689	0.006	0.010	0.017	D0	1.0	Q	71
		(HL)	0.418	0.657	1.030	0.005	0.008	0.013	D1	1.0		
	S → Q	(HH)	0.154	0.222	0.318	0.006	0.010	0.017	C	1.0		
	Set up time	D0	0.300		0.590				S	2.5		
	Set up time	D1	0.300		0.610				A	1.0		
	Set up time	A	0.310		0.690							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							

Block type	Path		Switching speed t_{LD0} (ns)			Switching speed t_1			Input		Output	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Hold time	A	0.000		0.000							
	Release time	S	0.000		0.000							
	Removal time	S	0.390		0.650							
	Min Pulse	C	0.469		1.130							
	Min Pulse	S	0.256		0.622							
F643SQP	C → Q	(HH)	0.321	0.495	0.773	0.003	0.005	0.008	D0	1.0	Q	142
		(HL)	0.495	0.781	1.228	0.003	0.004	0.007	D1	1.0		
	S → Q	(HH)	0.189	0.267	0.389	0.003	0.005	0.008	C	1.0		
	Set up time	D0	0.300		0.590				S	2.5		
	Set up time	D1	0.300		0.610				A	1.0		
	Set up time	A	0.310		0.700							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Release time	S	0.000		0.000							
	Removal time	S	0.390		0.650							
	Min Pulse	C	0.546		1.329							
	Min Pulse	S	0.333		0.752							
F643SB	C → QB	(HH)	0.270	0.415	0.648	0.006	0.011	0.017	D0	1.0	QB	71
		(HL)	0.285	0.452	0.709	0.005	0.008	0.013	D1	1.0		
	S → QB	(HL)	0.274	0.565	0.910	0.005	0.008	0.013	C	1.0		
	Set up time	D0	0.300		0.610				S	2.5		
	Set up time	D1	0.300		0.630				A	1.0		
	Set up time	A	0.310		0.710							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Release time	S	0.000		0.000							
	Removal time	S	0.350		0.610							
	Min Pulse	C	0.338		0.812							
	Min Pulse	S	0.459		1.209							
F643SBP	C → QB	(HH)	0.308	0.474	0.747	0.003	0.005	0.009	D0	1.0	QB	141
		(HL)	0.329	0.537	0.863	0.003	0.004	0.007	D1	1.0		
	S → QB	(HL)	0.323	0.653	1.060	0.003	0.004	0.007	C	1.0		
	Set up time	D0	0.300		0.620				S	2.5		
	Set up time	D1	0.300		0.640				A	1.0		
	Set up time	A	0.310		0.730							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Release time	S	0.000		0.000							
	Removal time	S	0.320		0.590							
	Min Pulse	C	0.382		0.966							
	Min Pulse	S	0.509		1.358							

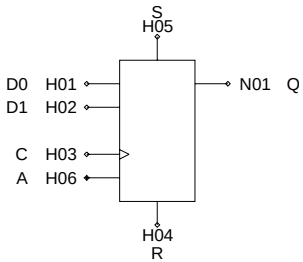
[MEMO]

Function	D-F/F with R,S,2 to 1 Selector							SSI Family				
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power												
x1												
x2												
x4			F614SQT	15	F614SBT	15						

Logic Diagram for "Normal"

Truth Table for "Normal"

Logic Diagram for "Q output"

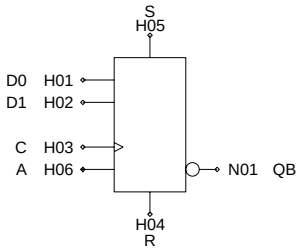


Truth Table for "Q output"

D0	D1	C	R	S	A	Q	QB	
0	X	↗	0	0	0	0	1	
1	X	↗	0	0	0	1	0	
X	X	↘	0	0	0	Hold		
X	0	↗	0	0	1	0	1	
X	1	↗	0	0	1	1	0	
X	X	↘	0	0	1	Hold		
X	X	X	0	1	X	1	0	
X	X	X	1	0	X	0	1	
X	X	X	1	1	X	1	1	← Prohibition

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

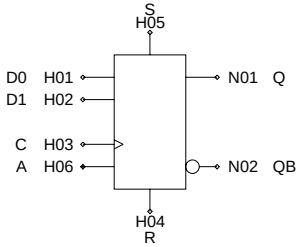
D0	D1	C	R	S	A	Q	QB	
0	X	↗	0	0	0	0	1	
1	X	↗	0	0	0	1	0	
X	X	↘	0	0	0	Hold		
X	0	↗	0	0	1	0	1	
X	1	↗	0	0	1	1	0	
X	X	↘	0	0	1	Hold		
X	X	X	0	1	X	1	0	
X	X	X	1	0	X	0	1	
X	X	X	1	1	X	1	1	← Prohibition

X:Irrelevant

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F614SQT	C → Q	(HH)	0.368	0.593	0.948	0.002	0.003	0.004	D0	1.3	Q	286
		(HL)	0.487	0.768	1.211	0.001	0.002	0.003	D1	1.3		
	R → Q	(HL)	0.428	0.685	1.077	0.001	0.002	0.003	C	1.3		
	S → Q	(HH)	0.179	0.253	0.364	0.002	0.003	0.004	R	2.7		
	Set up time	D0	0.330		0.780				S	3.7		
	Set up time	D1	0.330		0.790				A	1.3		
	Set up time	A	0.340		0.880							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Release time	R	0.100		0.320							
	Release time	S	0.000		0.000							
	Removal time	R	0.110		0.090							
	Removal time	S	0.390		0.660							
	Min Pulse	C	0.536		1.311							
	Min Pulse	R	0.594		1.429							
	Min Pulse	S	0.314		0.712							
F614SBT	C → QB	(HH)	0.340	0.527	0.829	0.002	0.003	0.004	D0	1.3	QB	279
		(HL)	0.401	0.672	1.118	0.001	0.002	0.004	D1	1.3		
	R → QB	(HH)	0.271	0.501	0.798	0.002	0.003	0.004	C	1.3		
	S → QB	(HL)	0.528	1.040	1.711	0.001	0.002	0.004	R	3.8		
	Set up time	D0	0.340		0.690				S	2.6		
	Set up time	D1	0.350		0.710				A	1.3		
	Set up time	A	0.350		0.790							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Release time	R	0.070		0.130							
	Release time	S	0.000		0.000							
	Removal time	R	0.140		0.180							
	Removal time	S	0.400		0.700							
	Min Pulse	C	0.452		1.221							
	Min Pulse	R	0.573		1.223							
	Min Pulse	S	0.765		1.988							

Function	D-F/F with R,S,2 to 1 Selector							SSI Family					
Block type	Standard type						Low Gate type						
	Normal		Q output		QB output		Normal		Q output		QB output		
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	
Low Power	F644SL	11											
x1	F644S	12	F644SQ	11	F644SB	11							
x2	F644SP	14	F644SQP	12	F644SBP	12							
x4													

Logic Diagram for "Normal"

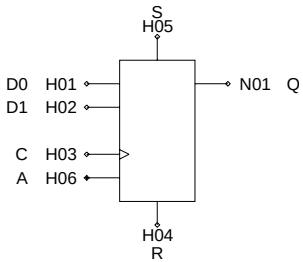


Truth Table for "Normal"

D0	D1	C	R	S	A	Q	QB	
0	X	↗	0	0	0	0	1	
1	X	↗	0	0	0	1	0	
X	X	↘	0	0	0	Hold		
X	0	↗	0	0	1	0	1	
X	1	↗	0	0	1	1	0	
X	X	↘	0	0	1	Hold		
X	X	X	0	1	X	1	0	
X	X	X	1	0	X	0	1	
X	X	X	1	1	X	1	1	← Prohibition

X:Irrelevant

Logic Diagram for "Q output"

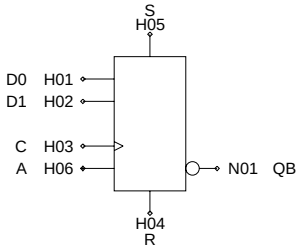


Truth Table for "Q output"

D0	D1	C	R	S	A	Q	QB	
0	X	↗	0	0	0	0	1	
1	X	↗	0	0	0	1	0	
X	X	↘	0	0	0	Hold		
X	0	↗	0	0	1	0	1	
X	1	↗	0	0	1	1	0	
X	X	↘	0	0	1	Hold		
X	X	X	0	1	X	1	0	
X	X	X	1	0	X	0	1	
X	X	X	1	1	X	1	1	← Prohibition

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

D0	D1	C	R	S	A	Q	QB	
0	X	↗	0	0	0	0	1	
1	X	↗	0	0	0	1	0	
X	X	↘	0	0	0	Hold		
X	0	↗	0	0	1	0	1	
X	1	↗	0	0	1	1	0	
X	X	↘	0	0	1	Hold		
X	X	X	0	1	X	1	0	
X	X	X	1	0	X	0	1	
X	X	X	1	1	X	1	1	← Prohibition

X:Irrelevant

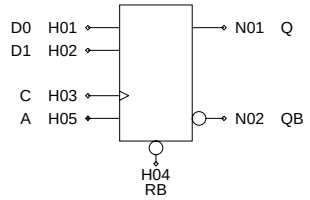
Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F644SL	C → Q	(HH)	0.283	0.439	0.686	0.013	0.021	0.034	D0	1.0	Q	36
		(HL)	0.378	0.592	0.926	0.010	0.016	0.026	D1	1.0	QB	35
	C → QB	(HH)	0.415	0.659	1.046	0.013	0.021	0.034	C	1.0		
		(HL)	0.413	0.654	1.034	0.010	0.016	0.026	R	2.6		
	R → Q	(HL)	0.322	0.500	0.777	0.010	0.016	0.026	S	2.5		
	R → QB	(HH)	0.127	0.240	0.345	0.013	0.021	0.034	A	1.0		
	S → Q	(HH)	0.133	0.195	0.281	0.013	0.021	0.034				
	S → QB	(HL)	0.262	0.554	0.863	0.010	0.016	0.026				
	Set up time	D0	0.320		0.800							
	Set up time	D1	0.330		0.810							
	Set up time	A	0.330		0.900							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Release time	R	0.090		0.340							
	Release time	S	0.000		0.000							
	Removal time	R	0.120		0.110							
	Removal time	S	0.410		0.690							
	Min Pulse	C	0.469		1.146							
	Min Pulse	R	0.463		1.114							
	Min Pulse	S	0.437		1.115							
F644S	C → Q	(HH)	0.302	0.468	0.735	0.006	0.010	0.017	D0	1.0	Q	72
		(HL)	0.416	0.653	1.022	0.005	0.008	0.013	D1	1.0	QB	71
	C → QB	(HH)	0.478	0.763	1.211	0.006	0.010	0.017	C	1.0		
		(HL)	0.476	0.755	1.198	0.005	0.008	0.013	R	2.6		
	R → Q	(HL)	0.363	0.590	0.923	0.005	0.008	0.013	S	2.5		
	R → QB	(HH)	0.150	0.264	0.381	0.006	0.010	0.017	A	1.0		
	S → Q	(HH)	0.153	0.220	0.315	0.006	0.010	0.017				
	S → QB	(HL)	0.326	0.643	1.001	0.005	0.009	0.014				
	Set up time	D0	0.320		0.800							
	Set up time	D1	0.330		0.810							
	Set up time	A	0.330		0.900							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Release time	R	0.090		0.350							
	Release time	S	0.000		0.000							
	Removal time	R	0.120		0.110							
	Removal time	S	0.410		0.690							
	Min Pulse	C	0.532		1.311							
	Min Pulse	R	0.548		1.290							
	Min Pulse	S	0.525		1.298							
F644SP	C → Q	(HH)	0.339	0.528	0.830	0.003	0.005	0.008	D0	1.0	Q	143
		(HL)	0.493	0.777	1.222	0.003	0.004	0.007	D1	1.0	QB	142
	C → QB	(HH)	0.600	0.963	1.533	0.003	0.005	0.008	C	1.0		
		(HL)	0.596	0.946	1.503	0.003	0.004	0.007	R	2.6		
	R → Q	(HL)	0.445	0.769	1.211	0.003	0.004	0.007	S	2.5		
	R → QB	(HH)	0.186	0.310	0.456	0.003	0.005	0.008	A	1.0		
	S → Q	(HH)	0.188	0.267	0.386	0.003	0.005	0.008				
	S → QB	(HL)	0.442	0.816	1.280	0.003	0.004	0.007				
	Set up time	D0	0.320		0.810							
	Set up time	D1	0.330		0.820							
	Set up time	A	0.330		0.910							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Release time	R	0.090		0.350							
	Release time	S	0.000		0.000							
	Removal time	R	0.120		0.110							
	Removal time	S	0.410		0.690							
	Min Pulse	C	0.651		1.633							
	Min Pulse	R	0.703		1.622							
	Min Pulse	S	0.684		1.640							
F644SQ	C → Q	(HH)	0.302	0.470	0.737	0.006	0.010	0.017	D0	1.0	Q	71
		(HL)	0.415	0.652	1.021	0.005	0.008	0.013	D1	1.0		
	R → Q	(HL)	0.345	0.554	0.866	0.005	0.008	0.013	C	1.0		
	S → Q	(HH)	0.153	0.220	0.315	0.006	0.010	0.017	R	2.6		
	Set up time	D0	0.320		0.800				S	2.5		
	Set up time	D1	0.330		0.810				A	1.0		
	Set up time	A	0.330		0.900							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Release time	R	0.090		0.350							
	Release time	S	0.000		0.000							
	Removal time	R	0.120		0.110							
	Removal time	S	0.410		0.690							
	Min Pulse	C	0.466		1.124							
	Min Pulse	R	0.492		1.199							
	Min Pulse	S	0.253		0.615							
F644SQP	C → Q	(HH)	0.339	0.529	0.832	0.003	0.005	0.008	D0	1.0	Q	142
		(HL)	0.494	0.779	1.220	0.003	0.004	0.007	D1	1.0		
	R → Q	(HL)	0.423	0.682	1.070	0.003	0.004	0.007	C	1.0		
	S → Q	(HH)	0.188	0.267	0.387	0.003	0.005	0.008	R	2.6		
	Set up time	D0	0.320		0.810				S	2.5		
	Set up time	D1	0.330		0.820				A	1.0		
	Set up time	A	0.330		0.910							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Release time	R	0.090		0.350							
	Release time	S	0.000		0.000							
	Removal time	R	0.120		0.110							
	Removal time	S	0.410		0.690							
	Min Pulse	C	0.544		1.325							
	Min Pulse	R	0.567		1.397							
	Min Pulse	S	0.333		0.748							
F644SB	C → QB	(HH)	0.270	0.417	0.650	0.006	0.011	0.017	D0	1.0	QB	71
		(HL)	0.314	0.513	0.829	0.006	0.009	0.014	D1	1.0		
	R → QB	(HH)	0.214	0.343	0.529	0.006	0.011	0.017	C	1.0		
	S → QB	(HL)	0.391	0.783	1.276	0.006	0.009	0.014	R	2.6		
	Set up time	D0	0.330		0.740				S	2.5		
	Set up time	D1	0.330		0.760				A	1.0		
	Set up time	A	0.340		0.850							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Release time	R	0.100		0.290							
	Release time	S	0.000		0.000							
	Removal time	R	0.100		0.080							
	Removal time	S	0.360		0.630							
	Min Pulse	C	0.368		0.930							

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Min Pulse	R	0.398		0.905							
	Min Pulse	S	0.589		1.558							
F644SBP	C → QB	(HH)	0.308	0.476	0.749	0.003	0.005	0.009	D0	1.0	QB	141
		(HL)	0.380	0.628	1.044	0.003	0.005	0.007	D1	1.0		
	R → QB	(HH)	0.254	0.403	0.632	0.003	0.005	0.009	C	1.0		
	S → QB	(HL)	0.473	0.921	1.505	0.003	0.005	0.007	R	2.6		
	Set up time	D0	0.330		0.780				S	2.5		
	Set up time	D1	0.340		0.780				A	1.0		
	Set up time	A	0.340		0.880							
	Hold time	D0	0.010		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Release time	R	0.120		0.320							
	Release time	S	0.000		0.000							
	Removal time	R	0.100		0.060							
	Removal time	S	0.330		0.610							
	Min Pulse	C	0.431		1.147							
	Min Pulse	R	0.471		1.036							
	Min Pulse	S	0.668		1.785							

Function	D-F/F with RB,2 to 1 Selector							SSI Family				
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	F615SL	10										
x1	F615S	11	F615SQ	10	F615SB	10						
x2	F615SP	13	F615SQP	11	F615SBP	11						
x4	F615ST	18	F615SQT	14	F615SBT	14						

Logic Diagram for "Normal"

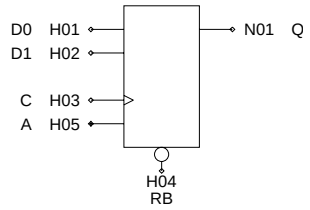


Truth Table for "Normal"

D0	D1	C	RB	A	Q	QB
0	X	↗	1	0	0	1
1	X	↗	1	0	1	0
X	X	↘	1	0	Hold	
X	0	↗	1	1	0	1
X	1	↗	1	1	1	0
X	X	↘	1	1	Hold	
X	X	X	0	X	0	1

X:Irrelevant

Logic Diagram for "Q output"

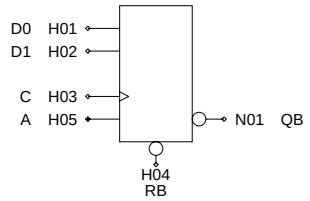


Truth Table for "Q output"

D0	D1	C	RB	A	Q	QB
0	X	↗	1	0	0	1
1	X	↗	1	0	1	0
X	X	↘	1	0	Hold	
X	0	↗	1	1	0	1
X	1	↗	1	1	1	0
X	X	↘	1	1	Hold	
X	X	X	0	X	0	1

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

D0	D1	C	RB	A	Q	QB
0	X	↗	1	0	0	1
1	X	↗	1	0	1	0
X	X	↘	1	0	Hold	
X	0	↗	1	1	0	1
X	1	↗	1	1	1	0
X	X	↘	1	1	Hold	
X	X	X	0	X	0	1

X:Irrelevant

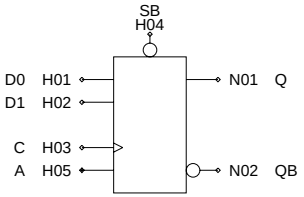
Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_1						
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F615SL	C → Q		(HH)	0.300	0.465	0.735	0.013	0.021	0.034	D0	1.0	Q	35
			(HL)	0.308	0.475	0.739	0.010	0.016	0.025	D1	1.0	QB	35
	C → QB		(HH)	0.347	0.542	0.854	0.013	0.021	0.034	C	1.0		
			(HL)	0.362	0.566	0.894	0.010	0.016	0.025	RB	2.5		
	RB → Q		(LL)	0.141	0.219	0.327	0.010	0.016	0.025	A	1.0		
	RB → QB		(LH)	0.180	0.343	0.535	0.013	0.021	0.034				
	Set up time	D0		0.300		0.580							
	Set up time	D1		0.310		0.590							
	Set up time	A		0.320		0.670							
	Hold time	D0		0.000		0.000							
	Hold time	D1		0.000		0.000							
	Hold time	A		0.000		0.000							
	Release time	RB		0.000		0.000							
	Removal time	RB		0.330		0.570							
	Min Pulse	C		0.415		0.998							
	Min Pulse	RB		0.308		0.778							
F615S	C → Q		(HH)	0.322	0.502	0.797	0.006	0.011	0.017	D0	1.0	Q	71
			(HL)	0.329	0.510	0.791	0.005	0.008	0.013	D1	1.0	QB	71
	C → QB		(HH)	0.390	0.612	0.963	0.006	0.010	0.017	C	1.0		
			(HL)	0.415	0.649	1.036	0.005	0.008	0.013	RB	2.5		
	RB → Q		(LL)	0.162	0.249	0.377	0.005	0.008	0.013	A	1.0		
	RB → QB		(LH)	0.225	0.410	0.638	0.006	0.010	0.017				
	Set up time	D0		0.300		0.580							
	Set up time	D1		0.310		0.590							
	Set up time	A		0.320		0.680							
	Hold time	D0		0.000		0.000							
	Hold time	D1		0.000		0.000							
	Hold time	A		0.000		0.000							
	Release time	RB		0.000		0.000							
	Removal time	RB		0.330		0.570							
	Min Pulse	C		0.468		1.139							
	Min Pulse	RB		0.374		0.917							
F615SP	C → Q		(HH)	0.371	0.578	0.926	0.003	0.005	0.009	D0	1.0	Q	142
			(HL)	0.374	0.579	0.903	0.003	0.004	0.007	D1	1.0	QB	142
	C → QB		(HH)	0.473	0.742	1.172	0.003	0.005	0.008	C	1.0		
			(HL)	0.515	0.809	1.300	0.003	0.004	0.006	RB	2.5		
	RB → Q		(LL)	0.203	0.317	0.483	0.003	0.004	0.007	A	1.0		
	RB → QB		(LH)	0.304	0.541	0.848	0.003	0.005	0.008				
	Set up time	D0		0.300		0.580							
	Set up time	D1		0.310		0.600							
	Set up time	A		0.320		0.680							
	Hold time	D0		0.000		0.000							
	Hold time	D1		0.000		0.000							
	Hold time	A		0.000		0.000							
	Release time	RB		0.000		0.000							
	Removal time	RB		0.330		0.570							
	Min Pulse	C		0.567		1.403							
	Min Pulse	RB		0.496		1.176							
F615ST	C → Q		(HH)	0.399	0.628	1.008	0.002	0.003	0.004	D0	1.3	Q	286
			(HL)	0.383	0.595	0.933	0.001	0.002	0.003	D1	1.3	QB	284
	C → QB		(HH)	0.543	0.853	1.354	0.002	0.003	0.004	C	1.3		
			(HL)	0.627	0.994	1.601	0.001	0.002	0.003	RB	3.8		
	RB → Q		(LL)	0.192	0.299	0.455	0.001	0.002	0.003	A	1.3		
	RB → QB		(LH)	0.353	0.634	0.995	0.002	0.003	0.004				
	Set up time	D0		0.300		0.590							
	Set up time	D1		0.310		0.610							

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Set up time	A	0.320		0.690							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Release time	RB	0.000		0.000							
	Removal time	RB	0.310		0.540							
	Min Pulse	C	0.680		1.701							
	Min Pulse	RB	0.543		1.319							
F615SQ	C → Q	(HH)	0.323	0.503	0.800	0.006	0.011	0.017	D0	1.0	Q	71
		(HL)	0.330	0.508	0.793	0.005	0.008	0.013	D1	1.0		
	RB → Q	(LL)	0.162	0.250	0.378	0.005	0.008	0.013	C	1.0		
	Set up time	D0	0.300		0.580				RB	2.5		
	Set up time	D1	0.310		0.590				A	1.0		
	Set up time	A	0.320		0.680							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Release time	RB	0.000		0.000							
	Removal time	RB	0.330		0.570							
	Min Pulse	C	0.380		0.901							
	Min Pulse	RB	0.273		0.647							
F615SQP	C → Q	(HH)	0.371	0.580	0.931	0.003	0.005	0.009	D0	1.0	Q	142
		(HL)	0.374	0.579	0.905	0.003	0.004	0.007	D1	1.0		
	RB → Q	(LL)	0.205	0.318	0.485	0.003	0.004	0.006	C	1.0		
	Set up time	D0	0.300		0.580				RB	2.5		
	Set up time	D1	0.310		0.600				A	1.0		
	Set up time	A	0.320		0.680							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Release time	RB	0.000		0.000							
	Removal time	RB	0.330		0.570							
	Min Pulse	C	0.424		1.032							
	Min Pulse	RB	0.338		0.797							
F615SQT	C → Q	(HH)	0.395	0.625	1.004	0.002	0.003	0.004	D0	1.3	Q	284
		(HL)	0.381	0.592	0.927	0.001	0.002	0.003	D1	1.3		
	RB → Q	(LL)	0.191	0.297	0.450	0.001	0.002	0.003	C	1.3		
	Set up time	D0	0.300		0.590				RB	3.9		
	Set up time	D1	0.310		0.610				A	1.3		
	Set up time	A	0.320		0.690							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Release time	RB	0.000		0.000							
	Removal time	RB	0.310		0.540							
	Min Pulse	C	0.448		1.104							
	Min Pulse	RB	0.303		0.755							
F615SB	C → QB	(HH)	0.271	0.416	0.651	0.006	0.011	0.017	D0	1.0	QB	70
		(HL)	0.282	0.449	0.704	0.005	0.008	0.013	D1	1.0		
	RB → QB	(LH)	0.234	0.527	0.863	0.006	0.011	0.017	C	1.0		
	Set up time	D0	0.300		0.590				RB	2.5		
	Set up time	D1	0.310		0.610				A	1.0		
	Set up time	A	0.320		0.700							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Release time	RB	0.000		0.000							
	Removal time	RB	0.290		0.520							
	Min Pulse	C	0.333		0.805							
	Min Pulse	RB	0.438		1.123							
F615SBP	C → QB	(HH)	0.308	0.476	0.750	0.003	0.005	0.009	D0	1.0	QB	141
		(HL)	0.327	0.533	0.859	0.003	0.004	0.007	D1	1.0		
	RB → QB	(LH)	0.272	0.593	0.973	0.003	0.005	0.009	C	1.0		
	Set up time	D0	0.310		0.600				RB	2.5		
	Set up time	D1	0.310		0.620				A	1.0		
	Set up time	A	0.320		0.710							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Release time	RB	0.000		0.000							
	Removal time	RB	0.270		0.490							
	Min Pulse	C	0.378		0.959							
	Min Pulse	RB	0.480		1.234							
F615SBT	C → QB	(HH)	0.329	0.508	0.795	0.002	0.003	0.004	D0	1.3	QB	278
		(HL)	0.343	0.557	0.901	0.001	0.002	0.003	D1	1.3		
	RB → QB	(LH)	0.340	0.652	1.083	0.002	0.003	0.004	C	1.3		
	Set up time	D0	0.350		0.680				RB	2.6		
	Set up time	D1	0.360		0.700				A	1.3		
	Set up time	A	0.360		0.780							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Release time	RB	0.000		0.000							
	Removal time	RB	0.360		0.700							
	Min Pulse	C	0.395		1.002							
	Min Pulse	RB	0.519		1.359							

Function	D-F/F with SB,2 to 1 Selector							SSI Family				
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	F616SL	10										
x1	F616S	11	F616SQ	10	F616SB	10						
x2	F616SP	13	F616SQP	11	F616SBP	11						
x4			F616SQT	14	F616SBT	14						

Logic Diagram for "Normal"

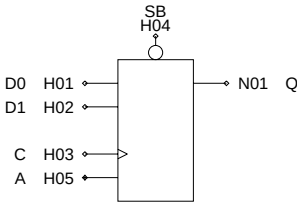


Truth Table for "Normal"

D0	D1	C	SB	A	Q	QB
0	X	↗	1	0	0	1
1	X	↗	1	0	1	0
X	X	↘	1	0	Hold	
X	0	↗	1	1	0	1
X	1	↗	1	1	1	0
X	X	↘	1	1	Hold	
X	X	X	0	X	1	0

X:Irrelevant

Logic Diagram for "Q output"

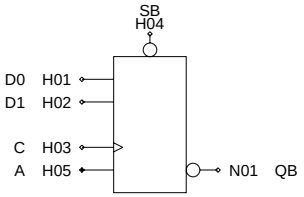


Truth Table for "Q output"

D0	D1	C	SB	A	Q	QB
0	X	↗	1	0	0	1
1	X	↗	1	0	1	0
X	X	↘	1	0	Hold	
X	0	↗	1	1	0	1
X	1	↗	1	1	1	0
X	X	↘	1	1	Hold	
X	X	X	0	X	1	0

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

D0	D1	C	SB	A	Q	QB
0	X	↗	1	0	0	1
1	X	↗	1	0	1	0
X	X	↘	1	0	Hold	
X	0	↗	1	1	0	1
X	1	↗	1	1	1	0
X	X	↘	1	1	Hold	
X	X	X	0	X	1	0

X:Irrelevant

Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_1						
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F616SL	C → Q		(HH)	0.264	0.406	0.628	0.013	0.021	0.034	D0	1.0	Q	36
			(HL)	0.320	0.493	0.772	0.010	0.016	0.025	D1	1.0	QB	36
	C → QB		(HH)	0.388	0.609	0.979	0.013	0.021	0.034	C	1.0		
			(HL)	0.330	0.512	0.798	0.010	0.016	0.025	SB	2.5		
	SB → Q		(LH)	0.246	0.401	0.644	0.013	0.021	0.034	A	1.0		
	SB → QB		(LL)	0.130	0.276	0.417	0.010	0.016	0.026				
	Set up time	D0		0.300		0.690							
	Set up time	D1		0.310		0.700							
	Set up time	A		0.320		0.790							
	Hold time	D0		0.000		0.000							
	Hold time	D1		0.000		0.000							
	Hold time	A		0.000		0.000							
	Release time	SB		0.090		0.090							
	Removal time	SB		0.110		0.150							
	Min Pulse	C		0.437		1.081							
	Min Pulse	SB		0.362		0.933							
F616S	C → Q		(HH)	0.283	0.436	0.675	0.006	0.010	0.017	D0	1.0	Q	71
			(HL)	0.344	0.534	0.838	0.005	0.008	0.013	D1	1.0	QB	72
	C → QB		(HH)	0.441	0.696	1.117	0.006	0.010	0.017	C	1.0		
			(HL)	0.372	0.579	0.905	0.005	0.008	0.013	SB	2.5		
	SB → Q		(LH)	0.268	0.475	0.762	0.006	0.010	0.017	A	1.0		
	SB → QB		(LL)	0.151	0.305	0.465	0.005	0.008	0.013				
	Set up time	D0		0.300		0.690							
	Set up time	D1		0.310		0.710							
	Set up time	A		0.320		0.790							
	Hold time	D0		0.000		0.000							
	Hold time	D1		0.000		0.000							
	Hold time	A		0.000		0.000							
	Release time	SB		0.090		0.090							
	Removal time	SB		0.110		0.150							
	Min Pulse	C		0.491		1.219							
	Min Pulse	SB		0.425		1.069							
F616SP	C → Q		(HH)	0.316	0.488	0.759	0.003	0.005	0.008	D0	1.0	Q	143
			(HL)	0.392	0.608	0.960	0.003	0.004	0.007	D1	1.0	QB	143
	C → QB		(HH)	0.545	0.859	1.390	0.003	0.005	0.008	C	1.0		
			(HL)	0.453	0.707	1.112	0.003	0.004	0.006	SB	2.5		
	SB → Q		(LH)	0.300	0.612	0.982	0.003	0.005	0.008	A	1.0		
	SB → QB		(LL)	0.196	0.372	0.571	0.003	0.004	0.007				
	Set up time	D0		0.300		0.690							
	Set up time	D1		0.310		0.710							
	Set up time	A		0.320		0.790							
	Hold time	D0		0.000		0.000							
	Hold time	D1		0.000		0.000							
	Hold time	A		0.000		0.000							
	Release time	SB		0.090		0.090							
	Removal time	SB		0.110		0.150							
	Min Pulse	C		0.594		1.488							
	Min Pulse	SB		0.535		1.326							
F616SQ	C → Q		(HH)	0.282	0.434	0.674	0.006	0.010	0.017	D0	1.0	Q	71
			(HL)	0.344	0.532	0.835	0.005	0.008	0.013	D1	1.0		
	SB → Q		(LH)	0.241	0.433	0.692	0.006	0.010	0.017	C	1.0		
	Set up time	D0		0.300		0.690				SB	2.5		
	Set up time	D1		0.310		0.710				A	1.0		
	Set up time	A		0.320		0.790							
	Hold time	D0		0.000		0.000							
	Hold time	D1		0.000		0.000							

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Hold time	A	0.000		0.000							
	Release time	SB	0.090		0.090							
	Removal time	SB	0.110		0.150							
	Min Pulse	C	0.393		0.937							
	Min Pulse	SB	0.374		0.986							
F616SQP	C → Q	(HH)	0.315	0.486	0.759	0.003	0.005	0.008	D0	1.0	Q	142
		(HL)	0.390	0.606	0.953	0.003	0.004	0.007	D1	1.0		
	SB → Q	(LH)	0.276	0.488	0.780	0.003	0.005	0.008	C	1.0		
	Set up time	D0	0.300		0.690				SB	2.5		
	Set up time	D1	0.310		0.710				A	1.0		
	Set up time	A	0.320		0.790							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Release time	SB	0.090		0.090							
	Removal time	SB	0.110		0.150							
	Min Pulse	C	0.439		1.054							
	Min Pulse	SB	0.409		1.074							
F616SQT	C → Q	(HH)	0.339	0.534	0.839	0.002	0.003	0.004	D0	1.3	Q	286
		(HL)	0.402	0.624	0.987	0.001	0.002	0.003	D1	1.3		
	SB → Q	(LH)	0.294	0.527	0.851	0.002	0.003	0.004	C	1.4		
	Set up time	D0	0.310		0.720				SB	2.5		
	Set up time	D1	0.320		0.740				A	1.3		
	Set up time	A	0.330		0.820							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Release time	SB	0.110		0.130							
	Removal time	SB	0.090		0.110							
	Min Pulse	C	0.452		1.086							
	Min Pulse	SB	0.449		1.167							
F616SB	C → QB	(HH)	0.302	0.465	0.739	0.007	0.011	0.017	D0	1.0	QB	70
		(HL)	0.284	0.452	0.710	0.005	0.008	0.013	D1	1.0		
	SB → QB	(LL)	0.233	0.424	0.679	0.005	0.008	0.013	C	1.0		
	Set up time	D0	0.310		0.710				SB	2.5		
	Set up time	D1	0.320		0.720				A	1.0		
	Set up time	A	0.330		0.810							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Release time	SB	0.100		0.110							
	Removal time	SB	0.100		0.120							
	Min Pulse	C	0.351		0.840							
	Min Pulse	SB	0.397		1.002							
F616SBP	C → QB	(HH)	0.352	0.545	0.875	0.003	0.005	0.009	D0	1.0	QB	139
		(HL)	0.327	0.534	0.858	0.003	0.004	0.007	D1	1.0		
	SB → QB	(LL)	0.279	0.501	0.819	0.003	0.004	0.007	C	1.0		
	Set up time	D0	0.320		0.720				SB	2.5		
	Set up time	D1	0.320		0.740				A	1.0		
	Set up time	A	0.340		0.820							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Release time	SB	0.110		0.120							
	Removal time	SB	0.090		0.110							
	Min Pulse	C	0.401		0.974							

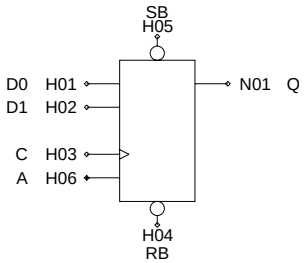
Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Min Pulse	SB	0.465		1.157							
F616SBT	C → QB	(HH)	0.376	0.583	0.933	0.002	0.003	0.004	D0	1.3	QB	279
		(HL)	0.361	0.593	0.967	0.001	0.002	0.003	D1	1.3		
	SB → QB	(LL)	0.297	0.614	1.022	0.001	0.002	0.003	C	1.3		
	Set up time	D0	0.320		0.730				SB	3.8		
	Set up time	D1	0.330		0.750				A	1.3		
	Set up time	A	0.340		0.830							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Release time	SB	0.050		0.010							
	Removal time	SB	0.150		0.230							
	Min Pulse	C	0.426		1.070							
	Min Pulse	SB	0.544		1.374							

Function	D-F/F with RB,SB,2 to 1 Selector							SSI Family				
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power												
x1												
x2												
x4			F617SQT	15	F617SBT	15						

Logic Diagram for "Normal"

Truth Table for "Normal"

Logic Diagram for "Q output"

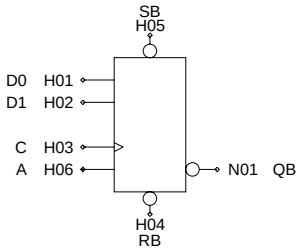


Truth Table for "Q output"

D0	D1	C	RB	SB	A	Q	QB	
0	X	↗	1	1	0	0	1	
1	X	↗	1	1	0	1	0	
X	X	↘	1	1	0	Hold		
X	0	↗	1	1	1	0	1	
X	1	↗	1	1	1	1	0	
X	X	↘	1	1	1	Hold		
X	X	X	0	1	X	0	1	
X	X	X	1	0	X	1	0	
X	X	X	0	0	X	0	0	← Prohibition

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

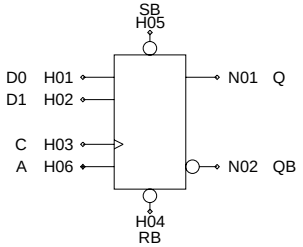
D0	D1	C	RB	SB	A	Q	QB	
0	X	↗	1	1	0	0	1	
1	X	↗	1	1	0	1	0	
X	X	↘	1	1	0	Hold		
X	0	↗	1	1	1	0	1	
X	1	↗	1	1	1	1	0	
X	X	↘	1	1	1	Hold		
X	X	X	0	1	X	0	1	
X	X	X	1	0	X	1	0	
X	X	X	0	0	X	0	0	← Prohibition

X:Irrelevant

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F617SQT	C → Q	(HH)	0.398	0.630	1.012	0.002	0.003	0.004	D0	1.3	Q	283
		(HL)	0.409	0.638	1.011	0.001	0.002	0.003	D1	1.3		
	RB → Q	(LL)	0.191	0.296	0.451	0.001	0.002	0.003	C	1.3		
	SB → Q	(LH)	0.350	0.611	0.998	0.002	0.003	0.004	RB	3.9		
	Set up time	D0	0.310		0.720				SB	2.5		
	Set up time	D1	0.310		0.730				A	1.3		
	Set up time	A	0.330		0.820							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Release time	RB	0.000		0.000							
	Release time	SB	0.090		0.100							
	Removal time	RB	0.330		0.570							
	Removal time	SB	0.110		0.150							
	Min Pulse	C	0.459		1.112							
	Min Pulse	RB	0.307		0.755							
	Min Pulse	SB	0.520		1.315							
F617SBT	C → QB	(HH)	0.376	0.585	0.934	0.002	0.003	0.004	D0	1.3	QB	271
		(HL)	0.360	0.593	0.965	0.001	0.002	0.003	D1	1.3		
	RB → QB	(LH)	0.441	0.775	1.303	0.002	0.003	0.004	C	1.3		
	SB → QB	(LL)	0.295	0.619	1.027	0.001	0.002	0.003	RB	2.6		
	Set up time	D0	0.330		0.740				SB	3.8		
	Set up time	D1	0.330		0.750				A	1.3		
	Set up time	A	0.340		0.830							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Release time	RB	0.000		0.000							
	Release time	SB	0.040		0.000							
	Removal time	RB	0.330		0.610							
	Removal time	SB	0.160		0.250							
	Min Pulse	C	0.427		1.067							
	Min Pulse	RB	0.601		1.565							
	Min Pulse	SB	0.554		1.383							

Function	D-F/F with RB,SB,2 to 1 Selector							SSI Family					
Block type	Standard type						Low Gate type						
	Normal		Q output		QB output		Normal		Q output		QB output		
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	
Low Power	F647SL	11											
x1	F647S	12	F647SQ	11	F647SB	11							
x2	F647SP	14	F647SQP	12	F647SBP	12							
x4													

Logic Diagram for "Normal"

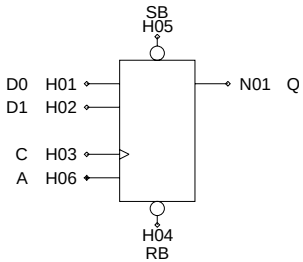


Truth Table for "Normal"

D0	D1	C	RB	SB	A	Q	QB	
0	X	↗	1	1	0	0	1	
1	X	↗	1	1	0	1	0	
X	X	↘	1	1	0	Hold		
X	0	↗	1	1	1	0	1	
X	1	↗	1	1	1	1	0	
X	X	↘	1	1	1	Hold		
X	X	X	0	1	X	0	1	
X	X	X	1	0	X	1	0	
X	X	X	0	0	X	0	0	← Prohibition

X:Irrelevant

Logic Diagram for "Q output"

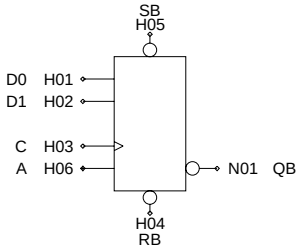


Truth Table for "Q output"

D0	D1	C	RB	SB	A	Q	QB	
0	X	↗	1	1	0	0	1	
1	X	↗	1	1	0	1	0	
X	X	↘	1	1	0	Hold		
X	0	↗	1	1	1	0	1	
X	1	↗	1	1	1	1	0	
X	X	↘	1	1	1	Hold		
X	X	X	0	1	X	0	1	
X	X	X	1	0	X	1	0	
X	X	X	0	0	X	0	0	← Prohibition

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

D0	D1	C	RB	SB	A	Q	QB	
0	X	↗	1	1	0	0	1	
1	X	↗	1	1	0	1	0	
X	X	↘	1	1	0	Hold		
X	0	↗	1	1	1	0	1	
X	1	↗	1	1	1	1	0	
X	X	↘	1	1	1	Hold		
X	X	X	0	1	X	0	1	
X	X	X	1	0	X	1	0	
X	X	X	0	0	X	0	0	← Prohibition

X:Irrelevant

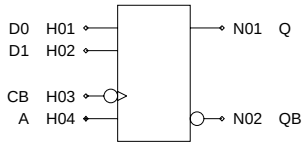
Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F647SL	C → Q	(HH)	0.300	0.465	0.737	0.013	0.021	0.034	D0	1.0	Q	35
		(HL)	0.322	0.499	0.781	0.010	0.016	0.025	D1	1.0	QB	35
	C → QB	(HH)	0.391	0.616	0.988	0.013	0.021	0.034	C	1.0		
		(HL)	0.365	0.570	0.905	0.010	0.016	0.025	RB	2.5		
	RB → Q	(LL)	0.137	0.215	0.320	0.010	0.016	0.025	SB	2.5		
	RB → QB	(LH)	0.207	0.422	0.682	0.013	0.021	0.034	A	1.0		
	SB → Q	(LH)	0.279	0.461	0.748	0.013	0.021	0.034				
	SB → QB	(LL)	0.130	0.279	0.423	0.010	0.016	0.026				
	Set up time	D0	0.300		0.690							
	Set up time	D1	0.310		0.700							
	Set up time	A	0.320		0.790							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Release time	RB	0.000		0.000							
	Release time	SB	0.080		0.080							
	Removal time	RB	0.350		0.600							
	Removal time	SB	0.120		0.170							
	Min Pulse	C	0.440		1.087							
	Min Pulse	RB	0.367		0.921							
	Min Pulse	SB	0.416		1.044							
F647S	C → Q	(HH)	0.323	0.503	0.798	0.006	0.010	0.017	D0	1.0	Q	71
		(HL)	0.344	0.534	0.840	0.005	0.008	0.013	D1	1.0	QB	70
	C → QB	(HH)	0.446	0.702	1.130	0.006	0.010	0.017	C	1.0		
		(HL)	0.417	0.653	1.042	0.005	0.008	0.013	RB	2.5		
	RB → Q	(LL)	0.159	0.245	0.370	0.005	0.008	0.013	SB	2.5		
	RB → QB	(LH)	0.261	0.503	0.812	0.006	0.011	0.017	A	1.0		
	SB → Q	(LH)	0.305	0.548	0.887	0.006	0.010	0.017				
	SB → QB	(LL)	0.155	0.314	0.479	0.005	0.008	0.013				
	Set up time	D0	0.300		0.690							
	Set up time	D1	0.310		0.700							
	Set up time	A	0.320		0.790							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Release time	RB	0.000		0.000							
	Release time	SB	0.080		0.080							
	Removal time	RB	0.350		0.600							
	Removal time	SB	0.120		0.170							
	Min Pulse	C	0.495		1.230							
	Min Pulse	RB	0.443		1.088							
	Min Pulse	SB	0.479		1.207							
F647SP	C → Q	(HH)	0.371	0.579	0.928	0.003	0.005	0.009	D0	1.0	Q	141
		(HL)	0.392	0.608	0.960	0.003	0.004	0.007	D1	1.0	QB	140
	C → QB	(HH)	0.549	0.866	1.401	0.003	0.005	0.008	C	1.0		
		(HL)	0.516	0.813	1.308	0.003	0.004	0.006	RB	2.5		
	RB → Q	(LL)	0.202	0.312	0.477	0.003	0.004	0.006	SB	2.5		
	RB → QB	(LH)	0.360	0.663	1.072	0.003	0.005	0.009	A	1.0		
	SB → Q	(LH)	0.352	0.716	1.160	0.003	0.005	0.009				
	SB → QB	(LL)	0.200	0.381	0.588	0.003	0.004	0.007				
	Set up time	D0	0.300		0.690							
	Set up time	D1	0.310		0.710							
	Set up time	A	0.320		0.790							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Release time	RB	0.000		0.000							
	Release time	SB	0.080		0.080							
	Removal time	RB	0.350		0.600							
	Removal time	SB	0.120		0.170							
	Min Pulse	C	0.599		1.500							
	Min Pulse	RB	0.579		1.400							
	Min Pulse	SB	0.610		1.513							
F647SQ	C → Q	(HH)	0.323	0.504	0.802	0.006	0.011	0.017	D0	1.0	Q	70
		(HL)	0.344	0.535	0.841	0.005	0.008	0.013	D1	1.0		
	RB → Q	(LL)	0.159	0.247	0.371	0.005	0.008	0.013	C	1.0		
	SB → Q	(LH)	0.283	0.494	0.801	0.006	0.011	0.017	RB	2.5		
	Set up time	D0	0.300		0.690				SB	2.5		
	Set up time	D1	0.310		0.700				A	1.0		
	Set up time	A	0.320		0.790							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Release time	RB	0.000		0.000							
	Release time	SB	0.080		0.080							
	Removal time	RB	0.350		0.600							
	Removal time	SB	0.120		0.170							
	Min Pulse	C	0.395		0.941							
	Min Pulse	RB	0.269		0.638							
	Min Pulse	SB	0.432		1.097							
F647SQP	C → Q	(HH)	0.372	0.582	0.933	0.003	0.005	0.009	D0	1.0	Q	141
		(HL)	0.392	0.610	0.961	0.003	0.004	0.007	D1	1.0		
	RB → Q	(LL)	0.202	0.314	0.479	0.003	0.004	0.006	C	1.0		
	SB → Q	(LH)	0.333	0.574	0.937	0.003	0.005	0.009	RB	2.5		
	Set up time	D0	0.300		0.690				SB	2.5		
	Set up time	D1	0.310		0.710				A	1.0		
	Set up time	A	0.320		0.790							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Release time	RB	0.000		0.000							
	Release time	SB	0.080		0.080							
	Removal time	RB	0.350		0.600							
	Removal time	SB	0.120		0.170							
	Min Pulse	C	0.442		1.061							
	Min Pulse	RB	0.334		0.792							
	Min Pulse	SB	0.482		1.233							
F647SB	C → QB	(HH)	0.301	0.464	0.738	0.006	0.011	0.017	D0	1.0	QB	70
		(HL)	0.281	0.448	0.702	0.005	0.008	0.013	D1	1.0		
	RB → QB	(LH)	0.285	0.636	1.062	0.006	0.011	0.017	C	1.0		
	SB → QB	(LL)	0.231	0.416	0.669	0.005	0.008	0.013	RB	2.5		
	Set up time	D0	0.310		0.700				SB	2.5		
	Set up time	D1	0.310		0.720				A	1.0		
	Set up time	A	0.330		0.810							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Release time	RB	0.000		0.000							
	Release time	SB	0.090		0.100							
	Removal time	RB	0.310		0.540							
	Removal time	SB	0.110		0.140							
	Min Pulse	C	0.350		0.837							

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Min Pulse	RB	0.512		1.326							
	Min Pulse	SB	0.397		0.990							
F647SBP	C → QB	(HH)	0.353	0.546	0.877	0.003	0.005	0.009	D0	1.0	QB	139
		(HL)	0.326	0.533	0.856	0.003	0.004	0.007	D1	1.0		
	RB → QB	(LH)	0.340	0.727	1.219	0.003	0.005	0.009	C	1.0		
	SB → QB	(LL)	0.280	0.499	0.812	0.003	0.004	0.007	RB	2.5		
	Set up time	D0	0.310		0.720				SB	2.5		
	Set up time	D1	0.320		0.740				A	1.0		
	Set up time	A	0.330		0.820							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Release time	RB	0.000		0.000							
	Release time	SB	0.100		0.110							
	Removal time	RB	0.270		0.500							
	Removal time	SB	0.100		0.130							
	Min Pulse	C	0.402		0.977							
	Min Pulse	RB	0.570		1.483							
	Min Pulse	SB	0.468		1.153							

Function	D-F/F (CB) with 2 to 1 Selector							SSI Family				
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power												
x1												
x2												
x4	F631ST	17	F631SQT	13	F631SBT	13						

Logic Diagram for "Normal"

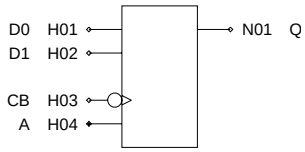


Truth Table for "Normal"

D0	D1	CB	A	Q	QB
0	X	↘	0	0	1
1	X	↘	0	1	0
X	X	↗	0	Hold	
X	0	↘	1	0	1
X	1	↘	1	1	0
X	X	↗	1	Hold	

X:Irrelevant

Logic Diagram for "Q output"

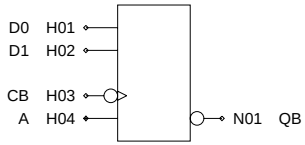


Truth Table for "Q output"

D0	D1	CB	A	Q	QB
0	X	↘	0	0	1
1	X	↘	0	1	0
X	X	↗	0	Hold	
X	0	↘	1	0	1
X	1	↘	1	1	0
X	X	↗	1	Hold	

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

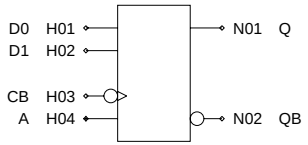
D0	D1	CB	A	Q	QB
0	X	↘	0	0	1
1	X	↘	0	1	0
X	X	↗	0	Hold	
X	0	↘	1	0	1
X	1	↘	1	1	0
X	X	↗	1	Hold	

X:Irrelevant

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F631ST	CB → Q	(LH)	0.334	0.552	0.898	0.002	0.003	0.004	D0	1.3	Q	289
		(LL)	0.334	0.528	0.842	0.001	0.002	0.003	D1	1.3	QB	289
	CB → QB	(LH)	0.488	0.777	1.249	0.002	0.003	0.004	CB	1.2		
		(LL)	0.551	0.899	1.455	0.001	0.002	0.003	A	1.3		
	Set up time	D0	0.280		0.640							
	Set up time	D1	0.290		0.660							
	Set up time	A	0.310		0.740							
	Hold time	D0	0.020		0.000							
	Hold time	D1	0.010		0.000							
	Hold time	A	0.020		0.000							
	Min Pulse	CB	0.597		1.547							
F631SQT	CB → Q	(LH)	0.332	0.548	0.892	0.002	0.003	0.004	D0	1.3	Q	288
		(LL)	0.333	0.527	0.840	0.001	0.002	0.003	D1	1.3		
	Set up time	D0	0.280		0.650				CB	1.2		
	Set up time	D1	0.290		0.660				A	1.3		
	Set up time	A	0.310		0.750							
	Hold time	D0	0.020		0.000							
	Hold time	D1	0.010		0.000							
	Hold time	A	0.020		0.000							
	Min Pulse	CB	0.378		0.982							
F631SBT	CB → QB	(LH)	0.309	0.491	0.784	0.002	0.003	0.004	D0	1.3	QB	283
		(LL)	0.331	0.555	0.912	0.001	0.002	0.003	D1	1.3		
	Set up time	D0	0.300		0.760				CB	1.2		
	Set up time	D1	0.310		0.780				A	1.3		
	Set up time	A	0.330		0.860							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Min Pulse	CB	0.376		1.000							

Function	D-F/F (CB) with 2 to 1 Selector										SSI Family	
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	F661SL	9										
x1	F661S	10	F661SQ	9	F661SB	9						
x2	F661SP	12	F661SQP	10	F661SBP	10						
x4												

Logic Diagram for "Normal"

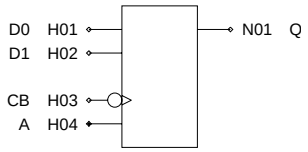


Truth Table for "Normal"

D0	D1	CB	A	Q	QB
0	X	↘	0	0	1
1	X	↘	0	1	0
X	X	↗	0	Hold	
X	0	↘	1	0	1
X	1	↘	1	1	0
X	X	↗	1	Hold	

X:Irrelevant

Logic Diagram for "Q output"

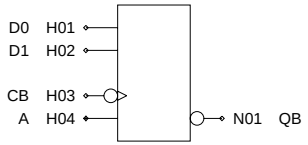


Truth Table for "Q output"

D0	D1	CB	A	Q	QB
0	X	↘	0	0	1
1	X	↘	0	1	0
X	X	↗	0	Hold	
X	0	↘	1	0	1
X	1	↘	1	1	0
X	X	↗	1	Hold	

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

D0	D1	CB	A	Q	QB
0	X	↘	0	0	1
1	X	↘	0	1	0
X	X	↗	0	Hold	
X	0	↘	1	0	1
X	1	↘	1	1	0
X	X	↗	1	Hold	

X:Irrelevant

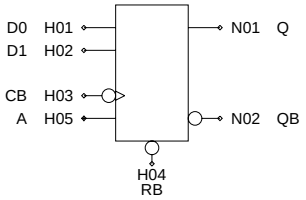
Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_1						
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F661SL	CB → Q		(LH)	0.274	0.444	0.714	0.013	0.021	0.034	D0	1.0	Q	36
			(LL)	0.266	0.419	0.661	0.010	0.016	0.025	D1	1.0	QB	36
	CB → QB		(LH)	0.304	0.484	0.771	0.013	0.021	0.034	CB	1.0		
			(LL)	0.335	0.541	0.869	0.010	0.016	0.025	A	1.0		
	Set up time	D0		0.280		0.640							
	Set up time	D1		0.280		0.660							
	Set up time	A		0.310		0.750							
	Hold time	D0		0.020		0.000							
	Hold time	D1		0.010		0.000							
	Hold time	A		0.020		0.000							
	Min Pulse	CB		0.376		0.959							
F661S	CB → Q		(LH)	0.294	0.477	0.764	0.006	0.010	0.017	D0	1.0	Q	71
			(LL)	0.291	0.460	0.725	0.005	0.008	0.013	D1	1.0	QB	72
	CB → QB		(LH)	0.347	0.554	0.883	0.006	0.010	0.017	CB	1.0		
			(LL)	0.378	0.612	0.982	0.005	0.008	0.013	A	1.0		
	Set up time	D0		0.280		0.640							
	Set up time	D1		0.280		0.660							
	Set up time	A		0.310		0.750							
	Hold time	D0		0.010		0.000							
	Hold time	D1		0.010		0.000							
	Hold time	A		0.020		0.000							
	Min Pulse	CB		0.420		1.072							
F661SP	CB → Q		(LH)	0.329	0.529	0.849	0.003	0.005	0.008	D0	1.0	Q	143
			(LL)	0.337	0.530	0.837	0.003	0.004	0.007	D1	1.0	QB	144
	CB → QB		(LH)	0.430	0.684	1.094	0.003	0.005	0.008	CB	1.0		
			(LL)	0.459	0.738	1.188	0.003	0.004	0.006	A	1.0		
	Set up time	D0		0.280		0.650							
	Set up time	D1		0.280		0.660							
	Set up time	A		0.310		0.740							
	Hold time	D0		0.010		0.000							
	Hold time	D1		0.010		0.000							
	Hold time	A		0.020		0.000							
	Min Pulse	CB		0.501		1.276							
F661SQ	CB → Q		(LH)	0.293	0.474	0.761	0.006	0.010	0.017	D0	1.0	Q	71
			(LL)	0.289	0.456	0.721	0.005	0.008	0.013	D1	1.0		
	Set up time	D0		0.280		0.650				CB	1.0		
	Set up time	D1		0.280		0.660				A	1.0		
	Set up time	A		0.310		0.740							
	Hold time	D0		0.010		0.000							
	Hold time	D1		0.010		0.000							
	Hold time	A		0.020		0.000							
	Min Pulse	CB		0.336		0.849							
F661SQP	CB → Q		(LH)	0.327	0.527	0.845	0.003	0.005	0.008	D0	1.0	Q	142
			(LL)	0.334	0.527	0.833	0.003	0.004	0.007	D1	1.0		
	Set up time	D0		0.280		0.650				CB	1.0		
	Set up time	D1		0.280		0.660				A	1.0		
	Set up time	A		0.310		0.740							
	Hold time	D0		0.010		0.000							
	Hold time	D1		0.010		0.000							
	Hold time	A		0.020		0.000							
	Min Pulse	CB		0.376		0.935							
F661SB	CB → QB		(LH)	0.245	0.386	0.617	0.006	0.011	0.017	D0	1.0	QB	70
			(LL)	0.279	0.458	0.740	0.005	0.008	0.013	D1	1.0		
	Set up time	D0		0.280		0.640				CB	1.0		
	Set up time	D1		0.290		0.660				A	1.0		
	Set up time	A		0.310		0.740							

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Hold time	D0	0.020		0.000							
	Hold time	D1	0.010		0.000							
	Hold time	A	0.020		0.000							
	Min Pulse	CB	0.323		0.832							
F661SBP	CB → QB	(LH)	0.285	0.452	0.729	0.003	0.005	0.009	D0	1.0	QB	141
		(LL)	0.320	0.535	0.878	0.003	0.004	0.007	D1	1.0		
	Set up time	D0	0.290		0.650				CB	1.0		
	Set up time	D1	0.300		0.670				A	1.0		
	Set up time	A	0.310		0.740							
	Hold time	D0	0.020		0.000							
	Hold time	D1	0.020		0.000							
	Hold time	A	0.020		0.000							
	Min Pulse	CB	0.365		0.969							

[MEMO]

Function	D-F/F (CB) with RB,2 to 1 Selector							SSI Family				
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power												
x1												
x2												
x4	F635ST	18	F635SQT	14	F635SBT	14						

Logic Diagram for "Normal"

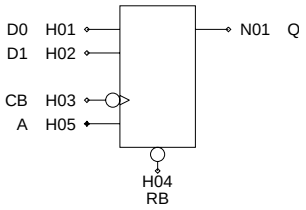


Truth Table for "Normal"

D0	D1	CB	RB	A	Q	QB
0	X	↘	1	0	0	1
1	X	↘	1	0	1	0
X	X	↗	1	0	Hold	
X	0	↘	1	1	0	1
X	1	↘	1	1	1	0
X	X	↗	1	1	Hold	
X	X	X	0	X	0	1

X:Irrelevant

Logic Diagram for "Q output"

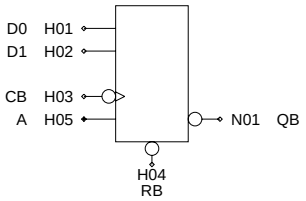


Truth Table for "Q output"

D0	D1	CB	RB	A	Q	QB
0	X	↘	1	0	0	1
1	X	↘	1	0	1	0
X	X	↗	1	0	Hold	
X	0	↘	1	1	0	1
X	1	↘	1	1	1	0
X	X	↗	1	1	Hold	
X	X	X	0	X	0	1

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

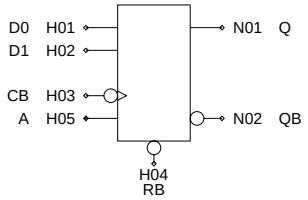
D0	D1	CB	RB	A	Q	QB
0	X	↘	1	0	0	1
1	X	↘	1	0	1	0
X	X	↗	1	0	Hold	
X	0	↘	1	1	0	1
X	1	↘	1	1	1	0
X	X	↗	1	1	Hold	
X	X	X	0	X	0	1

X:Irrelevant

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F635ST	CB → Q	(LH)	0.403	0.653	1.072	0.002	0.003	0.004	D0	1.3	Q	285
		(LL)	0.355	0.560	0.889	0.001	0.002	0.003	D1	1.3	QB	286
	CB → QB	(LH)	0.516	0.819	1.312	0.002	0.003	0.004	CB	1.2		
		(LL)	0.631	1.019	1.664	0.001	0.002	0.003	RB	3.8		
	RB → Q	(LL)	0.192	0.299	0.456	0.001	0.002	0.003	A	1.3		
	RB → QB	(LH)	0.353	0.634	0.995	0.002	0.003	0.004				
	Set up time	D0	0.290		0.650							
	Set up time	D1	0.300		0.670							
	Set up time	A	0.310		0.750							
	Hold time	D0	0.010		0.000							
	Hold time	D1	0.010		0.000							
	Hold time	A	0.020		0.000							
	Release time	RB	0.000		0.000							
	Removal time	RB	0.300		0.570							
	Min Pulse	CB	0.674		1.749							
	Min Pulse	RB	0.543		1.319							
F635SQT	CB → Q	(LH)	0.398	0.648	1.062	0.002	0.003	0.004	D0	1.3	Q	283
		(LL)	0.353	0.559	0.888	0.001	0.002	0.003	D1	1.3		
	RB → Q	(LL)	0.191	0.296	0.450	0.001	0.002	0.003	CB	1.2		
	Set up time	D0	0.290		0.650				RB	3.9		
	Set up time	D1	0.300		0.670				A	1.3		
	Set up time	A	0.310		0.750							
	Hold time	D0	0.010		0.000							
	Hold time	D1	0.010		0.000							
	Hold time	A	0.020		0.000							
	Release time	RB	0.000		0.000							
	Removal time	RB	0.300		0.580							
	Min Pulse	CB	0.442		1.151							
	Min Pulse	RB	0.303		0.755							
F635SBT	CB → QB	(LH)	0.310	0.491	0.784	0.002	0.003	0.004	D0	1.3	QB	278
		(LL)	0.330	0.553	0.909	0.001	0.002	0.003	D1	1.3		
	RB → QB	(LH)	0.340	0.652	1.082	0.002	0.003	0.004	CB	1.2		
	Set up time	D0	0.300		0.760				RB	2.6		
	Set up time	D1	0.310		0.780				A	1.3		
	Set up time	A	0.330		0.870							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	A	0.000		0.000							
	Release time	RB	0.000		0.000							
	Removal time	RB	0.360		0.740							
	Min Pulse	CB	0.376		1.002							
	Min Pulse	RB	0.519		1.359							

Function	D-F/F (CB) with RB,2 to 1 Selector							SSI Family				
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	F665SL	10										
x1	F665S	11	F665SQ	10	F665SB	10						
x2	F665SP	13	F665SQP	11	F665SBP	11						
x4												

Logic Diagram for "Normal"

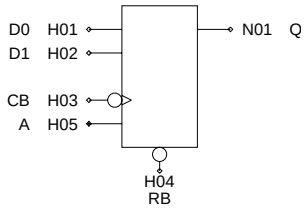


Truth Table for "Normal"

D0	D1	CB	RB	A	Q	QB
0	X	↘	1	0	0	1
1	X	↘	1	0	1	0
X	X	↗	1	0	Hold	
X	0	↘	1	1	0	1
X	1	↘	1	1	1	0
X	X	↗	1	1	Hold	
X	X	X	0	X	0	1

X:Irrelevant

Logic Diagram for "Q output"

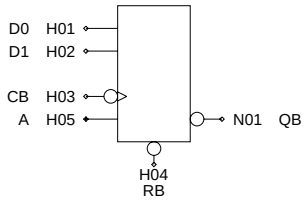


Truth Table for "Q output"

D0	D1	CB	RB	A	Q	QB
0	X	↘	1	0	0	1
1	X	↘	1	0	1	0
X	X	↗	1	0	Hold	
X	0	↘	1	1	0	1
X	1	↘	1	1	1	0
X	X	↗	1	1	Hold	
X	X	X	0	X	0	1

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

D0	D1	CB	RB	A	Q	QB
0	X	↘	1	0	0	1
1	X	↘	1	0	1	0
X	X	↗	1	0	Hold	
X	0	↘	1	1	0	1
X	1	↘	1	1	1	0
X	X	↗	1	1	Hold	
X	X	X	0	X	0	1

X:Irrelevant

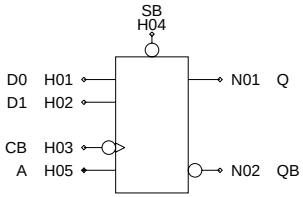
Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_1						
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F665SL	CB → Q		(LH)	0.314	0.510	0.832	0.013	0.021	0.034	D0	1.0	Q	35
			(LL)	0.274	0.432	0.682	0.010	0.016	0.025	D1	1.0	QB	36
	CB → QB		(LH)	0.313	0.500	0.797	0.013	0.021	0.034	CB	1.0		
			(LL)	0.377	0.611	0.994	0.010	0.016	0.025	RB	2.5		
	RB → Q		(LL)	0.142	0.219	0.327	0.010	0.016	0.025	A	1.0		
	RB → QB		(LH)	0.181	0.343	0.535	0.013	0.021	0.034				
	Set up time	D0		0.280		0.650							
	Set up time	D1		0.290		0.670							
	Set up time	A		0.310		0.740							
	Hold time	D0		0.010		0.000							
	Hold time	D1		0.010		0.000							
	Hold time	A		0.020		0.000							
	Release time	RB		0.000		0.000							
	Removal time	RB		0.320		0.620							
	Min Pulse	CB		0.421		1.082							
	Min Pulse	RB		0.308		0.778							
F665S	CB → Q		(LH)	0.337	0.547	0.894	0.006	0.011	0.017	D0	1.0	Q	71
			(LL)	0.295	0.464	0.733	0.005	0.008	0.013	D1	1.0	QB	71
	CB → QB		(LH)	0.356	0.565	0.904	0.006	0.010	0.017	CB	1.0		
			(LL)	0.430	0.694	1.132	0.005	0.008	0.013	RB	2.5		
	RB → Q		(LL)	0.162	0.248	0.377	0.005	0.008	0.013	A	1.0		
	RB → QB		(LH)	0.224	0.409	0.638	0.006	0.010	0.017				
	Set up time	D0		0.280		0.650							
	Set up time	D1		0.290		0.670							
	Set up time	A		0.310		0.740							
	Hold time	D0		0.010		0.000							
	Hold time	D1		0.010		0.000							
	Hold time	A		0.020		0.000							
	Release time	RB		0.000		0.000							
	Removal time	RB		0.320		0.620							
	Min Pulse	CB		0.471		1.221							
	Min Pulse	RB		0.374		0.917							
F665SP	CB → Q		(LH)	0.386	0.626	1.025	0.003	0.005	0.009	D0	1.0	Q	141
			(LL)	0.341	0.533	0.845	0.003	0.004	0.007	D1	1.0	QB	142
	CB → QB		(LH)	0.440	0.697	1.117	0.003	0.005	0.008	CB	1.0		
			(LL)	0.530	0.856	1.398	0.003	0.004	0.006	RB	2.5		
	RB → Q		(LL)	0.203	0.317	0.483	0.003	0.004	0.007	A	1.0		
	RB → QB		(LH)	0.304	0.541	0.848	0.003	0.005	0.008				
	Set up time	D0		0.280		0.650							
	Set up time	D1		0.290		0.670							
	Set up time	A		0.310		0.740							
	Hold time	D0		0.010		0.000							
	Hold time	D1		0.010		0.000							
	Hold time	A		0.020		0.000							
	Release time	RB		0.000		0.000							
	Removal time	RB		0.320		0.620							
	Min Pulse	CB		0.571		1.487							
	Min Pulse	RB		0.496		1.176							
F665SQ	CB → Q		(LH)	0.338	0.548	0.895	0.006	0.011	0.017	D0	1.0	Q	71
			(LL)	0.296	0.464	0.737	0.005	0.008	0.013	D1	1.0		
	RB → Q		(LL)	0.163	0.251	0.379	0.005	0.008	0.013	CB	1.0		
	Set up time	D0		0.280		0.650				RB	2.5		
	Set up time	D1		0.290		0.670				A	1.0		
	Set up time	A		0.310		0.740							
	Hold time	D0		0.010		0.000							
	Hold time	D1		0.010		0.000							

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Hold time	A	0.020		0.000							
	Release time	RB	0.000		0.000							
	Removal time	RB	0.320		0.620							
	Min Pulse	CB	0.380		0.983							
	Min Pulse	RB	0.273		0.648							
F665SQP	CB → Q	(LH)	0.386	0.625	1.026	0.003	0.005	0.009	D0	1.0	Q	141
		(LL)	0.341	0.537	0.849	0.003	0.004	0.007	D1	1.0		
	RB → Q	(LL)	0.204	0.318	0.485	0.003	0.004	0.006	CB	1.0		
	Set up time	D0	0.280		0.650				RB	2.5		
	Set up time	D1	0.290		0.670				A	1.0		
	Set up time	A	0.310		0.740							
	Hold time	D0	0.010		0.000							
	Hold time	D1	0.010		0.000							
	Hold time	A	0.020		0.000							
	Release time	RB	0.000		0.000							
	Removal time	RB	0.320		0.620							
	Min Pulse	CB	0.428		1.113							
	Min Pulse	RB	0.338		0.797							
F665SB	CB → QB	(LH)	0.248	0.390	0.625	0.006	0.011	0.017	D0	1.0	QB	70
		(LL)	0.280	0.462	0.746	0.005	0.008	0.013	D1	1.0		
	RB → QB	(LH)	0.233	0.526	0.861	0.006	0.011	0.017	CB	1.0		
	Set up time	D0	0.290		0.650				RB	2.5		
	Set up time	D1	0.300		0.670				A	1.0		
	Set up time	A	0.310		0.740							
	Hold time	D0	0.020		0.000							
	Hold time	D1	0.010		0.000							
	Hold time	A	0.020		0.000							
	Release time	RB	0.000		0.000							
	Removal time	RB	0.280		0.560							
	Min Pulse	CB	0.325		0.836							
	Min Pulse	RB	0.437		1.122							
F665SBP	CB → QB	(LH)	0.289	0.457	0.737	0.003	0.005	0.009	D0	1.0	QB	141
		(LL)	0.322	0.538	0.884	0.003	0.004	0.007	D1	1.0		
	RB → QB	(LH)	0.272	0.591	0.971	0.003	0.005	0.009	CB	1.0		
	Set up time	D0	0.300		0.650				RB	2.5		
	Set up time	D1	0.300		0.670				A	1.0		
	Set up time	A	0.310		0.740							
	Hold time	D0	0.020		0.000							
	Hold time	D1	0.020		0.000							
	Hold time	A	0.020		0.000							
	Release time	RB	0.000		0.000							
	Removal time	RB	0.260		0.520							
	Min Pulse	CB	0.367		0.973							
	Min Pulse	RB	0.479		1.232							

[MEMO]

Function	D-F/F (CB) with SB,2 to 1 Selector						SSI Family					
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power												
x1												
x2												
x4	F636ST	18			F636SBT	14						

Logic Diagram for "Normal"



Truth Table for "Normal"

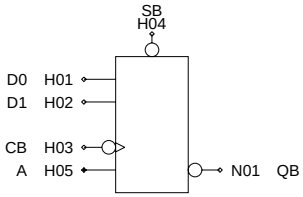
D0	D1	CB	SB	A	Q	QB
0	X	↘	1	0	0	1
1	X	↘	1	0	1	0
X	X	↗	1	0	Hold	
X	0	↘	1	1	0	1
X	1	↘	1	1	1	0
X	X	↗	1	1	Hold	
X	X	X	0	X	1	0

X:Irrelevant

Logic Diagram for "Q output"

Truth Table for "Q output"

Logic Diagram for "QB output"



Truth Table for "QB output"

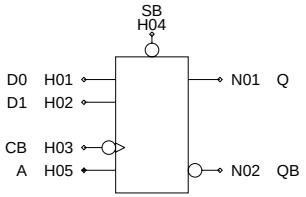
D0	D1	CB	SB	A	Q	QB
0	X	↘	1	0	0	1
1	X	↘	1	0	1	0
X	X	↗	1	0	Hold	
X	0	↘	1	1	0	1
X	1	↘	1	1	1	0
X	X	↗	1	1	Hold	
X	X	X	0	X	1	0

X:Irrelevant

Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_1						
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F636ST	CB → Q		(LH)	0.343	0.560	0.905	0.002	0.003	0.004	D0	1.3	Q	286
			(LL)	0.373	0.590	0.943	0.001	0.002	0.003	D1	1.3	QB	284
	CB → QB		(LH)	0.621	0.991	1.630	0.002	0.003	0.004	CB	1.2		
			(LL)	0.564	0.914	1.476	0.001	0.002	0.003	SB	2.6		
	SB → Q		(LH)	0.316	0.794	1.283	0.002	0.003	0.004	A	1.3		
	SB → QB		(LL)	0.275	0.529	0.822	0.001	0.002	0.003				
	Set up time	D0		0.330		0.730							
	Set up time	D1		0.340		0.750							
	Set up time	A		0.360		0.830							
	Hold time	D0		0.030		0.000							
	Hold time	D1		0.020		0.000							
	Hold time	A		0.030		0.000							
	Release time	SB		0.100		0.120							
	Removal time	SB		0.110		0.170							
	Min Pulse	CB		0.666		1.721							
	Min Pulse	SB		0.694		1.673							
F636SBT	CB → QB		(LH)	0.358	0.568	0.926	0.002	0.003	0.004	D0	1.3	QB	279
			(LL)	0.348	0.587	0.973	0.001	0.002	0.003	D1	1.3		
	SB → QB		(LL)	0.297	0.615	1.022	0.001	0.002	0.003	CB	1.2		
	Set up time	D0		0.330		0.780				SB	3.8		
	Set up time	D1		0.340		0.800				A	1.3		
	Set up time	A		0.360		0.880							
	Hold time	D0		0.000		0.000							
	Hold time	D1		0.000		0.000							
	Hold time	A		0.010		0.000							
	Release time	SB		0.050		0.010							
	Removal time	SB		0.150		0.260							
	Min Pulse	CB		0.404		1.064							
	Min Pulse	SB		0.544		1.374							

Function	D-F/F (CB) with SB,2 to 1 Selector							SSI Family					
Block type	Standard type						Low Gate type						
	Normal		Q output		QB output		Normal		Q output		QB output		
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	
Low Power	F666SL	10											
x1	F666S	11	F666SQ	10	F666SB	10							
x2	F666SP	13	F666SQP	11	F666SBP	11							
x4													

Logic Diagram for "Normal"

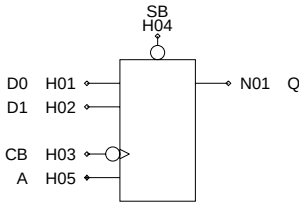


Truth Table for "Normal"

D0	D1	CB	SB	A	Q	QB
0	X	↘	1	0	0	1
1	X	↘	1	0	1	0
X	X	↗	1	0	Hold	
X	0	↘	1	1	0	1
X	1	↘	1	1	1	0
X	X	↗	1	1	Hold	
X	X	X	0	X	1	0

X:Irrelevant

Logic Diagram for "Q output"

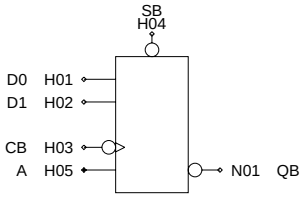


Truth Table for "Q output"

D0	D1	CB	SB	A	Q	QB
0	X	↘	1	0	0	1
1	X	↘	1	0	1	0
X	X	↗	1	0	Hold	
X	0	↘	1	1	0	1
X	1	↘	1	1	1	0
X	X	↗	1	1	Hold	
X	X	X	0	X	1	0

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

D0	D1	CB	SB	A	Q	QB
0	X	↘	1	0	0	1
1	X	↘	1	0	1	0
X	X	↗	1	0	Hold	
X	0	↘	1	1	0	1
X	1	↘	1	1	1	0
X	X	↗	1	1	Hold	
X	X	X	0	X	1	0

X:Irrelevant

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F666SL	CB → Q	(LH)	0.276	0.449	0.723	0.013	0.021	0.034	D0	1.3	Q	36
		(LL)	0.283	0.445	0.707	0.010	0.016	0.025	D1	1.3	QB	36
	CB → QB	(LH)	0.353	0.562	0.915	0.013	0.021	0.034	CB	1.2		
		(LL)	0.342	0.555	0.893	0.010	0.016	0.025	SB	2.5		
	SB → Q	(LH)	0.246	0.402	0.644	0.013	0.021	0.034	A	1.3		
	SB → QB	(LL)	0.130	0.276	0.417	0.010	0.016	0.026				
	Set up time	D0	0.320		0.710							
	Set up time	D1	0.320		0.730							
	Set up time	A	0.350		0.820							
	Hold time	D0	0.020		0.000							
	Hold time	D1	0.020		0.000							
	Hold time	A	0.020		0.000							
	Release time	SB	0.080		0.090							
	Removal time	SB	0.130		0.200							
	Min Pulse	CB	0.395		1.003							
	Min Pulse	SB	0.362		0.933							
F666S	CB → Q	(LH)	0.296	0.480	0.772	0.006	0.010	0.017	D0	1.3	Q	71
		(LL)	0.308	0.487	0.774	0.005	0.008	0.013	D1	1.3	QB	72
	CB → QB	(LH)	0.406	0.648	1.053	0.006	0.010	0.017	CB	1.2		
		(LL)	0.384	0.623	1.002	0.005	0.008	0.013	SB	2.5		
	SB → Q	(LH)	0.268	0.475	0.763	0.006	0.010	0.017	A	1.3		
	SB → QB	(LL)	0.152	0.305	0.464	0.005	0.008	0.013				
	Set up time	D0	0.320		0.710							
	Set up time	D1	0.320		0.730							
	Set up time	A	0.350		0.820							
	Hold time	D0	0.020		0.000							
	Hold time	D1	0.020		0.000							
	Hold time	A	0.020		0.000							
	Release time	SB	0.080		0.090							
	Removal time	SB	0.130		0.200							
	Min Pulse	CB	0.449		1.144							
	Min Pulse	SB	0.425		1.070							
F666SP	CB → Q	(LH)	0.330	0.533	0.856	0.003	0.005	0.008	D0	1.3	Q	143
		(LL)	0.356	0.560	0.893	0.003	0.004	0.007	D1	1.3	QB	144
	CB → QB	(LH)	0.510	0.811	1.322	0.003	0.005	0.008	CB	1.2		
		(LL)	0.466	0.751	1.207	0.003	0.004	0.006	SB	2.5		
	SB → Q	(LH)	0.300	0.612	0.979	0.003	0.005	0.008	A	1.3		
	SB → QB	(LL)	0.195	0.371	0.570	0.003	0.004	0.007				
	Set up time	D0	0.320		0.710							
	Set up time	D1	0.320		0.730							
	Set up time	A	0.350		0.820							
	Hold time	D0	0.020		0.000							
	Hold time	D1	0.020		0.000							
	Hold time	A	0.020		0.000							
	Release time	SB	0.080		0.100							
	Removal time	SB	0.130		0.210							
	Min Pulse	CB	0.554		1.412							
	Min Pulse	SB	0.535		1.324							
F666SQ	CB → Q	(LH)	0.293	0.476	0.768	0.006	0.010	0.017	D0	1.3	Q	71
		(LL)	0.309	0.486	0.772	0.005	0.008	0.013	D1	1.3		
	SB → Q	(LH)	0.242	0.433	0.694	0.006	0.010	0.017	CB	1.2		
	Set up time	D0	0.320		0.710				SB	2.5		
	Set up time	D1	0.320		0.730				A	1.3		
	Set up time	A	0.350		0.820							
	Hold time	D0	0.020		0.000							
	Hold time	D1	0.020		0.000							

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Hold time	A	0.020		0.000							
	Release time	SB	0.080		0.090							
	Removal time	SB	0.130		0.200							
	Min Pulse	CB	0.351		0.861							
	Min Pulse	SB	0.374		0.986							
F666SQP	CB → Q	(LH)	0.327	0.529	0.853	0.003	0.005	0.008	D0	1.3	Q	142
		(LL)	0.355	0.559	0.890	0.003	0.004	0.007	D1	1.3		
	SB → Q	(LH)	0.276	0.488	0.779	0.003	0.005	0.008	CB	1.2		
	Set up time	D0	0.320		0.710				SB	2.5		
	Set up time	D1	0.320		0.730				A	1.3		
	Set up time	A	0.350		0.820							
	Hold time	D0	0.020		0.000							
	Hold time	D1	0.020		0.000							
	Hold time	A	0.020		0.000							
	Release time	SB	0.080		0.100							
	Removal time	SB	0.130		0.200							
	Min Pulse	CB	0.398		0.979							
	Min Pulse	SB	0.409		1.074							
F666SB	CB → QB	(LH)	0.275	0.435	0.707	0.007	0.011	0.017	D0	1.3	QB	70
		(LL)	0.279	0.461	0.748	0.005	0.008	0.013	D1	1.3		
	SB → QB	(LL)	0.232	0.421	0.676	0.005	0.008	0.013	CB	1.2		
	Set up time	D0	0.320		0.710				SB	2.5		
	Set up time	D1	0.330		0.730				A	1.3		
	Set up time	A	0.350		0.820							
	Hold time	D0	0.030		0.000							
	Hold time	D1	0.020		0.000							
	Hold time	A	0.030		0.000							
	Release time	SB	0.090		0.090							
	Removal time	SB	0.120		0.190							
	Min Pulse	CB	0.323		0.836							
	Min Pulse	SB	0.395		0.998							
F666SBP	CB → QB	(LH)	0.331	0.526	0.861	0.003	0.005	0.009	D0	1.3	QB	139
		(LL)	0.320	0.537	0.884	0.003	0.004	0.007	D1	1.3		
	SB → QB	(LL)	0.279	0.501	0.818	0.003	0.004	0.007	CB	1.2		
	Set up time	D0	0.330		0.720				SB	2.5		
	Set up time	D1	0.330		0.740				A	1.3		
	Set up time	A	0.350		0.830							
	Hold time	D0	0.030		0.000							
	Hold time	D1	0.030		0.000							
	Hold time	A	0.030		0.000							
	Release time	SB	0.100		0.100							
	Removal time	SB	0.110		0.180							
	Min Pulse	CB	0.376		0.972							
	Min Pulse	SB	0.465		1.156							

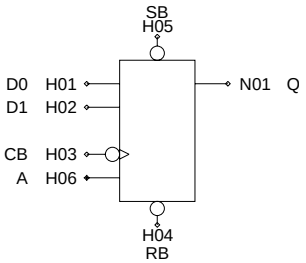
[MEMO]

Function	D-F/F (CB) with RB,SB,2 to 1 Selector							SSI Family				
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power												
x1												
x2												
x4			F637SQT	15	F637SBT	15						

Logic Diagram for "Normal"

Truth Table for "Normal"

Logic Diagram for "Q output"

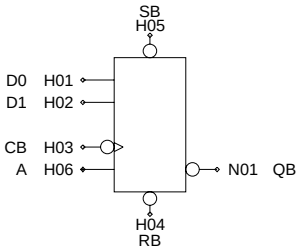


Truth Table for "Q output"

D0	D1	CB	RB	SB	A	Q	QB	
0	X	↘	1	1	0	0	1	
1	X	↗	1	1	0	1	0	
X	X	↗	1	1	0	Hold		
X	0	↘	1	1	1	0	1	
X	1	↘	1	1	1	1	0	
X	X	↗	1	1	1	Hold		
X	X	X	0	1	X	0	1	
X	X	X	1	0	X	1	0	
X	X	X	0	0	X	0	0	← Prohibition

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

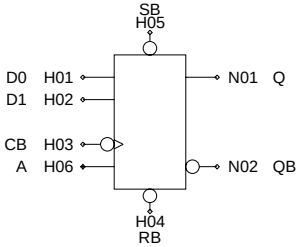
D0	D1	CB	RB	SB	A	Q	QB	
0	X	↘	1	1	0	0	1	
1	X	↗	1	1	0	1	0	
X	X	↗	1	1	0	Hold		
X	0	↘	1	1	1	0	1	
X	1	↘	1	1	1	1	0	
X	X	↗	1	1	1	Hold		
X	X	X	0	1	X	0	1	
X	X	X	1	0	X	1	0	
X	X	X	0	0	X	0	0	← Prohibition

X:Irrelevant

Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_1						
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F637SQT	CB → Q		(LH)	0.398	0.649	1.067	0.002	0.003	0.004	D0	1.3	Q	283
			(LL)	0.380	0.602	0.965	0.001	0.002	0.003	D1	1.3		
	RB → Q		(LL)	0.191	0.296	0.452	0.001	0.002	0.003	CB	1.2		
	SB → Q		(LH)	0.350	0.611	0.997	0.002	0.003	0.004	RB	3.9		
	Set up time	D0		0.320		0.730				SB	2.5		
	Set up time	D1		0.330		0.750				A	1.3		
	Set up time	A		0.350		0.830							
	Hold time	D0		0.020		0.000							
	Hold time	D1		0.010		0.000							
	Hold time	A		0.020		0.000							
	Release time	RB		0.000		0.000							
	Release time	SB		0.080		0.100							
	Removal time	RB		0.320		0.610							
	Removal time	SB		0.130		0.200							
	Min Pulse	CB		0.441		1.154							
	Min Pulse	RB		0.307		0.756							
	Min Pulse	SB		0.520		1.315							
F637SBT	CB → QB		(LH)	0.357	0.569	0.927	0.002	0.003	0.004	D0	1.3	QB	271
			(LL)	0.347	0.586	0.970	0.001	0.002	0.003	D1	1.3		
	RB → QB		(LH)	0.440	0.774	1.304	0.002	0.003	0.004	CB	1.2		
	SB → QB		(LL)	0.295	0.619	1.028	0.001	0.002	0.003	RB	2.6		
	Set up time	D0		0.330		0.780				SB	3.8		
	Set up time	D1		0.340		0.800				A	1.3		
	Set up time	A		0.360		0.890							
	Hold time	D0		0.000		0.000							
	Hold time	D1		0.000		0.000							
	Hold time	A		0.000		0.000							
	Release time	RB		0.000		0.000							
	Release time	SB		0.040		0.000							
	Removal time	RB		0.330		0.650							
	Removal time	SB		0.170		0.280							
	Min Pulse	CB		0.405		1.061							
	Min Pulse	RB		0.601		1.565							
	Min Pulse	SB		0.554		1.383							

Function	D-F/F (CB) with RB,SB,2 to 1 Selector							SSI Family					
Block type	Standard type						Low Gate type						
	Normal		Q output		QB output		Normal		Q output		QB output		
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	
Low Power	F667SL	11											
x1	F667S	12	F667SQ	11	F667SB	11							
x2	F667SP	14	F667SQP	12	F667SBP	12							
x4													

Logic Diagram for "Normal"

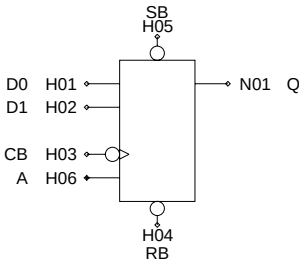


Truth Table for "Normal"

D0	D1	CB	RB	SB	A	Q	QB	
0	X	↘	1	1	0	0	1	
1	X	↗	1	1	0	1	0	
X	X	↗	1	1	0	Hold		
X	0	↘	1	1	1	0	1	
X	1	↘	1	1	1	1	0	
X	X	↗	1	1	1	Hold		
X	X	X	0	1	X	0	1	
X	X	X	1	0	X	1	0	
X	X	X	0	0	X	0	0	← Prohibition

X:Irrelevant

Logic Diagram for "Q output"

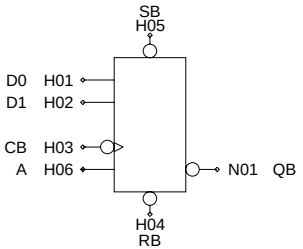


Truth Table for "Q output"

D0	D1	CB	RB	SB	A	Q	QB	
0	X	↘	1	1	0	0	1	
1	X	↗	1	1	0	1	0	
X	X	↗	1	1	0	Hold		
X	0	↘	1	1	1	0	1	
X	1	↘	1	1	1	1	0	
X	X	↗	1	1	1	Hold		
X	X	X	0	1	X	0	1	
X	X	X	1	0	X	1	0	
X	X	X	0	0	X	0	0	← Prohibition

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

D0	D1	CB	RB	SB	A	Q	QB	
0	X	↘	1	1	0	0	1	
1	X	↗	1	1	0	1	0	
X	X	↗	1	1	0	Hold		
X	0	↘	1	1	1	0	1	
X	1	↘	1	1	1	1	0	
X	X	↗	1	1	1	Hold		
X	X	X	0	1	X	0	1	
X	X	X	1	0	X	1	0	
X	X	X	0	0	X	0	0	← Prohibition

X:Irrelevant

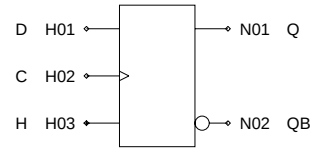
Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F667SL	CB → Q	(LH)	0.312	0.506	0.826	0.013	0.021	0.034	D0	1.0	Q	35
		(LL)	0.288	0.453	0.721	0.010	0.016	0.025	D1	1.0	QB	35
	CB → QB	(LH)	0.358	0.570	0.928	0.013	0.021	0.034	CB	1.0		
		(LL)	0.377	0.611	0.994	0.010	0.016	0.025	RB	2.5		
	RB → Q	(LL)	0.138	0.215	0.320	0.010	0.016	0.025	SB	2.5		
	RB → QB	(LH)	0.207	0.422	0.682	0.013	0.021	0.034	A	1.0		
	SB → Q	(LH)	0.278	0.462	0.749	0.013	0.021	0.034				
	SB → QB	(LL)	0.130	0.279	0.423	0.010	0.016	0.026				
	Set up time	D0	0.320		0.710							
	Set up time	D1	0.320		0.730							
	Set up time	A	0.350		0.820							
	Hold time	D0	0.020		0.000							
	Hold time	D1	0.010		0.000							
	Hold time	A	0.020		0.000							
	Release time	RB	0.000		0.000							
	Release time	SB	0.070		0.080							
	Removal time	RB	0.340		0.650							
	Removal time	SB	0.140		0.220							
	Min Pulse	CB	0.419		1.080							
	Min Pulse	RB	0.367		0.921							
	Min Pulse	SB	0.416		1.044							
F667S	CB → Q	(LH)	0.336	0.543	0.889	0.006	0.011	0.017	D0	1.0	Q	71
		(LL)	0.310	0.489	0.777	0.005	0.008	0.013	D1	1.0	QB	70
	CB → QB	(LH)	0.412	0.657	1.068	0.006	0.010	0.017	CB	1.0		
		(LL)	0.429	0.694	1.134	0.005	0.008	0.013	RB	2.5		
	RB → Q	(LL)	0.159	0.245	0.371	0.005	0.008	0.013	SB	2.5		
	RB → QB	(LH)	0.261	0.503	0.813	0.006	0.011	0.017	A	1.0		
	SB → Q	(LH)	0.304	0.549	0.887	0.006	0.010	0.017				
	SB → QB	(LL)	0.155	0.313	0.479	0.005	0.008	0.013				
	Set up time	D0	0.320		0.710							
	Set up time	D1	0.320		0.730							
	Set up time	A	0.350		0.820							
	Hold time	D0	0.020		0.000							
	Hold time	D1	0.010		0.000							
	Hold time	A	0.020		0.000							
	Release time	RB	0.000		0.000							
	Release time	SB	0.070		0.080							
	Removal time	RB	0.330		0.650							
	Removal time	SB	0.140		0.220							
	Min Pulse	CB	0.471		1.222							
	Min Pulse	RB	0.443		1.088							
	Min Pulse	SB	0.478		1.207							
F667SP	CB → Q	(LH)	0.384	0.623	1.020	0.003	0.005	0.009	D0	1.0	Q	142
		(LL)	0.358	0.563	0.895	0.003	0.004	0.007	D1	1.0	QB	140
	CB → QB	(LH)	0.516	0.822	1.337	0.003	0.005	0.008	CB	1.0		
		(LL)	0.527	0.857	1.399	0.003	0.004	0.006	RB	2.5		
	RB → Q	(LL)	0.202	0.313	0.477	0.003	0.004	0.006	SB	2.5		
	RB → QB	(LH)	0.360	0.663	1.072	0.003	0.005	0.009	A	1.0		
	SB → Q	(LH)	0.352	0.716	1.159	0.003	0.005	0.009				
	SB → QB	(LL)	0.200	0.381	0.588	0.003	0.004	0.007				
	Set up time	D0	0.320		0.720							
	Set up time	D1	0.320		0.730							
	Set up time	A	0.350		0.820							
	Hold time	D0	0.020		0.000							
	Hold time	D1	0.010		0.000							
	Hold time	A	0.020		0.000							

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Release time	RB	0.000		0.000							
	Release time	SB	0.070		0.090							
	Removal time	RB	0.330		0.650							
	Removal time	SB	0.140		0.220							
	Min Pulse	CB	0.569		1.486							
	Min Pulse	RB	0.579		1.399							
	Min Pulse	SB	0.610		1.513							
F667SQ	CB → Q	(LH)	0.335	0.544	0.889	0.006	0.011	0.017	D0	1.0	Q	71
		(LL)	0.311	0.491	0.781	0.005	0.008	0.013	D1	1.0		
	RB → Q	(LL)	0.160	0.247	0.371	0.005	0.008	0.013	CB	1.0		
	SB → Q	(LH)	0.283	0.493	0.801	0.006	0.011	0.017	RB	2.5		
	Set up time	D0	0.320		0.710				SB	2.5		
	Set up time	D1	0.320		0.730				A	1.0		
	Set up time	A	0.350		0.820							
	Hold time	D0	0.020		0.000							
	Hold time	D1	0.010		0.000							
	Hold time	A	0.020		0.000							
	Release time	RB	0.000		0.000							
	Release time	SB	0.070		0.080							
	Removal time	RB	0.340		0.650							
	Removal time	SB	0.140		0.220							
	Min Pulse	CB	0.377		0.978							
	Min Pulse	RB	0.268		0.638							
	Min Pulse	SB	0.432		1.097							
F667SQP	CB → Q	(LH)	0.383	0.622	1.020	0.003	0.005	0.009	D0	1.0	Q	141
		(LL)	0.359	0.565	0.901	0.003	0.004	0.007	D1	1.0		
	RB → Q	(LL)	0.203	0.314	0.480	0.003	0.004	0.006	CB	1.0		
	SB → Q	(LH)	0.332	0.573	0.937	0.003	0.005	0.009	RB	2.5		
	Set up time	D0	0.320		0.720				SB	2.5		
	Set up time	D1	0.320		0.730				A	1.0		
	Set up time	A	0.350		0.820							
	Hold time	D0	0.020		0.000							
	Hold time	D1	0.010		0.000							
	Hold time	A	0.020		0.000							
	Release time	RB	0.000		0.000							
	Release time	SB	0.070		0.090							
	Removal time	RB	0.340		0.650							
	Removal time	SB	0.140		0.220							
	Min Pulse	CB	0.425		1.108							
	Min Pulse	RB	0.335		0.792							
	Min Pulse	SB	0.481		1.233							
F667SB	CB → QB	(LH)	0.276	0.436	0.708	0.006	0.011	0.017	D0	1.0	QB	70
		(LL)	0.278	0.458	0.742	0.005	0.008	0.013	D1	1.0		
	RB → QB	(LH)	0.286	0.636	1.061	0.006	0.011	0.017	CB	1.0		
	SB → QB	(LL)	0.232	0.416	0.668	0.005	0.008	0.013	RB	2.5		
	Set up time	D0	0.320		0.720				SB	2.5		
	Set up time	D1	0.330		0.740				A	1.0		
	Set up time	A	0.350		0.820							
	Hold time	D0	0.030		0.000							
	Hold time	D1	0.020		0.000							
	Hold time	A	0.030		0.000							
	Release time	RB	0.000		0.000							
	Release time	SB	0.080		0.080							
	Removal time	RB	0.300		0.580							
	Removal time	SB	0.130		0.210							
	Min Pulse	CB	0.322		0.830							

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Min Pulse	RB	0.512		1.327							
	Min Pulse	SB	0.397		0.990							
F667SBP	CB → QB	(LH)	0.332	0.527	0.863	0.003	0.005	0.009	D0	1.0	QB	139
		(LL)	0.320	0.535	0.880	0.003	0.004	0.007	D1	1.0		
	RB → QB	(LH)	0.340	0.727	1.218	0.003	0.005	0.009	CB	1.0		
	SB → QB	(LL)	0.280	0.498	0.811	0.003	0.004	0.007	RB	2.5		
	Set up time	D0	0.320		0.730				SB	2.5		
	Set up time	D1	0.330		0.740				A	1.0		
	Set up time	A	0.350		0.830							
	Hold time	D0	0.030		0.000							
	Hold time	D1	0.020		0.000							
	Hold time	A	0.030		0.000							
	Release time	RB	0.000		0.000							
	Release time	SB	0.090		0.090							
	Removal time	RB	0.270		0.530							
	Removal time	SB	0.120		0.200							
	Min Pulse	CB	0.376		0.969							
	Min Pulse	RB	0.569		1.481							
	Min Pulse	SB	0.467		1.152							

Function	D-F/F with Hold										SSI Family	
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	F641HL	9										
x1	F641H	10	F641HQ	9	F641HB	9						
x2	F641HP	12	F641HQP	10	F641HBP	10						
x4												

Logic Diagram for "Normal"

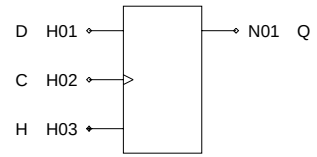


Truth Table for "Normal"

D	C	H	Q	QB
0	↗	0	0	1
1	↗	0	1	0
X	↗	1	Hold	
X	↘	X	Hold	

X:Irrelevant

Logic Diagram for "Q output"

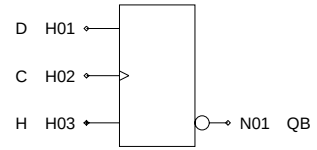


Truth Table for "Q output"

D	C	H	Q	QB
0	↗	0	0	1
1	↗	0	1	0
X	↗	1	Hold	
X	↘	X	Hold	

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

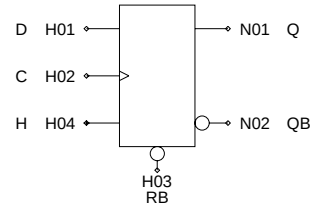
D	C	H	Q	QB
0	↗	0	0	1
1	↗	0	1	0
X	↗	1	Hold	
X	↘	X	Hold	

X:Irrelevant

Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_1						
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F641HL	C → Q		(HH)	0.266	0.407	0.630	0.013	0.021	0.034	D	1.0	Q	36
			(HL)	0.305	0.469	0.726	0.010	0.016	0.025	C	1.0	QB	36
	C → QB		(HH)	0.363	0.567	0.893	0.013	0.021	0.034	H	1.0		
			(HL)	0.358	0.554	0.865	0.010	0.016	0.025				
	Set up time	D		0.300		0.580							
	Set up time	H		0.300		0.670							
	Hold time	D		0.000		0.000							
	Hold time	H		0.000		0.000							
	Min Pulse	C		0.413		0.995							
F641H	C → Q		(HH)	0.281	0.431	0.667	0.006	0.010	0.017	D	1.0	Q	72
			(HL)	0.324	0.501	0.777	0.005	0.008	0.013	C	1.0	QB	72
	C → QB		(HH)	0.404	0.635	1.000	0.006	0.010	0.017	H	1.0		
			(HL)	0.399	0.620	0.972	0.005	0.008	0.013				
	Set up time	D		0.300		0.580							
	Set up time	H		0.300		0.670							
	Hold time	D		0.000		0.000							
	Hold time	H		0.000		0.000							
	Min Pulse	C		0.453		1.101							
F641HP	C → Q		(HH)	0.314	0.483	0.753	0.003	0.005	0.008	D	1.0	Q	143
			(HL)	0.369	0.571	0.889	0.003	0.004	0.007	C	1.0	QB	145
	C → QB		(HH)	0.487	0.765	1.210	0.003	0.005	0.008	H	1.0		
			(HL)	0.479	0.747	1.178	0.003	0.004	0.007				
	Set up time	D		0.300		0.580							
	Set up time	H		0.300		0.670							
	Hold time	D		0.000		0.000							
	Hold time	H		0.000		0.000							
	Min Pulse	C		0.536		1.313							
F641HQ	C → Q		(HH)	0.281	0.431	0.670	0.006	0.010	0.017	D	1.0	Q	71
			(HL)	0.325	0.502	0.778	0.005	0.008	0.013	C	1.0		
	Set up time	D		0.300		0.580				H	1.0		
	Set up time	H		0.300		0.670							
	Hold time	D		0.000		0.000							
	Hold time	H		0.000		0.000							
	Min Pulse	C		0.374		0.879							
F641HQP	C → Q		(HH)	0.314	0.484	0.756	0.003	0.005	0.008	D	1.0	Q	143
			(HL)	0.369	0.571	0.891	0.003	0.004	0.007	C	1.0		
	Set up time	D		0.300		0.580				H	1.0		
	Set up time	H		0.300		0.670							
	Hold time	D		0.000		0.000							
	Hold time	H		0.000		0.000							
	Min Pulse	C		0.419		0.992							
F641HB	C → QB		(HH)	0.272	0.419	0.654	0.006	0.011	0.017	D	1.0	QB	70
			(HL)	0.285	0.452	0.709	0.005	0.008	0.013	C	1.0		
	Set up time	D		0.300		0.590				H	1.0		
	Set up time	H		0.300		0.680							
	Hold time	D		0.000		0.000							
	Hold time	H		0.000		0.000							
	Min Pulse	C		0.337		0.811							
F641HBP	C → QB		(HH)	0.309	0.478	0.753	0.003	0.005	0.009	D	1.0	QB	141
			(HL)	0.329	0.536	0.863	0.003	0.004	0.007	C	1.0		
	Set up time	D		0.300		0.590				H	1.0		
	Set up time	H		0.300		0.680							
	Hold time	D		0.000		0.000							
	Hold time	H		0.000		0.000							
	Min Pulse	C		0.381		0.963							

Function	D-F/F with RB,Hold										SSI Family	
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	F615HL	10										
x1	F615H	11	F615HQ	10	F615HB	10						
x2	F615HP	13	F615HQP	11	F615HBP	11						
x4												

Logic Diagram for "Normal"

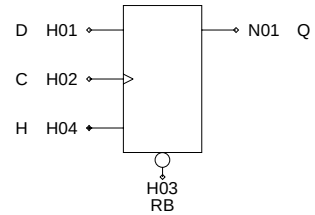


Truth Table for "Normal"

D	C	RB	H	Q	QB
0	↗	1	0	0	1
1	↗	1	0	1	0
X	↗	1	1	Hold	
X	↘	1	X	Hold	
X	X	0	X	0	1

X:Irrelevant

Logic Diagram for "Q output"

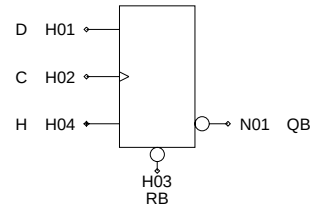


Truth Table for "Q output"

D	C	RB	H	Q	QB
0	↗	1	0	0	1
1	↗	1	0	1	0
X	↗	1	1	Hold	
X	↘	1	X	Hold	
X	X	0	X	0	1

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

D	C	RB	H	Q	QB
0	↗	1	0	0	1
1	↗	1	0	1	0
X	↗	1	1	Hold	
X	↘	1	X	Hold	
X	X	0	X	0	1

X:Irrelevant

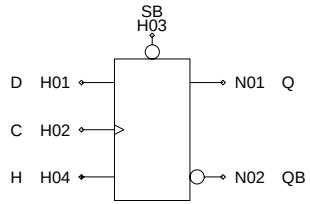
Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_1						
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F615HL	C → Q		(HH)	0.301	0.465	0.736	0.013	0.021	0.034	D	1.0	Q	35
			(HL)	0.310	0.479	0.743	0.010	0.016	0.025	C	1.0	QB	35
	C → QB		(HH)	0.369	0.579	0.913	0.013	0.021	0.034	RB	2.5		
			(HL)	0.396	0.617	0.980	0.010	0.016	0.025	H	1.0		
	RB → Q		(LL)	0.141	0.219	0.329	0.010	0.016	0.025				
	RB → QB		(LH)	0.203	0.375	0.587	0.013	0.021	0.034				
	Set up time	D		0.300		0.580							
	Set up time	H		0.300		0.660							
	Hold time	D		0.000		0.000							
	Hold time	H		0.000		0.000							
	Release time	RB		0.000		0.000							
	Removal time	RB		0.330		0.570							
	Min Pulse	C		0.449		1.083							
	Min Pulse	RB		0.324		0.834							
F615H	C → Q		(HH)	0.324	0.503	0.799	0.006	0.011	0.017	D	1.0	Q	71
			(HL)	0.332	0.512	0.796	0.005	0.008	0.013	C	1.0	QB	71
	C → QB		(HH)	0.413	0.646	1.021	0.006	0.010	0.017	RB	2.5		
			(HL)	0.447	0.700	1.117	0.005	0.008	0.013	H	1.0		
	RB → Q		(LL)	0.162	0.249	0.379	0.005	0.008	0.013				
	RB → QB		(LH)	0.246	0.442	0.692	0.006	0.010	0.017				
	Set up time	D		0.300		0.580							
	Set up time	H		0.300		0.660							
	Hold time	D		0.000		0.000							
	Hold time	H		0.000		0.000							
	Release time	RB		0.000		0.000							
	Removal time	RB		0.330		0.570							
	Min Pulse	C		0.500		1.218							
	Min Pulse	RB		0.397		0.973							
F615HP	C → Q		(HH)	0.372	0.580	0.930	0.003	0.005	0.009	D	1.0	Q	142
			(HL)	0.376	0.582	0.907	0.003	0.004	0.007	C	1.0	QB	143
	C → QB		(HH)	0.496	0.779	1.231	0.003	0.005	0.008	RB	2.5		
			(HL)	0.546	0.859	1.381	0.003	0.004	0.007	H	1.0		
	RB → Q		(LL)	0.203	0.317	0.486	0.003	0.004	0.007				
	RB → QB		(LH)	0.325	0.573	0.900	0.003	0.005	0.008				
	Set up time	D		0.300		0.580							
	Set up time	H		0.300		0.660							
	Hold time	D		0.000		0.000							
	Hold time	H		0.000		0.000							
	Release time	RB		0.000		0.000							
	Removal time	RB		0.330		0.570							
	Min Pulse	C		0.599		1.483							
	Min Pulse	RB		0.514		1.232							
F615HQ	C → Q		(HH)	0.324	0.504	0.802	0.006	0.011	0.017	D	1.0	Q	71
			(HL)	0.331	0.513	0.797	0.005	0.008	0.013	C	1.0		
	RB → Q		(LL)	0.162	0.250	0.378	0.005	0.008	0.013	RB	2.5		
	Set up time	D		0.300		0.580				H	1.0		
	Set up time	H		0.300		0.660							
	Hold time	D		0.000		0.000							
	Hold time	H		0.000		0.000							
	Release time	RB		0.000		0.000							
	Removal time	RB		0.330		0.570							
	Min Pulse	C		0.382		0.901							
	Min Pulse	RB		0.263		0.649							
F615HQP	C → Q		(HH)	0.372	0.580	0.933	0.003	0.005	0.009	D	1.0	Q	141
			(HL)	0.375	0.583	0.909	0.003	0.004	0.007	C	1.0		
	RB → Q		(LL)	0.205	0.318	0.487	0.003	0.004	0.006	RB	2.5		

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Set up time	D	0.300		0.580				H	1.0		
	Set up time	H	0.300		0.660							
	Hold time	D	0.000		0.000							
	Hold time	H	0.000		0.000							
	Release time	RB	0.000		0.000							
	Removal time	RB	0.330		0.570							
	Min Pulse	C	0.426		1.032							
	Min Pulse	RB	0.336		0.802							
F615HB	C → QB	(HH)	0.272	0.417	0.651	0.006	0.011	0.017	D	1.0	QB	70
		(HL)	0.282	0.446	0.699	0.005	0.008	0.013	C	1.0		
	RB → QB	(LH)	0.251	0.531	0.868	0.006	0.011	0.017	RB	2.5		
	Set up time	D	0.300		0.590				H	1.0		
	Set up time	H	0.300		0.680							
	Hold time	D	0.000		0.000							
	Hold time	H	0.000		0.000							
	Release time	RB	0.000		0.000							
	Removal time	RB	0.290		0.520							
	Min Pulse	C	0.335		0.800							
	Min Pulse	RB	0.434		1.137							
F615HBP	C → QB	(HH)	0.309	0.476	0.750	0.003	0.005	0.009	D	1.0	QB	141
		(HL)	0.327	0.532	0.857	0.003	0.004	0.007	C	1.0		
	RB → QB	(LH)	0.291	0.597	0.977	0.003	0.005	0.009	RB	2.5		
	Set up time	D	0.300		0.600				H	1.0		
	Set up time	H	0.300		0.680							
	Hold time	D	0.010		0.000							
	Hold time	H	0.000		0.000							
	Release time	RB	0.000		0.000							
	Removal time	RB	0.260		0.490							
	Min Pulse	C	0.378		0.955							
	Min Pulse	RB	0.476		1.244							

[MEMO]

Function	D-F/F with SB,Hold										SSI Family	
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	F616HL	10										
x1	F616H	11	F616HQ	10	F616HB	10						
x2	F616HP	13	F616HQP	11	F616HBP	11						
x4												

Logic Diagram for "Normal"

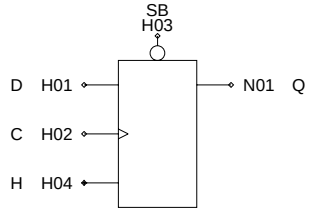


Truth Table for "Normal"

D	C	SB	H	Q	QB
0	↗	1	0	0	1
1	↗	1	0	1	0
X	↘	1	0	Hold	
X	X	1	1	Hold	
X	X	0	X	1	0

X:Irrelevant

Logic Diagram for "Q output"

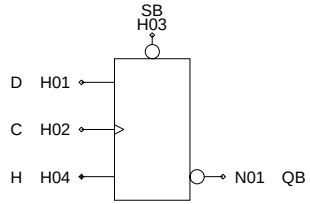


Truth Table for "Q output"

D	C	SB	H	Q	QB
0	↗	1	0	0	1
1	↗	1	0	1	0
X	↘	1	0	Hold	
X	X	1	1	Hold	
X	X	0	X	1	0

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

D	C	SB	H	Q	QB
0	↗	1	0	0	1
1	↗	1	0	1	0
X	↘	1	0	Hold	
X	X	1	1	Hold	
X	X	0	X	1	0

X:Irrelevant

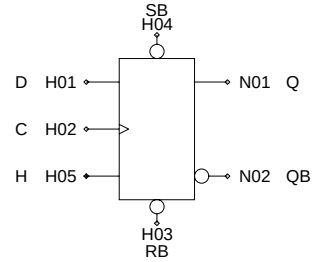
Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F616HL	C → Q	(HH)	0.265	0.405	0.628	0.013	0.021	0.034	D	1.0	Q	36
		(HL)	0.320	0.496	0.775	0.010	0.016	0.025	C	1.0	QB	35
	C → QB	(HH)	0.421	0.665	1.073	0.013	0.021	0.034	SB	2.5		
		(HL)	0.362	0.562	0.880	0.010	0.016	0.025	H	1.0		
	SB → Q	(LH)	0.244	0.444	0.717	0.013	0.021	0.034				
	SB → QB	(LL)	0.161	0.322	0.494	0.010	0.016	0.026				
	Set up time	D	0.300		0.680							
	Set up time	H	0.310		0.770							
	Hold time	D	0.000		0.000							
	Hold time	H	0.000		0.000							
	Release time	SB	0.090		0.080							
	Removal time	SB	0.110		0.160							
	Min Pulse	C	0.470		1.173							
	Min Pulse	SB	0.380		1.029							
F616H	C → Q	(HH)	0.283	0.437	0.676	0.006	0.010	0.017	D	1.0	Q	71
		(HL)	0.346	0.537	0.842	0.005	0.008	0.013	C	1.0	QB	71
	C → QB	(HH)	0.475	0.750	1.210	0.006	0.010	0.017	SB	2.5		
		(HL)	0.404	0.629	0.986	0.005	0.008	0.013	H	1.0		
	SB → Q	(LH)	0.265	0.520	0.837	0.006	0.010	0.017				
	SB → QB	(LL)	0.182	0.351	0.539	0.005	0.008	0.013				
	Set up time	D	0.300		0.680							
	Set up time	H	0.310		0.770							
	Hold time	D	0.000		0.000							
	Hold time	H	0.000		0.000							
	Release time	SB	0.090		0.080							
	Removal time	SB	0.110		0.160							
	Min Pulse	C	0.524		1.312							
	Min Pulse	SB	0.451		1.168							
F616HP	C → Q	(HH)	0.317	0.487	0.760	0.003	0.005	0.008	D	1.0	Q	143
		(HL)	0.394	0.613	0.963	0.003	0.004	0.007	C	1.0	QB	143
	C → QB	(HH)	0.579	0.913	1.479	0.003	0.005	0.009	SB	2.5		
		(HL)	0.484	0.754	1.189	0.003	0.004	0.007	H	1.0		
	SB → Q	(LH)	0.297	0.661	1.058	0.003	0.005	0.008				
	SB → QB	(LL)	0.222	0.415	0.642	0.003	0.004	0.007				
	Set up time	D	0.300		0.680							
	Set up time	H	0.310		0.770							
	Hold time	D	0.000		0.000							
	Hold time	H	0.000		0.000							
	Release time	SB	0.090		0.080							
	Removal time	SB	0.110		0.160							
	Min Pulse	C	0.628		1.581							
	Min Pulse	SB	0.566		1.421							
F616HQ	C → Q	(HH)	0.282	0.435	0.675	0.006	0.010	0.017	D	1.0	Q	71
		(HL)	0.345	0.535	0.838	0.005	0.008	0.013	C	1.0		
	SB → Q	(LH)	0.267	0.443	0.711	0.006	0.010	0.017	SB	2.5		
	Set up time	D	0.300		0.680				H	1.0		
	Set up time	H	0.310		0.770							
	Hold time	D	0.000		0.000							
	Hold time	H	0.000		0.000							
	Release time	SB	0.090		0.080							
	Removal time	SB	0.110		0.160							
	Min Pulse	C	0.394		0.940							
	Min Pulse	SB	0.392		1.005							
F616HQP	C → Q	(HH)	0.315	0.486	0.759	0.003	0.005	0.008	D	1.0	Q	142
		(HL)	0.391	0.607	0.955	0.003	0.004	0.007	C	1.0		
	SB → Q	(LH)	0.301	0.500	0.800	0.003	0.005	0.008	SB	2.5		

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Set up time	D	0.300		0.680				H	1.0		
	Set up time	H	0.310		0.770							
	Hold time	D	0.000		0.000							
	Hold time	H	0.000		0.000							
	Release time	SB	0.090		0.080							
	Removal time	SB	0.110		0.160							
	Min Pulse	C	0.441		1.057							
	Min Pulse	SB	0.435		1.100							
F616HB	C → QB	(HH)	0.303	0.468	0.743	0.006	0.011	0.017	D	1.0	QB	70
		(HL)	0.285	0.453	0.711	0.005	0.008	0.013	C	1.0		
	SB → QB	(LL)	0.255	0.430	0.695	0.005	0.008	0.013	SB	2.5		
	Set up time	D	0.310		0.700				H	1.0		
	Set up time	H	0.320		0.790							
	Hold time	D	0.000		0.000							
	Hold time	H	0.000		0.000							
	Release time	SB	0.100		0.100							
	Removal time	SB	0.100		0.130							
	Min Pulse	C	0.353		0.844							
	Min Pulse	SB	0.407		1.017							
F616HBP	C → QB	(HH)	0.355	0.549	0.880	0.003	0.005	0.009	D	1.0	QB	139
		(HL)	0.329	0.536	0.863	0.003	0.004	0.007	C	1.0		
	SB → QB	(LL)	0.304	0.511	0.837	0.003	0.004	0.007	SB	2.5		
	Set up time	D	0.320		0.710				H	1.0		
	Set up time	H	0.330		0.800							
	Hold time	D	0.000		0.000							
	Hold time	H	0.000		0.000							
	Release time	SB	0.110		0.110							
	Removal time	SB	0.090		0.110							
	Min Pulse	C	0.404		0.981							
	Min Pulse	SB	0.474		1.180							

[MEMO]

Function	D-F/F with RB,SB,Hold							SSI Family			
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	F647HL	11										
x1	F647H	12	F647HQ	11	F647HB	11						
x2	F647HP	14	F647HQP	12	F647HBP	12						
x4												

Logic Diagram for "Normal"

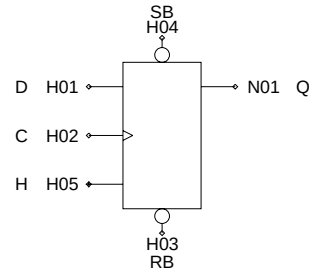


Truth Table for "Normal"

D	C	RB	SB	H	Q	QB	
0	↗	1	1	0	0	1	
1	↗	1	1	0	1	0	
X	↘	1	1	0	Hold		
X	X	1	1	1	Hold		
X	X	0	1	X	0	1	
X	X	1	0	X	1	0	
X	X	0	0	X	0	0	← Prohibition

X:Irrelevant

Logic Diagram for "Q output"

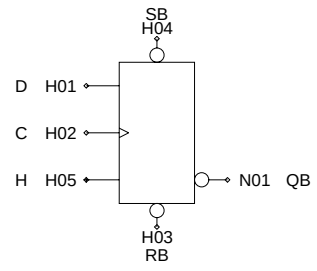


Truth Table for "Q output"

D	C	RB	SB	H	Q	QB	
0	↗	1	1	0	0	1	
1	↗	1	1	0	1	0	
X	↘	1	1	0	Hold		
X	X	1	1	1	Hold		
X	X	0	1	X	0	1	
X	X	1	0	X	1	0	
X	X	0	0	X	0	0	← Prohibition

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

D	C	RB	SB	H	Q	QB	
0	↗	1	1	0	0	1	
1	↗	1	1	0	1	0	
X	↘	1	1	0	Hold		
X	X	1	1	1	Hold		
X	X	0	1	X	0	1	
X	X	1	0	X	1	0	
X	X	0	0	X	0	0	← Prohibition

X:Irrelevant

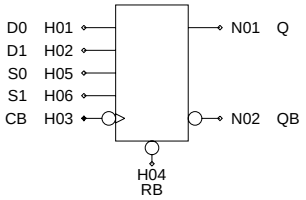
Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F647HL	C → Q	(HH)	0.300	0.463	0.732	0.013	0.021	0.034	D	1.3	Q	35
		(HL)	0.323	0.500	0.781	0.010	0.016	0.025	C	1.2	QB	35
	C → QB	(HH)	0.427	0.674	1.086	0.013	0.021	0.034	RB	2.5		
		(HL)	0.401	0.626	0.992	0.010	0.016	0.025	SB	2.5		
	RB → Q	(LL)	0.137	0.214	0.319	0.010	0.016	0.025	H	1.2		
	RB → QB	(LH)	0.242	0.476	0.775	0.013	0.021	0.034				
	SB → Q	(LH)	0.278	0.513	0.834	0.013	0.021	0.034				
	SB → QB	(LL)	0.165	0.331	0.506	0.010	0.016	0.026				
	Set up time	D	0.300		0.680							
	Set up time	H	0.310		0.770							
	Hold time	D	0.000		0.000							
	Hold time	H	0.000		0.000							
	Release time	RB	0.000		0.000							
	Release time	SB	0.080		0.070							
	Removal time	RB	0.350		0.600							
	Removal time	SB	0.130		0.180							
	Min Pulse	C	0.476		1.188							
	Min Pulse	RB	0.401		1.016							
	Min Pulse	SB	0.457		1.158							
F647H	C → Q	(HH)	0.327	0.507	0.807	0.006	0.011	0.017	D	1.0	Q	71
		(HL)	0.349	0.543	0.852	0.005	0.008	0.013	C	1.0	QB	70
	C → QB	(HH)	0.483	0.762	1.232	0.006	0.011	0.017	RB	2.5		
		(HL)	0.454	0.711	1.136	0.005	0.008	0.013	SB	2.5		
	RB → Q	(LL)	0.162	0.251	0.378	0.005	0.008	0.013	H	1.0		
	RB → QB	(LH)	0.296	0.560	0.908	0.006	0.011	0.017				
	SB → Q	(LH)	0.307	0.605	0.980	0.006	0.010	0.017				
	SB → QB	(LL)	0.185	0.359	0.551	0.005	0.008	0.013				
	Set up time	D	0.300		0.680							
	Set up time	H	0.310		0.770							
	Hold time	D	0.000		0.000							
	Hold time	H	0.000		0.000							
	Release time	RB	0.000		0.000							
	Release time	SB	0.080		0.070							
	Removal time	RB	0.350		0.600							
	Removal time	SB	0.120		0.180							
	Min Pulse	C	0.532		1.333							
	Min Pulse	RB	0.480		1.189							
	Min Pulse	SB	0.527		1.324							
F647HP	C → Q	(HH)	0.375	0.583	0.936	0.003	0.005	0.009	D	1.0	Q	142
		(HL)	0.395	0.616	0.969	0.003	0.004	0.006	C	1.0	QB	141
	C → QB	(HH)	0.585	0.925	1.496	0.003	0.005	0.009	RB	2.6		
		(HL)	0.551	0.869	1.399	0.003	0.004	0.006	SB	2.5		
	RB → Q	(LL)	0.204	0.318	0.486	0.003	0.004	0.006	H	1.0		
	RB → QB	(LH)	0.393	0.717	1.164	0.003	0.005	0.009				
	SB → Q	(LH)	0.353	0.773	1.252	0.003	0.005	0.009				
	SB → QB	(LL)	0.225	0.420	0.649	0.003	0.004	0.007				
	Set up time	D	0.300		0.680							
	Set up time	H	0.310		0.770							
	Hold time	D	0.000		0.000							
	Hold time	H	0.000		0.000							
	Release time	RB	0.000		0.000							
	Release time	SB	0.080		0.080							
	Removal time	RB	0.350		0.600							
	Removal time	SB	0.120		0.180							
	Min Pulse	C	0.635		1.599							
	Min Pulse	RB	0.619		1.495							

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Min Pulse	SB	0.653		1.624							
F647HQ	C → Q	(HH)	0.325	0.506	0.805	0.006	0.011	0.017	D	1.0	Q	71
		(HL)	0.348	0.541	0.848	0.005	0.008	0.013	C	1.0		
	RB → Q	(LL)	0.161	0.249	0.378	0.005	0.008	0.013	RB	2.6		
	SB → Q	(LH)	0.307	0.523	0.850	0.006	0.011	0.017	SB	2.5		
	Set up time	D	0.300		0.680				H	1.0		
	Set up time	H	0.310		0.770							
	Hold time	D	0.000		0.000							
	Hold time	H	0.000		0.000							
	Release time	RB	0.000		0.000							
	Release time	SB	0.080		0.070							
	Removal time	RB	0.350		0.600							
	Removal time	SB	0.130		0.180							
	Min Pulse	C	0.397		0.951							
	Min Pulse	RB	0.264		0.649							
	Min Pulse	SB	0.463		1.158							
F647HQP	C → Q	(HH)	0.373	0.583	0.937	0.003	0.005	0.009	D	1.0	Q	141
		(HL)	0.395	0.615	0.968	0.003	0.004	0.006	C	1.0		
	RB → Q	(LL)	0.204	0.318	0.485	0.003	0.004	0.006	RB	2.5		
	SB → Q	(LH)	0.357	0.604	0.985	0.003	0.005	0.009	SB	2.5		
	Set up time	D	0.300		0.680				H	1.0		
	Set up time	H	0.310		0.770							
	Hold time	D	0.000		0.000							
	Hold time	H	0.000		0.000							
	Release time	RB	0.000		0.000							
	Release time	SB	0.080		0.070							
	Removal time	RB	0.350		0.600							
	Removal time	SB	0.130		0.180							
	Min Pulse	C	0.445		1.070							
	Min Pulse	RB	0.342		0.802							
	Min Pulse	SB	0.518		1.295							
F647HB	C → QB	(HH)	0.304	0.468	0.742	0.006	0.011	0.017	D	1.0	QB	70
		(HL)	0.283	0.449	0.705	0.005	0.008	0.013	C	1.0		
	RB → QB	(LH)	0.324	0.640	1.069	0.006	0.011	0.017	RB	2.5		
	SB → QB	(LL)	0.253	0.437	0.709	0.005	0.008	0.013	SB	2.5		
	Set up time	D	0.310		0.700				H	1.0		
	Set up time	H	0.320		0.790							
	Hold time	D	0.000		0.000							
	Hold time	H	0.000		0.000							
	Release time	RB	0.000		0.000							
	Release time	SB	0.090		0.090							
	Removal time	RB	0.300		0.540							
	Removal time	SB	0.110		0.150							
	Min Pulse	C	0.353		0.844							
	Min Pulse	RB	0.510		1.334							
	Min Pulse	SB	0.411		1.038							
F647HBP	C → QB	(HH)	0.354	0.546	0.875	0.003	0.005	0.009	D	1.0	QB	139
		(HL)	0.326	0.532	0.854	0.003	0.004	0.007	C	1.0		
	RB → QB	(LH)	0.377	0.727	1.218	0.003	0.005	0.009	RB	2.5		
	SB → QB	(LL)	0.300	0.517	0.848	0.003	0.004	0.007	SB	2.5		
	Set up time	D	0.310		0.710				H	1.0		
	Set up time	H	0.320		0.800							
	Hold time	D	0.000		0.000							
	Hold time	H	0.000		0.000							
	Release time	RB	0.000		0.000							
	Release time	SB	0.100		0.100							

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Removal time	RB	0.270		0.500							
	Removal time	SB	0.100		0.130							
	Min Pulse	C	0.403		0.978							
	Min Pulse	RB	0.566		1.485							
	Min Pulse	SB	0.474		1.196							

Function	D-F/F (CB) with 2 to 1 Selector(2 CTRL),RB							SSI Family				
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power												
x1	F673	11										
x2												
x4												

Logic Diagram for "Normal"



Truth Table for "Normal"

D0	D1	S0	S1	CB	RB	Q	QB
A	X	1	0	↘	1	A	AB
X	B	0	1	↘	1	B	BB
X	X	0	0	↘	1	0	1
X	X	1	1	↘	1	X	X
X	X	X	X	↗	1	Hold	
X	X	X	X	X	0	0	1

X:Irrelevant

Logic Diagram for "Q output"

Truth Table for "Q output"

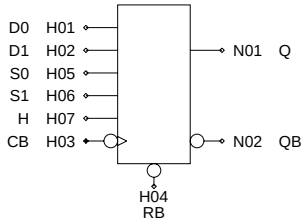
Logic Diagram for "QB output"

Truth Table for "QB output"

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F673	CB → Q	(LH)	0.367	0.595	0.972	0.006	0.010	0.017	D0	1.0	Q	71
		(LL)	0.322	0.508	0.803	0.005	0.008	0.013	D1	1.0	QB	72
	CB → QB	(LH)	0.369	0.587	0.936	0.006	0.010	0.017	CB	1.0		
		(LL)	0.442	0.714	1.163	0.005	0.008	0.013	RB	2.5		
	RB → Q	(LL)	0.183	0.284	0.432	0.005	0.008	0.013	S0	1.0		
	RB → QB	(LH)	0.232	0.364	0.565	0.006	0.010	0.017	S1	1.0		
	Set up time	D0	0.270		0.520							
	Set up time	D1	0.330		0.570							
	Set up time	S0	0.280		0.580							
	Set up time	S1	0.270		0.630							
	Hold time	D0	0.020		0.010							
	Hold time	D1	0.010		0.000							
	Hold time	S0	0.070		0.050							
	Hold time	S1	0.020		0.000							
	Release time	RB	0.000		0.000							
	Removal time	RB	0.310		0.610							
	Min Pulse	CB	0.485		1.252							
	Min Pulse	RB	0.318		0.862							

Function	D-F/F (CB) with Hold,2 to 1 Selector(2 CTRL),RB							SSI Family			
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power												
x1	F674	12										
x2												
x4												

Logic Diagram for "Normal"



Truth Table for "Normal"

D0	D1	S0	S1	CB	RB	H	Q	QB
A	X	1	0	↘	1	0	A	AB
X	X	1	0	↘	1	1	X	X
X	B	0	1	↘	1	0	B	BB
X	X	0	1	↘	1	1	X	X
X	X	0	0	↘	1	0	0	1
X	X	0	0	↘	1	1	Hold	
X	X	1	1	↘	1	X	X	X
X	X	X	X	↗	1	X	Hold	
X	X	X	X	X	0	X	0	1

X:Irrelevant

Logic Diagram for "Q output"

Truth Table for "Q output"

Logic Diagram for "QB output"

Truth Table for "QB output"

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F674	CB → Q	(LH)	0.373	0.604	0.990	0.006	0.011	0.017	D0	1.0	Q	71
		(LL)	0.327	0.516	0.813	0.005	0.008	0.013	D1	1.0	QB	72
	CB → QB	(LH)	0.391	0.622	0.994	0.006	0.010	0.017	CB	1.0		
		(LL)	0.471	0.759	1.241	0.005	0.008	0.013	RB	2.5		
	RB → Q	(LL)	0.188	0.291	0.442	0.005	0.008	0.013	S0	1.0		
	RB → QB	(LH)	0.253	0.399	0.623	0.006	0.010	0.017	S1	1.0		
	Set up time	D0	0.360		0.910				H	1.0		
	Set up time	D1	0.370		1.020							
	Set up time	S0	0.400		1.010							
	Set up time	S1	0.400		1.110							
	Set up time	H	0.340		0.720							
	Hold time	D0	0.000		0.000							
	Hold time	D1	0.000		0.000							
	Hold time	S0	0.020		0.000							
	Hold time	S1	0.000		0.000							
	Hold time	H	0.070		0.030							
	Release time	RB	0.000		0.000							
	Removal time	RB	0.310		0.610							
	Min Pulse	CB	0.514		1.327							
	Min Pulse	RB	0.400		0.929							

[MEMO]

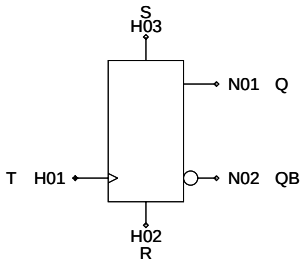
[MEMO]

2.11 T-F/F, JK-F/F

[MEMO]

Function	T-F/F with R,S										SSI Family	
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	F744NL	8							L714	8		
x1	F744	9	F744NQ	8			F714	9				
x2	F744NP	11	F744NQP	9								
x4												

Logic Diagram for "Normal"

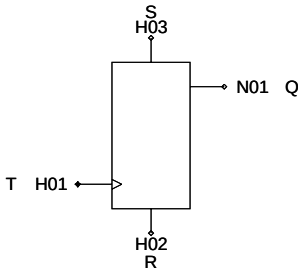


Truth Table for "Normal"

T	R	S	Q	QB	
↗	0	0	Invert		
↘	0	0	Hold		
X	1	0	0	1	
X	0	1	1	0	
X	1	1	1	1	← Prohibition

X:Irrelevant

Logic Diagram for "Q output"



Truth Table for "Q output"

T	R	S	Q	QB	
↗	0	0	Invert		
↘	0	0	Hold		
X	1	0	0	1	
X	0	1	1	0	
X	1	1	1	1	← Prohibition

X:Irrelevant

Logic Diagram for "QB output"

Truth Table for "QB output"

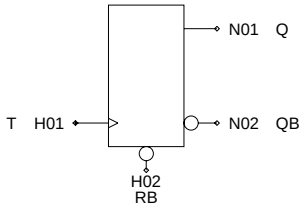
Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F744NL	T → Q	(HH)	0.285	0.442	0.691	0.013	0.021	0.034	T	1.0	Q	36
		(HL)	0.379	0.593	0.930	0.010	0.016	0.026	R	2.6	QB	35
	T → QB	(HH)	0.430	0.685	1.090	0.013	0.021	0.034	S	2.5		
		(HL)	0.440	0.698	1.109	0.010	0.016	0.026				
	R → Q	(HL)	0.321	0.565	0.885	0.010	0.016	0.026				
	R → QB	(HH)	0.141	0.304	0.447	0.013	0.021	0.034				
	S → Q	(HH)	0.133	0.196	0.281	0.013	0.021	0.034				
	S → QB	(HL)	0.288	0.740	1.164	0.010	0.017	0.027				
	Release time	R	0.090		0.310							
	Release time	S	0.000		0.000							
	Removal time	R	0.120		0.110							
	Removal time	S	0.390		0.660							
	Min Pulse	T	0.493		1.212							
	Min Pulse	R	0.568		1.292							
	Min Pulse	S	0.549		1.413							
F744	T → Q	(HH)	0.300	0.466	0.729	0.006	0.010	0.017	T	1.0	Q	72
		(HL)	0.414	0.650	1.020	0.005	0.008	0.013	R	2.6	QB	71
	T → QB	(HH)	0.492	0.785	1.250	0.006	0.010	0.017	S	2.5		
		(HL)	0.497	0.791	1.257	0.005	0.008	0.013				
	R → Q	(HL)	0.365	0.651	1.025	0.005	0.008	0.013				
	R → QB	(HH)	0.160	0.322	0.476	0.006	0.010	0.017				
	S → Q	(HH)	0.152	0.218	0.311	0.006	0.010	0.017				
	S → QB	(HL)	0.348	0.817	1.281	0.005	0.009	0.014				
	Release time	R	0.100		0.360							
	Release time	S	0.000		0.000							
	Removal time	R	0.110		0.090							
	Removal time	S	0.390		0.660							
	Min Pulse	T	0.551		1.359							
	Min Pulse	R	0.642		1.453							
	Min Pulse	S	0.629		1.576							
F714	T → Q	(HH)	0.300	0.466	0.729	0.006	0.010	0.017	T	1.0	Q	72
		(HL)	0.414	0.650	1.020	0.005	0.008	0.013	R	2.6	QB	71
	T → QB	(HH)	0.492	0.785	1.250	0.006	0.010	0.017	S	2.5		
		(HL)	0.497	0.791	1.257	0.005	0.008	0.013				
	R → Q	(HL)	0.365	0.651	1.025	0.005	0.008	0.013				
	R → QB	(HH)	0.160	0.322	0.476	0.006	0.010	0.017				
	S → Q	(HH)	0.152	0.218	0.311	0.006	0.010	0.017				
	S → QB	(HL)	0.348	0.817	1.281	0.005	0.009	0.014				
	Release time	R	0.100		0.360							
	Release time	S	0.000		0.000							
	Removal time	R	0.110		0.090							
	Removal time	S	0.390		0.660							
	Min Pulse	T	0.551		1.359							
	Min Pulse	R	0.642		1.453							
	Min Pulse	S	0.629		1.576							
F744NP	T → Q	(HH)	0.338	0.526	0.828	0.003	0.005	0.008	T	1.0	Q	143
		(HL)	0.493	0.778	1.224	0.003	0.004	0.007	R	2.6	QB	142
	T → QB	(HH)	0.614	0.984	1.569	0.003	0.005	0.008	S	2.5		
		(HL)	0.612	0.975	1.555	0.003	0.004	0.007				
	R → Q	(HL)	0.448	0.833	1.319	0.003	0.004	0.007				
	R → QB	(HH)	0.193	0.363	0.542	0.003	0.005	0.009				
	S → Q	(HH)	0.187	0.266	0.385	0.003	0.005	0.008				
	S → QB	(HL)	0.460	0.983	1.546	0.003	0.005	0.007				
	Release time	R	0.100		0.360							
	Release time	S	0.000		0.000							
	Removal time	R	0.110		0.090							

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Removal time	S	0.390		0.670							
	Min Pulse	T	0.667		1.667							
	Min Pulse	R	0.790		1.778							
	Min Pulse	S	0.785		1.907							
L714	T → Q	(HH)	0.253	0.389	0.605	0.013	0.021	0.034	T	1.0	Q	35
		(HL)	0.290	0.461	0.728	0.011	0.017	0.026	R	2.5		
	R → Q	(HL)	0.425	0.752	1.220	0.011	0.017	0.027	S	2.6		
	S → Q	(HH)	0.209	0.350	0.542	0.013	0.021	0.034				
	Release time	R	0.000		0.000							
	Release time	S	0.090		0.250							
	Removal time	R	0.370		0.640							
	Removal time	S	0.110		0.110							
	Min Pulse	T	0.343		0.829							
	Min Pulse	R	0.566		1.475							
	Min Pulse	S	0.413		0.934							
F744NQ	T → Q	(HH)	0.298	0.464	0.727	0.006	0.010	0.017	T	1.0	Q	72
		(HL)	0.413	0.647	1.016	0.005	0.008	0.013	R	2.6		
	R → Q	(HL)	0.359	0.600	0.936	0.005	0.008	0.013	S	2.5		
	S → Q	(HH)	0.151	0.217	0.310	0.006	0.010	0.017				
	Release time	R	0.100		0.360							
	Release time	S	0.000		0.000							
	Removal time	R	0.110		0.090							
	Removal time	S	0.390		0.660							
	Min Pulse	T	0.462		1.113							
	Min Pulse	R	0.562		1.319							
	Min Pulse	S	0.252		0.607							
F744NQP	T → Q	(HH)	0.336	0.523	0.824	0.003	0.005	0.008	T	1.0	Q	143
		(HL)	0.490	0.773	1.216	0.003	0.004	0.007	R	2.6		
	R → Q	(HL)	0.438	0.727	1.141	0.003	0.004	0.007	S	2.5		
	S → Q	(HH)	0.186	0.263	0.381	0.003	0.005	0.008				
	Release time	R	0.100		0.360							
	Release time	S	0.000		0.000							
	Removal time	R	0.110		0.090							
	Removal time	S	0.390		0.660							
	Min Pulse	T	0.539		1.315							
	Min Pulse	R	0.639		1.522							
	Min Pulse	S	0.333		0.740							

[MEMO]

Function	T-F/F with RB										SSI Family	
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	F745NL	7										
x1	F745	8	F745NQ	7								
x2	F745NP	10	F745NQP	8								
x4												

Logic Diagram for "Normal"

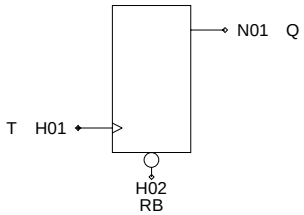


Truth Table for "Normal"

T	RB	Q	QB
↗	1	Invert	
↘	1	Hold	
X	0	0	1

X:Irrelevant

Logic Diagram for "Q output"



Truth Table for "Q output"

T	RB	Q	QB
↗	1	Invert	
↘	1	Hold	
X	0	0	1

X:Irrelevant

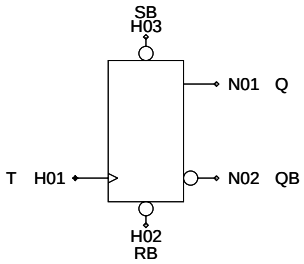
Logic Diagram for "QB output"

Truth Table for "QB output"

Block type	Switching speed									Input		Output	
	Path		t LD0 (ns)			t 1							
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		Symbol	Fanin	Symbol	Fanout
F745NL	T → Q	(HH)	0.302	0.467	0.737	0.013	0.021	0.034		T	1.0	Q	35
		(HL)	0.310	0.479	0.743	0.010	0.016	0.025		RB	2.5	QB	35
	T → QB	(HH)	0.361	0.566	0.893	0.013	0.021	0.034					
		(HL)	0.382	0.595	0.944	0.010	0.016	0.025					
	RB → Q	(LL)	0.140	0.218	0.327	0.010	0.016	0.025					
	RB → QB	(LH)	0.192	0.412	0.648	0.013	0.021	0.034					
	Release time	RB	0.000		0.000								
	Removal time	RB	0.320		0.560								
	Min Pulse	T	0.435		1.047								
	Min Pulse	RB	0.385		0.892								
F745	T → Q	(HH)	0.326	0.505	0.801	0.006	0.010	0.017		T	1.0	Q	71
		(HL)	0.332	0.512	0.796	0.005	0.008	0.013		RB	2.5	QB	71
	T → QB	(HH)	0.402	0.631	0.995	0.006	0.010	0.017					
		(HL)	0.432	0.675	1.079	0.005	0.008	0.013					
	RB → Q	(LL)	0.161	0.249	0.378	0.005	0.008	0.013					
	RB → QB	(LH)	0.234	0.476	0.746	0.006	0.010	0.017					
	Release time	RB	0.000		0.000								
	Removal time	RB	0.320		0.570								
	Min Pulse	T	0.484		1.181								
	Min Pulse	RB	0.401		1.025								
F745NP	T → Q	(HH)	0.374	0.581	0.932	0.003	0.005	0.009		T	1.0	Q	142
		(HL)	0.375	0.583	0.908	0.003	0.004	0.007		RB	2.5	QB	141
	T → QB	(HH)	0.485	0.762	1.206	0.003	0.005	0.008					
		(HL)	0.530	0.833	1.342	0.003	0.004	0.006					
	RB → Q	(LL)	0.202	0.316	0.483	0.003	0.004	0.007					
	RB → QB	(LH)	0.314	0.607	0.956	0.003	0.005	0.009					
	Release time	RB	0.000		0.000								
	Removal time	RB	0.330		0.570								
	Min Pulse	T	0.582		1.445								
	Min Pulse	RB	0.479		1.285								
F745NQ	T → Q	(HH)	0.326	0.505	0.804	0.006	0.011	0.017		T	1.0	Q	70
		(HL)	0.332	0.514	0.796	0.005	0.008	0.013		RB	2.5		
	RB → Q	(LL)	0.161	0.250	0.376	0.005	0.008	0.013					
	Release time	RB	0.000		0.000								
	Removal time	RB	0.320		0.570								
	Min Pulse	T	0.382		0.905								
	Min Pulse	RB	0.260		0.645								
F745NQP	T → Q	(HH)	0.375	0.584	0.938	0.003	0.005	0.009		T	1.0	Q	142
		(HL)	0.377	0.585	0.911	0.003	0.004	0.007		RB	2.5		
	RB → Q	(LL)	0.203	0.317	0.486	0.003	0.004	0.006					
	Release time	RB	0.000		0.000								
	Removal time	RB	0.320		0.570								
	Min Pulse	T	0.427		1.038								
	Min Pulse	RB	0.278		0.798								

Function	T-F/F with RB,SB										SSI Family	
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	F747NL	8							L717	8		
x1	F747	9	F747NQ	8			F717	9				
x2	F747NP	11	F747NQP	9								
x4												

Logic Diagram for "Normal"

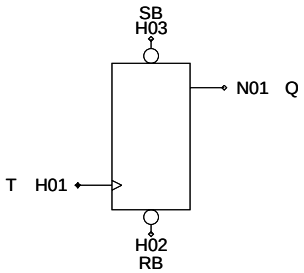


Truth Table for "Normal"

T	RB	SB	Q	QB	
↗	1	1	Invert		
↘	1	1	Hold		
X	0	1	0	1	
X	1	0	1	0	
X	0	0	0	0	← Prohibition

X:Irrelevant

Logic Diagram for "Q output"



Truth Table for "Q output"

T	RB	SB	Q	QB	
↗	1	1	Invert		
↘	1	1	Hold		
X	0	1	0	1	
X	1	0	1	0	
X	0	0	0	0	← Prohibition

X:Irrelevant

Logic Diagram for "QB output"

Truth Table for "QB output"

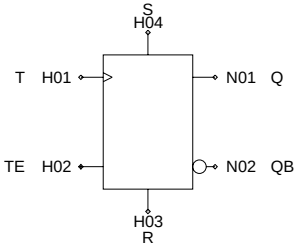
Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F747NL	T → Q	(HH)	0.304	0.468	0.741	0.013	0.021	0.034	T	1.0	Q	35
		(HL)	0.325	0.502	0.786	0.010	0.016	0.025	RB	2.6	QB	34
	T → QB	(HH)	0.415	0.654	1.053	0.013	0.021	0.034	SB	2.4		
		(HL)	0.388	0.605	0.963	0.010	0.016	0.025				
	RB → Q	(LL)	0.136	0.213	0.318	0.010	0.016	0.025				
	RB → QB	(LH)	0.226	0.540	0.886	0.013	0.021	0.034				
	SB → Q	(LH)	0.276	0.561	0.914	0.013	0.021	0.034				
	SB → QB	(LL)	0.150	0.378	0.588	0.010	0.016	0.026				
	Release time	RB	0.000		0.000							
	Release time	SB	0.070		0.060							
	Removal time	RB	0.340		0.600							
	Removal time	SB	0.130		0.190							
	Min Pulse	T	0.464		1.156							
	Min Pulse	RB	0.431		1.121							
	Min Pulse	SB	0.467		1.260							
F747	T → Q	(HH)	0.322	0.498	0.790	0.006	0.011	0.017	T	1.0	Q	71
		(HL)	0.342	0.532	0.836	0.005	0.008	0.013	RB	2.5	QB	69
	T → QB	(HH)	0.457	0.723	1.165	0.006	0.010	0.017	SB	2.6		
		(HL)	0.428	0.672	1.074	0.005	0.008	0.013				
	RB → Q	(LL)	0.157	0.245	0.369	0.005	0.008	0.013				
	RB → QB	(LH)	0.273	0.606	0.990	0.006	0.011	0.017				
	SB → Q	(LH)	0.303	0.638	1.036	0.006	0.010	0.017				
	SB → QB	(LL)	0.164	0.392	0.609	0.005	0.008	0.013				
	Release time	RB	0.000		0.000							
	Release time	SB	0.080		0.080							
	Removal time	RB	0.340		0.590							
	Removal time	SB	0.120		0.170							
	Min Pulse	T	0.508		1.263							
	Min Pulse	RB	0.490		1.263							
	Min Pulse	SB	0.548		1.390							
F717	T → Q	(HH)	0.322	0.498	0.790	0.006	0.011	0.017	T	1.0	Q	71
		(HL)	0.342	0.532	0.836	0.005	0.008	0.013	RB	2.5	QB	69
	T → QB	(HH)	0.457	0.723	1.165	0.006	0.010	0.017	SB	2.6		
		(HL)	0.428	0.672	1.074	0.005	0.008	0.013				
	RB → Q	(LL)	0.157	0.245	0.369	0.005	0.008	0.013				
	RB → QB	(LH)	0.273	0.606	0.990	0.006	0.011	0.017				
	SB → Q	(LH)	0.303	0.638	1.036	0.006	0.010	0.017				
	SB → QB	(LL)	0.164	0.392	0.609	0.005	0.008	0.013				
	Release time	RB	0.000		0.000							
	Release time	SB	0.080		0.080							
	Removal time	RB	0.340		0.590							
	Removal time	SB	0.120		0.170							
	Min Pulse	T	0.508		1.263							
	Min Pulse	RB	0.490		1.263							
	Min Pulse	SB	0.548		1.390							
F747NP	T → Q	(HH)	0.370	0.576	0.922	0.003	0.005	0.009	T	1.0	Q	142
		(HL)	0.389	0.608	0.958	0.003	0.004	0.006	RB	2.5	QB	138
	T → QB	(HH)	0.562	0.889	1.439	0.003	0.005	0.009	SB	2.6		
		(HL)	0.528	0.831	1.339	0.003	0.004	0.006				
	RB → Q	(LL)	0.201	0.313	0.477	0.003	0.004	0.006				
	RB → QB	(LH)	0.373	0.769	1.251	0.003	0.005	0.009				
	SB → Q	(LH)	0.352	0.811	1.316	0.003	0.005	0.009				
	SB → QB	(LL)	0.207	0.460	0.712	0.003	0.004	0.007				
	Release time	RB	0.000		0.000							
	Release time	SB	0.080		0.080							
	Removal time	RB	0.340		0.590							

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Removal time	SB	0.120		0.170							
	Min Pulse	T	0.612		1.537							
	Min Pulse	RB	0.598		1.577							
	Min Pulse	SB	0.694		1.696							
L717	T → Q	(HH)	0.280	0.432	0.685	0.013	0.021	0.034	T	1.0	Q	34
		(HL)	0.262	0.409	0.628	0.010	0.016	0.026	RB	2.6		
	RB → Q	(LL)	0.235	0.435	0.705	0.010	0.016	0.026	SB	2.6		
	SB → Q	(LH)	0.326	0.606	1.016	0.013	0.021	0.034				
	Release time	RB	0.080		0.080							
	Release time	SB	0.000		0.000							
	Removal time	RB	0.120		0.170							
	Removal time	SB	0.320		0.560							
	Min Pulse	T	0.330		0.784							
	Min Pulse	RB	0.393		1.035							
	Min Pulse	SB	0.474		1.274							
F747NQ	T → Q	(HH)	0.322	0.500	0.794	0.006	0.011	0.017	T	1.0	Q	71
		(HL)	0.342	0.532	0.838	0.005	0.008	0.013	RB	2.5		
	RB → Q	(LL)	0.157	0.245	0.369	0.005	0.008	0.013	SB	2.6		
	SB → Q	(LH)	0.304	0.556	0.910	0.006	0.011	0.017				
	Release time	RB	0.000		0.000							
	Release time	SB	0.080		0.080							
	Removal time	RB	0.340		0.590							
	Removal time	SB	0.120		0.170							
	Min Pulse	T	0.393		0.936							
	Min Pulse	RB	0.252		0.635							
	Min Pulse	SB	0.470		1.234							
F747NQP	T → Q	(HH)	0.371	0.579	0.927	0.003	0.005	0.009	T	1.0	Q	141
		(HL)	0.391	0.607	0.960	0.003	0.004	0.006	RB	2.5		
	RB → Q	(LL)	0.201	0.313	0.478	0.003	0.004	0.006	SB	2.6		
	SB → Q	(LH)	0.355	0.643	1.052	0.003	0.005	0.009				
	Release time	RB	0.000		0.000							
	Release time	SB	0.080		0.090							
	Removal time	RB	0.340		0.590							
	Removal time	SB	0.120		0.170							
	Min Pulse	T	0.441		1.057							
	Min Pulse	RB	0.309		0.791							
	Min Pulse	SB	0.531		1.379							

[MEMO]

Function	T-F/F with Data-Hold R,S							SSI Family			
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power												
x1	F791	12										
x2												
x4												

Logic Diagram for "Normal"



Truth Table for "Normal"

T	TE	R	S	Q	QB	
↗	1	0	0	Invert		
↘	1	0	0	Hold		
X	0	0	0	Hold		
X	X	1	0	0	1	
X	X	0	1	1	0	
X	X	1	1	1	1	← Prohibition

X:Irrelevant

Logic Diagram for "Q output"

Truth Table for "Q output"

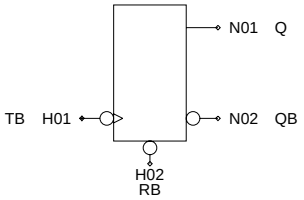
Logic Diagram for "QB output"

Truth Table for "QB output"

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F791	T → Q	(HH)	0.341	0.532	0.839	0.006	0.010	0.017	T	1.0	Q	71
		(HL)	0.502	0.795	1.253	0.005	0.009	0.014	TE	2.2	QB	71
	T → QB	(HH)	0.559	0.901	1.439	0.006	0.010	0.017	R	2.6		
		(HL)	0.516	0.817	1.301	0.005	0.008	0.013	S	2.5		
	R → Q	(HL)	0.455	0.737	1.159	0.005	0.009	0.014				
	R → QB	(HH)	0.147	0.261	0.376	0.006	0.010	0.017				
	S → Q	(HH)	0.193	0.274	0.399	0.006	0.010	0.017				
	S → QB	(HL)	0.367	0.693	1.080	0.005	0.009	0.014				
	Set up time	TE	0.340		0.840							
	Hold time	TE	0.020		0.000							
	Release time	R	0.100		0.370							
	Release time	S	0.000		0.000							
	Removal time	R	0.110		0.090							
	Removal time	S	0.400		0.670							
	Min Pulse	T	0.607		1.538							
	Min Pulse	R	0.632		1.516							
	Min Pulse	S	0.618		1.455							

Function	T-F/F (TB) with RB										SSI Family	
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	F765NL	7										
x1	F765	8	F765NQ	7								
x2	F765NP	10	F765NQP	8								
x4												

Logic Diagram for "Normal"

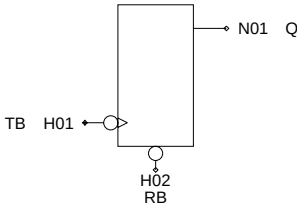


Truth Table for "Normal"

T	RB	Q	QB
↘	1	Invert	
↗	1	Hold	
X	0	0	1

X:Irrelevant

Logic Diagram for "Q output"



Truth Table for "Q output"

T	RB	Q	QB
↘	1	Invert	
↗	1	Hold	
X	0	0	1

X:Irrelevant

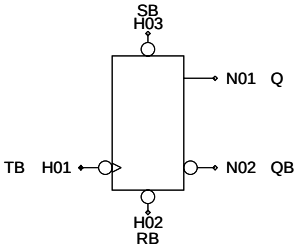
Logic Diagram for "QB output"

Truth Table for "QB output"

Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_1						
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F765NL	TB → Q		(LH)	0.315	0.512	0.833	0.013	0.021	0.034	TB	1.0	Q	35
			(LL)	0.277	0.434	0.685	0.010	0.016	0.025	RB	2.5	QB	35
	TB → QB		(LH)	0.329	0.522	0.837	0.013	0.021	0.034				
			(LL)	0.396	0.643	1.044	0.010	0.016	0.025				
	RB → Q		(LL)	0.140	0.218	0.327	0.010	0.016	0.025				
	RB → QB		(LH)	0.193	0.412	0.648	0.013	0.021	0.034				
	Release time	RB		0.000		0.000							
	Removal time	RB		0.320		0.620							
	Min Pulse	TB		0.438		1.132							
	Min Pulse	RB		0.385		0.893							
F765	TB → Q		(LH)	0.339	0.551	0.895	0.006	0.010	0.017	TB	1.0	Q	71
			(LL)	0.298	0.467	0.737	0.005	0.008	0.013	RB	2.5	QB	70
	TB → QB		(LH)	0.370	0.588	0.940	0.006	0.010	0.017				
			(LL)	0.446	0.723	1.175	0.005	0.008	0.013				
	RB → Q		(LL)	0.161	0.250	0.375	0.005	0.008	0.013				
	RB → QB		(LH)	0.235	0.476	0.747	0.006	0.010	0.017				
	Release time	RB		0.000		0.000							
	Removal time	RB		0.320		0.620							
	Min Pulse	TB		0.489		1.265							
	Min Pulse	RB		0.402		1.026							
F765NP	TB → Q		(LH)	0.387	0.626	1.026	0.003	0.005	0.009	TB	1.0	Q	142
			(LL)	0.343	0.538	0.848	0.003	0.004	0.007	RB	2.5	QB	141
	TB → QB		(LH)	0.452	0.719	1.149	0.003	0.005	0.008				
			(LL)	0.544	0.880	1.439	0.003	0.004	0.006				
	RB → Q		(LL)	0.203	0.316	0.483	0.003	0.004	0.007				
	RB → QB		(LH)	0.315	0.608	0.956	0.003	0.005	0.009				
	Release time	RB		0.000		0.000							
	Removal time	RB		0.320		0.620							
	Min Pulse	TB		0.587		1.527							
	Min Pulse	RB		0.480		1.286							
F765NQ	TB → Q		(LH)	0.339	0.550	0.898	0.006	0.011	0.017	TB	1.0	Q	71
			(LL)	0.298	0.469	0.739	0.005	0.008	0.013	RB	2.5		
	RB → Q		(LL)	0.161	0.250	0.376	0.005	0.008	0.013				
	Release time	RB		0.000		0.000							
	Removal time	RB		0.320		0.620							
	Min Pulse	TB		0.382		0.987							
	Min Pulse	RB		0.260		0.645							
F765NQP	TB → Q		(LH)	0.388	0.627	1.029	0.003	0.005	0.009	TB	1.0	Q	142
			(LL)	0.343	0.538	0.852	0.003	0.004	0.007	RB	2.5		
	RB → Q		(LL)	0.203	0.316	0.483	0.003	0.004	0.006				
	Release time	RB		0.000		0.000							
	Removal time	RB		0.320		0.620							
	Min Pulse	TB		0.430		1.117							
	Min Pulse	RB		0.291		0.796							

Function	T-F/F (TB) with RB,SB										SSI Family	
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	F767NL	8							L737	8		
x1	F767	9	F767NQ	8			F737	9				
x2	F767NP	11	F767NQP	9								
x4												

Logic Diagram for "Normal"

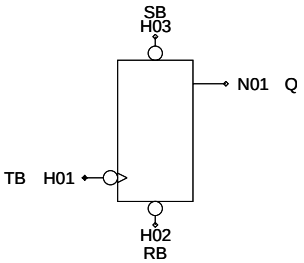


Truth Table for "Normal"

TB	RB	SB	Q	QB	
↘	1	1	Invert		
↗	1	1	Hold		
X	0	1	0	1	
X	1	0	1	0	
X	0	0	0	0	← Prohibition

X:Irrelevant

Logic Diagram for "Q output"



Truth Table for "Q output"

TB	RB	SB	Q	QB	
↘	1	1	Invert		
↗	1	1	Hold		
X	0	1	0	1	
X	1	0	1	0	
X	0	0	0	0	← Prohibition

X:Irrelevant

Logic Diagram for "QB output"

Truth Table for "QB output"

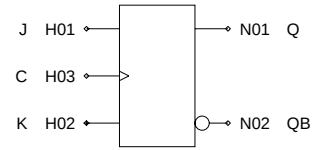
Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F767NL	TB → Q	(LH)	0.313	0.508	0.826	0.013	0.021	0.034	TB	1.0	Q	35
		(LL)	0.289	0.454	0.720	0.010	0.016	0.025	RB	2.5	QB	34
	TB → QB	(LH)	0.374	0.598	0.975	0.013	0.021	0.034	SB	2.6		
		(LL)	0.394	0.639	1.037	0.010	0.016	0.025				
	RB → Q	(LL)	0.138	0.215	0.321	0.010	0.016	0.025				
	RB → QB	(LH)	0.224	0.534	0.875	0.013	0.021	0.034				
	SB → Q	(LH)	0.279	0.555	0.903	0.013	0.021	0.034				
	SB → QB	(LL)	0.146	0.370	0.573	0.010	0.016	0.026				
	Release time	RB	0.000		0.000							
	Release time	SB	0.070		0.080							
	Removal time	RB	0.330		0.640							
	Removal time	SB	0.140		0.220							
	Min Pulse	TB	0.437		1.126							
	Min Pulse	RB	0.436		1.112							
	Min Pulse	SB	0.479		1.244							
F767	TB → Q	(LH)	0.336	0.542	0.885	0.006	0.011	0.017	TB	1.0	Q	71
		(LL)	0.310	0.487	0.774	0.005	0.008	0.013	RB	2.5	QB	69
	TB → QB	(LH)	0.425	0.678	1.104	0.006	0.010	0.017	SB	2.6		
		(LL)	0.443	0.716	1.168	0.005	0.008	0.013				
	RB → Q	(LL)	0.157	0.246	0.370	0.005	0.008	0.013				
	RB → QB	(LH)	0.273	0.607	0.989	0.006	0.011	0.017				
	SB → Q	(LH)	0.303	0.638	1.035	0.006	0.010	0.017				
	SB → QB	(LL)	0.164	0.392	0.609	0.005	0.008	0.013				
	Release time	RB	0.000		0.000							
	Release time	SB	0.070		0.090							
	Removal time	RB	0.330		0.640							
	Removal time	SB	0.140		0.220							
	Min Pulse	TB	0.485		1.253							
	Min Pulse	RB	0.490		1.264							
	Min Pulse	SB	0.548		1.390							
F737	TB → Q	(LH)	0.336	0.542	0.885	0.006	0.011	0.017	TB	1.0	Q	71
		(LL)	0.310	0.487	0.774	0.005	0.008	0.013	RB	2.5	QB	69
	TB → QB	(LH)	0.425	0.678	1.104	0.006	0.010	0.017	SB	2.6		
		(LL)	0.443	0.716	1.168	0.005	0.008	0.013				
	RB → Q	(LL)	0.157	0.246	0.370	0.005	0.008	0.013				
	RB → QB	(LH)	0.273	0.607	0.989	0.006	0.011	0.017				
	SB → Q	(LH)	0.303	0.638	1.035	0.006	0.010	0.017				
	SB → QB	(LL)	0.164	0.392	0.609	0.005	0.008	0.013				
	Release time	RB	0.000		0.000							
	Release time	SB	0.070		0.090							
	Removal time	RB	0.330		0.640							
	Removal time	SB	0.140		0.220							
	Min Pulse	TB	0.485		1.253							
	Min Pulse	RB	0.490		1.264							
	Min Pulse	SB	0.548		1.390							
F767NP	TB → Q	(LH)	0.385	0.623	1.019	0.003	0.005	0.009	TB	1.0	Q	142
		(LL)	0.358	0.562	0.894	0.003	0.004	0.006	RB	2.5	QB	139
	TB → QB	(LH)	0.531	0.844	1.377	0.003	0.005	0.009	SB	2.6		
		(LL)	0.540	0.876	1.434	0.003	0.004	0.006				
	RB → Q	(LL)	0.201	0.312	0.477	0.003	0.004	0.006				
	RB → QB	(LH)	0.373	0.768	1.251	0.003	0.005	0.009				
	SB → Q	(LH)	0.352	0.812	1.316	0.003	0.005	0.009				
	SB → QB	(LL)	0.207	0.460	0.712	0.003	0.004	0.007				
	Release time	RB	0.000		0.000							
	Release time	SB	0.070		0.090							
	Removal time	RB	0.330		0.640							

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Removal time	SB	0.140		0.220							
	Min Pulse	TB	0.583		1.521							
	Min Pulse	RB	0.597		1.577							
	Min Pulse	SB	0.694		1.696							
L737	TB → Q	(LH)	0.251	0.397	0.640	0.013	0.021	0.034	TB	1.0	Q	34
		(LL)	0.263	0.429	0.685	0.010	0.016	0.026	RB	2.6		
	RB → Q	(LL)	0.235	0.434	0.705	0.010	0.016	0.026	SB	2.6		
	SB → Q	(LH)	0.327	0.606	1.015	0.013	0.021	0.034				
	Release time	RB	0.070		0.070							
	Release time	SB	0.000		0.000							
	Removal time	RB	0.140		0.210							
	Removal time	SB	0.300		0.590							
	Min Pulse	TB	0.307		0.772							
	Min Pulse	RB	0.393		1.035							
	Min Pulse	SB	0.473		1.274							
F767NQ	TB → Q	(LH)	0.336	0.543	0.887	0.006	0.011	0.017	TB	1.0	Q	71
		(LL)	0.311	0.489	0.776	0.005	0.008	0.013	RB	2.5		
	RB → Q	(LL)	0.157	0.245	0.370	0.005	0.008	0.013	SB	2.6		
	SB → Q	(LH)	0.304	0.556	0.910	0.006	0.011	0.017				
	Release time	RB	0.000		0.000							
	Release time	SB	0.070		0.090							
	Removal time	RB	0.330		0.640							
	Removal time	SB	0.140		0.220							
	Min Pulse	TB	0.378		0.973							
	Min Pulse	RB	0.252		0.634							
	Min Pulse	SB	0.469		1.233							
F767NQP	TB → Q	(LH)	0.385	0.622	1.020	0.003	0.005	0.009	TB	1.0	Q	141
		(LL)	0.358	0.564	0.898	0.003	0.004	0.006	RB	2.5		
	RB → Q	(LL)	0.201	0.313	0.478	0.003	0.004	0.006	SB	2.6		
	SB → Q	(LH)	0.355	0.642	1.052	0.003	0.005	0.009				
	Release time	RB	0.000		0.000							
	Release time	SB	0.070		0.090							
	Removal time	RB	0.330		0.640							
	Removal time	SB	0.140		0.220							
	Min Pulse	TB	0.427		1.106							
	Min Pulse	RB	0.310		0.790							
	Min Pulse	SB	0.531		1.379							

[MEMO]

Function	JK-F/F							SSI Family				
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	F771NL	9	F771NQL	9	F771NBL	9						
x1	F771	10	F771NQ	9	F771NB	9						
x2	F771NP	12	F771NQP	10	F771NBP	10						
x4												

Logic Diagram for "Normal"

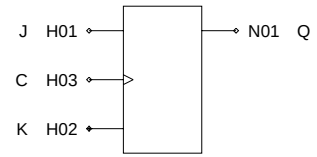


Truth Table for "Normal"

J	K	C	Q	QB
0	0	↗	Hold	
0	1	↗	0	1
1	0	↗	1	0
1	1	↗	Invert	
X	X	↘	Hold	

X:Irrelevant

Logic Diagram for "Q output"

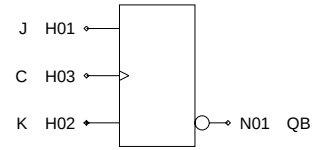


Truth Table for "Q output"

J	K	C	Q	QB
0	0	↗	Hold	
0	1	↗	0	1
1	0	↗	1	0
1	1	↗	Invert	
X	X	↘	Hold	

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

J	K	C	Q	QB
0	0	↗	Hold	
0	1	↗	0	1
1	0	↗	1	0
1	1	↗	Invert	
X	X	↘	Hold	

X:Irrelevant

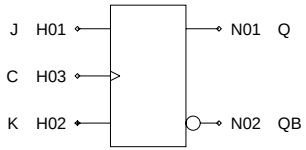
Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F771NL	C → Q	(HH)	0.261	0.401	0.623	0.013	0.021	0.034	J	1.0	Q	35
		(HL)	0.268	0.415	0.635	0.010	0.016	0.026	K	1.0	QB	36
	C → QB	(HH)	0.304	0.478	0.745	0.013	0.021	0.034	C	1.0		
		(HL)	0.331	0.513	0.799	0.010	0.016	0.025				
	Set up time	J	0.270		0.550							
	Set up time	K	0.270		0.500							
	Hold time	J	0.000		0.000							
	Hold time	K	0.000		0.000							
	Min Pulse	C	0.384		0.903							
F771	C → Q	(HH)	0.281	0.431	0.667	0.006	0.010	0.017	J	1.0	Q	72
		(HL)	0.331	0.511	0.796	0.005	0.008	0.013	K	1.0	QB	72
	C → QB	(HH)	0.421	0.660	1.043	0.006	0.010	0.017	C	1.0		
		(HL)	0.410	0.640	1.003	0.005	0.008	0.013				
	Set up time	J	0.270		0.490							
	Set up time	K	0.250		0.540							
	Hold time	J	0.000		0.000							
	Hold time	K	0.010		0.000							
	Min Pulse	C	0.472		1.143							
F771NP	C → Q	(HH)	0.313	0.483	0.761	0.003	0.005	0.009	J	1.0	Q	142
		(HL)	0.331	0.539	0.864	0.003	0.004	0.007	K	1.0	QB	144
	C → QB	(HH)	0.442	0.725	1.171	0.003	0.005	0.008	C	1.0		
		(HL)	0.463	0.723	1.150	0.003	0.004	0.006				
	Set up time	J	0.270		0.530							
	Set up time	K	0.260		0.470							
	Hold time	J	0.000		0.000							
	Hold time	K	0.000		0.000							
	Min Pulse	C	0.514		1.276							
F771NQL	C → Q	(HH)	0.261	0.401	0.624	0.013	0.021	0.034	J	1.0	Q	35
		(HL)	0.269	0.416	0.638	0.010	0.016	0.026	K	1.0		
	Set up time	J	0.270		0.550				C	1.0		
	Set up time	K	0.270		0.500							
	Hold time	J	0.000		0.000							
	Hold time	K	0.000		0.000							
	Min Pulse	C	0.323		0.742							
F771NQ	C → Q	(HH)	0.274	0.421	0.658	0.006	0.011	0.017	J	1.0	Q	71
		(HL)	0.285	0.451	0.705	0.005	0.008	0.013	K	1.0		
	Set up time	J	0.270		0.530				C	1.0		
	Set up time	K	0.260		0.470							
	Hold time	J	0.000		0.000							
	Hold time	K	0.000		0.000							
	Min Pulse	C	0.339		0.807							
F771NQP	C → Q	(HH)	0.311	0.480	0.757	0.003	0.005	0.009	J	1.0	Q	142
		(HL)	0.330	0.537	0.861	0.003	0.004	0.007	K	1.0		
	Set up time	J	0.270		0.530				C	1.0		
	Set up time	K	0.260		0.470							
	Hold time	J	0.000		0.000							
	Hold time	K	0.000		0.000							
	Min Pulse	C	0.382		0.965							
F771NBL	C → QB	(HH)	0.261	0.402	0.626	0.013	0.021	0.034	J	1.0	QB	35
		(HL)	0.269	0.417	0.639	0.010	0.016	0.026	K	1.0		
	Set up time	J	0.270		0.500				C	1.0		
	Set up time	K	0.260		0.550							
	Hold time	J	0.000		0.000							
	Hold time	K	0.010		0.000							
	Min Pulse	C	0.323		0.743							

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			Input		Output	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F771NB	C → QB	(HH)	0.274	0.421	0.658	0.006	0.011	0.017	J	1.0	QB	71
		(HL)	0.285	0.451	0.705	0.005	0.008	0.013	K	1.0		
	Set up time	J	0.260		0.470				C	1.0		
	Set up time	K	0.250		0.530							
	Hold time	J	0.000		0.000							
	Hold time	K	0.010		0.000							
	Min Pulse	C	0.339		0.807							
F771NBP	C → QB	(HH)	0.311	0.480	0.757	0.003	0.005	0.009	J	1.0	QB	142
		(HL)	0.330	0.537	0.861	0.003	0.004	0.007	K	1.0		
	Set up time	J	0.260		0.470				C	1.0		
	Set up time	K	0.260		0.530							
	Hold time	J	0.000		0.000							
	Hold time	K	0.010		0.000							
	Min Pulse	C	0.382		0.965							

[MEMO]

Function	JK-F/F (High Speed)							SSI Family				
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power												
x1	F7D1	10										
x2												
x4												

Logic Diagram for "Normal"



Truth Table for "Normal"

J	K	C	Q	QB
0	0	↗	Hold	
0	1	↗	0	1
1	0	↗	1	0
1	1	↗	Invert	
X	X	↘	Hold	

X:Irrelevant

Logic Diagram for "Q output"

Truth Table for "Q output"

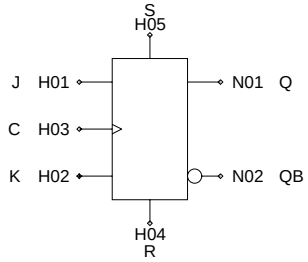
Logic Diagram for "QB output"

Truth Table for "QB output"

Block type	Switching speed								Input		Output	
	Path			t_{LD0} (ns)			t_1					
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F7D1	C → Q		(HH)	0.274	0.421	0.656	0.006	0.011	0.017	J	1.0	Q	72
			(HL)	0.284	0.449	0.702	0.005	0.008	0.013	K	1.0	QB	72
	C → QB		(HH)	0.348	0.557	0.883	0.006	0.010	0.017	C	1.0		
			(HL)	0.373	0.579	0.910	0.005	0.008	0.013				
	Set up time	J		0.270		0.530							
	Set up time	K		0.260		0.470							
	Hold time	J		0.000		0.000							
	Hold time	K		0.000		0.000							
	Min Pulse	C		0.425		1.012							

Function	JK-F/F with R,S						SSI Family					
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	F774NL	11	F774NQL	11	F774NBL	11						
x1	F774	12	F774NQ	11	F774NB	11						
x2	F774NP	14	F774NQP	12	F774NBP	12						
x4												

Logic Diagram for "Normal"

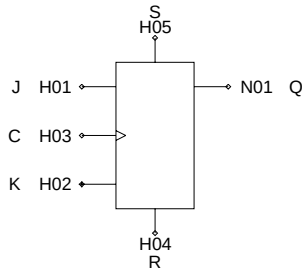


Truth Table for "Normal"

J	K	C	R	S	Q	QB	
0	0	↗	0	0	Hold		
0	1	↗	0	0	0	1	
1	0	↗	0	0	1	0	
1	1	↗	0	0	Invert		
X	X	↘	0	0	Hold		
X	X	X	1	0	0	1	
X	X	X	0	1	1	0	
X	X	X	1	1	1	1	← Prohibition

X:Irrelevant

Logic Diagram for "Q output"

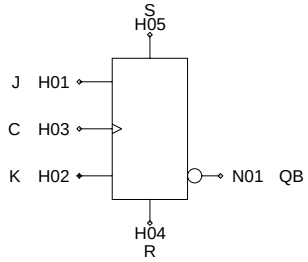


Truth Table for "Q output"

J	K	C	R	S	Q	QB	
0	0	↗	0	0	Hold		
0	1	↗	0	0	0	1	
1	0	↗	0	0	1	0	
1	1	↗	0	0	Invert		
X	X	↘	0	0	Hold		
X	X	X	1	0	0	1	
X	X	X	0	1	1	0	
X	X	X	1	1	1	1	← Prohibition

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

J	K	C	R	S	Q	QB	
0	0	↗	0	0	Hold		
0	1	↗	0	0	0	1	
1	0	↗	0	0	1	0	
1	1	↗	0	0	Invert		
X	X	↘	0	0	Hold		
X	X	X	1	0	0	1	
X	X	X	0	1	1	0	
X	X	X	1	1	1	1	← Prohibition

X:Irrelevant

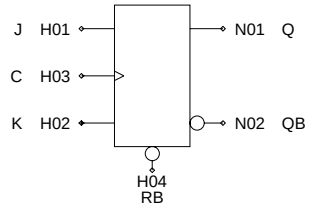
Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F774NL	C → Q	(HH)	0.287	0.445	0.696	0.013	0.021	0.034	J	1.0	Q	36
		(HL)	0.381	0.598	0.934	0.010	0.016	0.026	K	1.0	QB	35
	C → QB	(HH)	0.464	0.740	1.176	0.013	0.021	0.034	C	1.0		
		(HL)	0.510	0.813	1.293	0.010	0.016	0.026	R	2.4		
	R → Q	(HL)	0.327	0.559	0.875	0.010	0.016	0.026	S	2.6		
	R → QB	(HH)	0.176	0.300	0.441	0.013	0.021	0.034				
	S → Q	(HH)	0.133	0.195	0.280	0.013	0.021	0.034				
	S → QB	(HL)	0.358	0.713	1.123	0.010	0.017	0.027				
	Set up time	J	0.290		0.750							
	Set up time	K	0.270		0.600							
	Hold time	J	0.000		0.000							
	Hold time	K	0.000		0.000							
	Release time	R	0.090		0.350							
	Release time	S	0.000		0.000							
	Removal time	R	0.120		0.120							
	Removal time	S	0.420		0.720							
	Min Pulse	C	0.567		1.400							
	Min Pulse	R	0.560		1.278							
	Min Pulse	S	0.533		1.372							
F774	C → Q	(HH)	0.297	0.462	0.724	0.006	0.010	0.017	J	1.0	Q	72
		(HL)	0.412	0.647	1.017	0.005	0.008	0.013	K	1.0	QB	71
	C → QB	(HH)	0.522	0.832	1.326	0.006	0.010	0.017	C	1.0		
		(HL)	0.556	0.887	1.410	0.005	0.008	0.014	R	2.6		
	R → Q	(HL)	0.368	0.644	1.013	0.005	0.008	0.013	S	2.5		
	R → QB	(HH)	0.190	0.316	0.466	0.006	0.010	0.017				
	S → Q	(HH)	0.152	0.218	0.311	0.006	0.010	0.017				
	S → QB	(HL)	0.413	0.783	1.229	0.005	0.009	0.014				
	Set up time	J	0.280		0.730							
	Set up time	K	0.260		0.580							
	Hold time	J	0.000		0.000							
	Hold time	K	0.000		0.000							
	Release time	R	0.100		0.360							
	Release time	S	0.000		0.000							
	Removal time	R	0.110		0.090							
	Removal time	S	0.400		0.670							
	Min Pulse	C	0.610		1.515							
	Min Pulse	R	0.629		1.433							
	Min Pulse	S	0.609		1.524							
F774NP	C → Q	(HH)	0.335	0.523	0.823	0.003	0.005	0.008	J	1.0	Q	143
		(HL)	0.492	0.776	1.223	0.003	0.004	0.007	K	1.0	QB	142
	C → QB	(HH)	0.646	1.032	1.647	0.003	0.005	0.008	C	1.0		
		(HL)	0.668	1.066	1.704	0.003	0.004	0.007	R	2.6		
	R → Q	(HL)	0.451	0.825	1.307	0.003	0.004	0.007	S	2.5		
	R → QB	(HH)	0.219	0.355	0.530	0.003	0.005	0.009				
	S → Q	(HH)	0.188	0.266	0.385	0.003	0.005	0.008				
	S → QB	(HL)	0.523	0.950	1.493	0.003	0.005	0.007				
	Set up time	J	0.280		0.740							
	Set up time	K	0.260		0.580							
	Hold time	J	0.000		0.000							
	Hold time	K	0.000		0.000							
	Release time	R	0.100		0.370							
	Release time	S	0.000		0.000							
	Removal time	R	0.110		0.090							
	Removal time	S	0.400		0.670							
	Min Pulse	C	0.722		1.810							
	Min Pulse	R	0.778		1.759							

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Min Pulse	S	0.764		1.854							
F774NQL	C → Q	(HH)	0.287	0.445	0.698	0.013	0.021	0.034	J	1.0	Q	36
		(HL)	0.382	0.598	0.935	0.010	0.016	0.026	K	1.0		
	R → Q	(HL)	0.326	0.534	0.831	0.010	0.016	0.026	C	1.0		
	S → Q	(HH)	0.133	0.195	0.281	0.013	0.021	0.034	R	2.5		
	Set up time	J	0.290		0.750				S	2.6		
	Set up time	K	0.270		0.600							
	Hold time	J	0.000		0.000							
	Hold time	K	0.000		0.000							
	Release time	R	0.090		0.350							
	Release time	S	0.000		0.000							
	Removal time	R	0.120		0.120							
	Removal time	S	0.420		0.720							
	Min Pulse	C	0.432		1.040							
	Min Pulse	R	0.518		1.206							
	Min Pulse	S	0.208		0.538							
F774NQ	C → Q	(HH)	0.296	0.460	0.721	0.006	0.010	0.017	J	1.0	Q	72
		(HL)	0.410	0.644	1.012	0.005	0.008	0.013	K	1.0		
	R → Q	(HL)	0.362	0.591	0.923	0.005	0.008	0.013	C	1.0		
	S → Q	(HH)	0.151	0.217	0.308	0.006	0.010	0.017	R	2.6		
	Set up time	J	0.280		0.730				S	2.5		
	Set up time	K	0.260		0.580							
	Hold time	J	0.000		0.000							
	Hold time	K	0.000		0.000							
	Release time	R	0.100		0.360							
	Release time	S	0.000		0.000							
	Removal time	R	0.110		0.090							
	Removal time	S	0.400		0.670							
	Min Pulse	C	0.459		1.111							
	Min Pulse	R	0.551		1.298							
	Min Pulse	S	0.251		0.606							
F774NQP	C → Q	(HH)	0.333	0.519	0.818	0.003	0.005	0.008	J	1.0	Q	143
		(HL)	0.489	0.770	1.213	0.003	0.004	0.007	K	1.0		
	R → Q	(HL)	0.440	0.720	1.129	0.003	0.004	0.007	C	1.0		
	S → Q	(HH)	0.186	0.264	0.380	0.003	0.005	0.008	R	2.6		
	Set up time	J	0.280		0.740				S	2.5		
	Set up time	K	0.260		0.580							
	Hold time	J	0.000		0.000							
	Hold time	K	0.000		0.000							
	Release time	R	0.100		0.380							
	Release time	S	0.000		0.000							
	Removal time	R	0.110		0.090							
	Removal time	S	0.400		0.670							
	Min Pulse	C	0.538		1.312							
	Min Pulse	R	0.629		1.500							
	Min Pulse	S	0.332		0.742							
F774NBL	C → QB	(HH)	0.257	0.397	0.618	0.013	0.021	0.034	J	1.0	QB	35
		(HL)	0.292	0.463	0.724	0.011	0.017	0.026	K	1.0		
	R → QB	(HH)	0.212	0.348	0.535	0.013	0.021	0.034	C	1.0		
	S → QB	(HL)	0.439	0.744	1.204	0.011	0.017	0.027	R	2.5		
	Set up time	J	0.280		0.700				S	2.6		
	Set up time	K	0.270		0.600							
	Hold time	J	0.000		0.000							
	Hold time	K	0.000		0.000							
	Release time	R	0.090		0.300							
	Release time	S	0.000		0.000							

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Removal time	R	0.120		0.110							
	Removal time	S	0.400		0.690							
	Min Pulse	C	0.347		0.829							
	Min Pulse	R	0.408		0.928							
	Min Pulse	S	0.568		1.477							
F774NB	C → QB	(HH)	0.269	0.414	0.648	0.006	0.011	0.017	J	1.0	QB	71
		(HL)	0.311	0.508	0.820	0.006	0.009	0.014	K	1.0		
	R → QB	(HH)	0.234	0.376	0.584	0.006	0.010	0.017	C	1.0		
	S → QB	(HL)	0.481	0.803	1.310	0.006	0.009	0.014	R	2.6		
	Set up time	J	0.270		0.680				S	2.5		
	Set up time	K	0.270		0.570							
	Hold time	J	0.000		0.000							
	Hold time	K	0.000		0.000							
	Release time	R	0.110		0.310							
	Release time	S	0.000		0.000							
	Removal time	R	0.090		0.060							
	Removal time	S	0.360		0.620							
	Min Pulse	C	0.363		0.922							
	Min Pulse	R	0.445		0.992							
	Min Pulse	S	0.600		1.578							
F774NBP	C → QB	(HH)	0.304	0.471	0.742	0.003	0.005	0.009	J	1.0	QB	142
		(HL)	0.373	0.620	1.030	0.003	0.005	0.007	K	1.0		
	R → QB	(HH)	0.272	0.435	0.683	0.003	0.005	0.009	C	1.0		
	S → QB	(HL)	0.560	0.936	1.537	0.003	0.005	0.007	R	2.6		
	Set up time	J	0.280		0.710				S	2.5		
	Set up time	K	0.280		0.570							
	Hold time	J	0.000		0.000							
	Hold time	K	0.000		0.000							
	Release time	R	0.130		0.340							
	Release time	S	0.000		0.000							
	Removal time	R	0.090		0.040							
	Removal time	S	0.330		0.590							
	Min Pulse	C	0.424		1.131							
	Min Pulse	R	0.514		1.116							
	Min Pulse	S	0.676		1.805							

Function	JK-F/F with RB						SSI Family					
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	F775NL	10	F775NQL	10	F775NBL	10						
x1	F775	11	F775NQ	10	F775NB	10						
x2	F775NP	13	F775NQP	11	F775NBP	11						
x4												

Logic Diagram for "Normal"

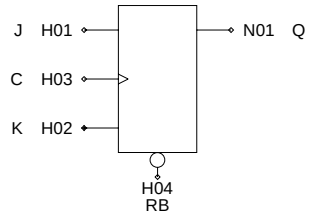


Truth Table for "Normal"

J	K	C	RB	Q	QB
0	0	↗	1	Hold	
0	1	↗	1	0	1
1	0	↗	1	1	0
1	1	↗	1	Invert	
X	X	↘	1	Hold	
X	X	X	0	0	1

X:Irrelevant

Logic Diagram for "Q output"

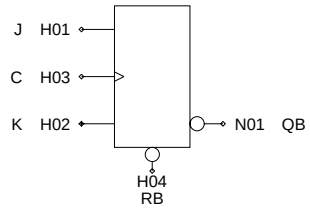


Truth Table for "Q output"

J	K	C	RB	Q	QB
0	0	↗	1	Hold	
0	1	↗	1	0	1
1	0	↗	1	1	0
1	1	↗	1	Invert	
X	X	↘	1	Hold	
X	X	X	0	0	1

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

J	K	C	RB	Q	QB
0	0	↗	1	Hold	
0	1	↗	1	0	1
1	0	↗	1	1	0
1	1	↗	1	Invert	
X	X	↘	1	Hold	
X	X	X	0	0	1

X:Irrelevant

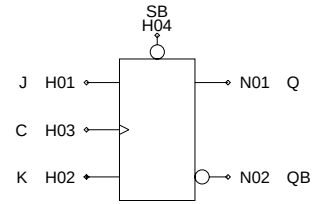
Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F775NL	C → Q	(HH)	0.303	0.468	0.741	0.013	0.021	0.034	J	1.0	Q	35
		(HL)	0.315	0.487	0.757	0.010	0.016	0.025	K	1.0	QB	35
	C → QB	(HH)	0.393	0.616	0.974	0.013	0.021	0.034	C	1.0		
		(HL)	0.420	0.658	1.046	0.010	0.016	0.025	RB	2.6		
	RB → Q	(LL)	0.142	0.218	0.326	0.010	0.016	0.025				
	RB → QB	(LH)	0.220	0.403	0.632	0.013	0.021	0.034				
	Set up time	J	0.280		0.510							
	Set up time	K	0.250		0.560							
	Hold time	J	0.000		0.000							
	Hold time	K	0.000		0.000							
	Release time	RB	0.000		0.000							
	Removal time	RB	0.340		0.590							
	Min Pulse	C	0.473		1.149							
	Min Pulse	RB	0.356		0.879							
F775	C → Q	(HH)	0.330	0.512	0.812	0.006	0.010	0.017	J	1.0	Q	71
		(HL)	0.340	0.525	0.819	0.005	0.008	0.013	K	1.0	QB	71
	C → QB	(HH)	0.436	0.684	1.083	0.006	0.010	0.017	C	1.0		
		(HL)	0.470	0.739	1.181	0.005	0.008	0.013	RB	2.6		
	RB → Q	(LL)	0.165	0.253	0.382	0.005	0.008	0.013				
	RB → QB	(LH)	0.264	0.469	0.736	0.006	0.010	0.017				
	Set up time	J	0.280		0.510							
	Set up time	K	0.250		0.560							
	Hold time	J	0.000		0.000							
	Hold time	K	0.000		0.000							
	Release time	RB	0.000		0.000							
	Removal time	RB	0.340		0.590							
	Min Pulse	C	0.524		1.285							
	Min Pulse	RB	0.413		1.022							
F775NP	C → Q	(HH)	0.379	0.590	0.945	0.003	0.005	0.009	J	1.0	Q	142
		(HL)	0.385	0.598	0.933	0.003	0.004	0.007	K	1.0	QB	143
	C → QB	(HH)	0.519	0.816	1.294	0.003	0.005	0.008	C	1.0		
		(HL)	0.569	0.896	1.441	0.003	0.004	0.007	RB	2.5		
	RB → Q	(LL)	0.206	0.323	0.493	0.003	0.004	0.006				
	RB → QB	(LH)	0.340	0.601	0.944	0.003	0.005	0.008				
	Set up time	J	0.280		0.510							
	Set up time	K	0.250		0.560							
	Hold time	J	0.000		0.000							
	Hold time	K	0.000		0.000							
	Release time	RB	0.000		0.000							
	Removal time	RB	0.340		0.590							
	Min Pulse	C	0.621		1.546							
	Min Pulse	RB	0.529		1.280							
F775NQL	C → Q	(HH)	0.302	0.469	0.741	0.013	0.021	0.034	J	1.0	Q	35
		(HL)	0.315	0.488	0.757	0.010	0.016	0.025	K	1.0		
	RB → Q	(LL)	0.142	0.219	0.327	0.010	0.016	0.025	C	1.0		
	Set up time	J	0.280		0.510				RB	2.6		
	Set up time	K	0.250		0.560							
	Hold time	J	0.000		0.000							
	Hold time	K	0.000		0.000							
	Release time	RB	0.000		0.000							
	Removal time	RB	0.340		0.590							
	Min Pulse	C	0.366		0.859							
	Min Pulse	RB	0.236		0.567							
F775NQ	C → Q	(HH)	0.326	0.507	0.804	0.006	0.011	0.017	J	1.0	Q	70
		(HL)	0.337	0.520	0.811	0.005	0.008	0.013	K	1.0		
	RB → Q	(LL)	0.163	0.250	0.377	0.005	0.008	0.013	C	1.0		

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Set up time	J	0.280		0.510				RB	2.6		
	Set up time	K	0.250		0.560							
	Hold time	J	0.000		0.000							
	Hold time	K	0.000		0.000							
	Release time	RB	0.000		0.000							
	Removal time	RB	0.340		0.590							
	Min Pulse	C	0.388		0.913							
	Min Pulse	RB	0.259		0.646							
F775NQP	C → Q	(HH)	0.374	0.584	0.935	0.003	0.005	0.009	J	1.0	Q	141
		(HL)	0.381	0.591	0.924	0.003	0.004	0.007	K	1.0		
	RB → Q	(LL)	0.203	0.318	0.484	0.003	0.004	0.006	C	1.0		
	Set up time	J	0.280		0.510				RB	2.5		
	Set up time	K	0.250		0.560							
	Hold time	J	0.000		0.000							
	Hold time	K	0.000		0.000							
	Release time	RB	0.000		0.000							
	Removal time	RB	0.340		0.590							
	Min Pulse	C	0.432		1.040							
	Min Pulse	RB	0.335		0.800							
F775NBL	C → QB	(HH)	0.261	0.402	0.625	0.013	0.021	0.034	J	1.0	QB	35
		(HL)	0.265	0.408	0.625	0.010	0.016	0.026	K	1.0		
	RB → QB	(LH)	0.249	0.490	0.799	0.013	0.021	0.034	C	1.0		
	Set up time	J	0.270		0.500				RB	2.6		
	Set up time	K	0.260		0.560							
	Hold time	J	0.000		0.000							
	Hold time	K	0.000		0.000							
	Release time	RB	0.000		0.000							
	Removal time	RB	0.320		0.560							
	Min Pulse	C	0.318		0.729							
	Min Pulse	RB	0.411		1.057							
F775NB	C → QB	(HH)	0.278	0.428	0.669	0.006	0.011	0.017	J	1.0	QB	70
		(HL)	0.288	0.455	0.711	0.005	0.008	0.013	K	1.0		
	RB → QB	(LH)	0.267	0.520	0.851	0.006	0.011	0.017	C	1.0		
	Set up time	J	0.270		0.490				RB	2.6		
	Set up time	K	0.260		0.560							
	Hold time	J	0.000		0.000							
	Hold time	K	0.000		0.000							
	Release time	RB	0.000		0.000							
	Removal time	RB	0.300		0.540							
	Min Pulse	C	0.342		0.814							
	Min Pulse	RB	0.432		1.108							
F775NBP	C → QB	(HH)	0.316	0.488	0.769	0.003	0.005	0.009	J	1.0	QB	141
		(HL)	0.334	0.543	0.870	0.003	0.004	0.007	K	1.0		
	RB → QB	(LH)	0.306	0.587	0.961	0.003	0.005	0.009	C	1.0		
	Set up time	J	0.260		0.490				RB	2.6		
	Set up time	K	0.260		0.550							
	Hold time	J	0.000		0.000							
	Hold time	K	0.010		0.000							
	Release time	RB	0.000		0.000							
	Removal time	RB	0.280		0.510							
	Min Pulse	C	0.387		0.976							
	Min Pulse	RB	0.474		1.222							

[MEMO]

Function	JK-F/F with SB							SSI Family					
Block type	Standard type						Low Gate type						
	Normal		Q output		QB output		Normal		Q output		QB output		
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	
Low Power	F776NL	11	F776NQL	11	F776NBL	11							
x1	F776	12	F776NQ	11	F776NB	11							
x2	F776NP	14	F776NQP	12	F776NBP	12							
x4													

Logic Diagram for "Normal"

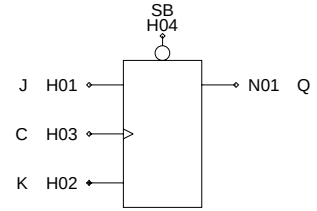


Truth Table for "Normal"

J	K	C	SB	Q	QB
0	0	↗	1	Hold	
0	1	↗	1	0	1
1	0	↗	1	1	0
1	1	↗	1	Invert	
X	X	↘	1	Hold	
X	X	X	0	1	0

X:Irrelevant

Logic Diagram for "Q output"

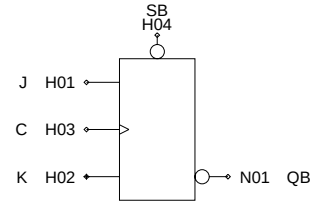


Truth Table for "Q output"

J	K	C	SB	Q	QB
0	0	↗	1	Hold	
0	1	↗	1	0	1
1	0	↗	1	1	0
1	1	↗	1	Invert	
X	X	↘	1	Hold	
X	X	X	0	1	0

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

J	K	C	SB	Q	QB
0	0	↗	1	Hold	
0	1	↗	1	0	1
1	0	↗	1	1	0
1	1	↗	1	Invert	
X	X	↘	1	Hold	
X	X	X	0	1	0

X:Irrelevant

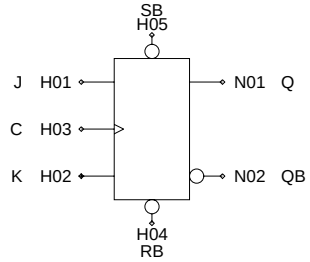
Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F776NL	C → Q	(HH)	0.270	0.414	0.640	0.013	0.021	0.034	J	1.0	Q	36
		(HL)	0.327	0.506	0.792	0.010	0.016	0.025	K	1.0	QB	35
	C → QB	(HH)	0.454	0.719	1.165	0.013	0.021	0.034	C	1.0		
		(HL)	0.392	0.609	0.954	0.010	0.016	0.026	SB	2.5		
	SB → Q	(LH)	0.245	0.485	0.783	0.013	0.021	0.034				
	SB → QB	(LL)	0.186	0.362	0.559	0.010	0.016	0.026				
	Set up time	J	0.300		0.560							
	Set up time	K	0.290		0.580							
	Hold time	J	0.000		0.000							
	Hold time	K	0.010		0.000							
	Release time	SB	0.080		0.060							
	Removal time	SB	0.120		0.180							
	Min Pulse	C	0.505		1.269							
	Min Pulse	SB	0.414		1.117							
F776	C → Q	(HH)	0.286	0.441	0.682	0.006	0.010	0.017	J	1.0	Q	71
		(HL)	0.351	0.543	0.854	0.005	0.008	0.013	K	1.0	QB	71
	C → QB	(HH)	0.509	0.805	1.305	0.006	0.011	0.017	C	1.0		
		(HL)	0.431	0.674	1.059	0.005	0.008	0.013	SB	2.5		
	SB → Q	(LH)	0.263	0.558	0.900	0.006	0.010	0.017				
	SB → QB	(LL)	0.206	0.392	0.607	0.005	0.008	0.013				
	Set up time	J	0.300		0.560							
	Set up time	K	0.290		0.580							
	Hold time	J	0.000		0.000							
	Hold time	K	0.010		0.000							
	Release time	SB	0.080		0.060							
	Removal time	SB	0.120		0.170							
	Min Pulse	C	0.559		1.408							
	Min Pulse	SB	0.517		1.252							
F776NP	C → Q	(HH)	0.320	0.492	0.764	0.003	0.005	0.008	J	1.0	Q	143
		(HL)	0.397	0.617	0.972	0.003	0.004	0.006	K	1.0	QB	143
	C → QB	(HH)	0.611	0.967	1.571	0.003	0.005	0.009	C	1.0		
		(HL)	0.510	0.796	1.257	0.003	0.004	0.007	SB	2.5		
	SB → Q	(LH)	0.295	0.700	1.123	0.003	0.005	0.008				
	SB → QB	(LL)	0.245	0.457	0.711	0.003	0.004	0.007				
	Set up time	J	0.300		0.560							
	Set up time	K	0.290		0.580							
	Hold time	J	0.000		0.000							
	Hold time	K	0.010		0.000							
	Release time	SB	0.080		0.060							
	Removal time	SB	0.120		0.170							
	Min Pulse	C	0.662		1.673							
	Min Pulse	SB	0.625		1.498							
F776NQL	C → Q	(HH)	0.270	0.414	0.640	0.013	0.021	0.034	J	1.0	Q	35
		(HL)	0.327	0.506	0.792	0.010	0.016	0.025	K	1.0		
	SB → Q	(LH)	0.247	0.449	0.725	0.013	0.021	0.034	C	1.0		
	Set up time	J	0.300		0.560				SB	2.5		
	Set up time	K	0.290		0.580							
	Hold time	J	0.000		0.000							
	Hold time	K	0.010		0.000							
	Release time	SB	0.080		0.060							
	Removal time	SB	0.120		0.180							
	Min Pulse	C	0.377		0.895							
	Min Pulse	SB	0.373		1.044							
F776NQ	C → Q	(HH)	0.286	0.440	0.683	0.006	0.010	0.017	J	1.0	Q	71
		(HL)	0.350	0.543	0.855	0.005	0.008	0.013	K	1.0		
	SB → Q	(LH)	0.266	0.482	0.774	0.006	0.010	0.017	C	1.0		

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Set up time	J	0.300		0.560				SB	2.5		
	Set up time	K	0.290		0.580							
	Hold time	J	0.000		0.000							
	Hold time	K	0.010		0.000							
	Release time	SB	0.080		0.060							
	Removal time	SB	0.120		0.180							
	Min Pulse	C	0.402		0.956							
	Min Pulse	SB	0.409		1.094							
F776NQP	C → Q	(HH)	0.319	0.492	0.766	0.003	0.005	0.008	J	1.0	Q	142
		(HL)	0.397	0.616	0.972	0.003	0.004	0.006	K	1.0		
	SB → Q	(LH)	0.301	0.542	0.867	0.003	0.005	0.008	C	1.0		
	Set up time	J	0.300		0.560				SB	2.5		
	Set up time	K	0.290		0.580							
	Hold time	J	0.000		0.000							
	Hold time	K	0.010		0.000							
	Release time	SB	0.080		0.060							
	Removal time	SB	0.120		0.180							
	Min Pulse	C	0.448		1.074							
	Min Pulse	SB	0.459		1.192							
F776NBL	C → QB	(HH)	0.286	0.441	0.698	0.013	0.021	0.034	J	1.0	QB	35
		(HL)	0.267	0.415	0.636	0.010	0.016	0.026	K	1.0		
	SB → QB	(LL)	0.236	0.430	0.694	0.010	0.016	0.026	C	1.0		
	Set up time	J	0.290		0.540				SB	2.5		
	Set up time	K	0.290		0.590							
	Hold time	J	0.000		0.000							
	Hold time	K	0.010		0.000							
	Release time	SB	0.090		0.070							
	Removal time	SB	0.110		0.160							
	Min Pulse	C	0.337		0.800							
	Min Pulse	SB	0.372		1.024							
F776NB	C → QB	(HH)	0.310	0.479	0.760	0.006	0.011	0.017	J	1.0	QB	70
		(HL)	0.292	0.462	0.722	0.005	0.008	0.013	K	1.0		
	SB → QB	(LL)	0.258	0.468	0.760	0.005	0.008	0.013	C	1.0		
	Set up time	J	0.290		0.520				SB	2.5		
	Set up time	K	0.290		0.600							
	Hold time	J	0.000		0.000							
	Hold time	K	0.010		0.000							
	Release time	SB	0.090		0.080							
	Removal time	SB	0.110		0.150							
	Min Pulse	C	0.361		0.862							
	Min Pulse	SB	0.419		1.101							
F776NBP	C → QB	(HH)	0.362	0.560	0.901	0.003	0.005	0.009	J	1.0	QB	139
		(HL)	0.337	0.549	0.882	0.003	0.004	0.007	K	1.0		
	SB → QB	(LL)	0.305	0.554	0.905	0.003	0.004	0.007	C	1.0		
	Set up time	J	0.280		0.500				SB	2.5		
	Set up time	K	0.300		0.610							
	Hold time	J	0.000		0.000							
	Hold time	K	0.020		0.000							
	Release time	SB	0.100		0.090							
	Removal time	SB	0.100		0.130							
	Min Pulse	C	0.413		1.002							
	Min Pulse	SB	0.518		1.268							

[MEMO]

Function	JK-F/F with RB,SB						SSI Family					
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	F777NL	11	F777NQL	11	F777NBL	11						
x1	F777	12	F777NQ	11	F777NB	11						
x2	F777NP	14	F777NQP	12	F777NBP	12						
x4												

Logic Diagram for "Normal"

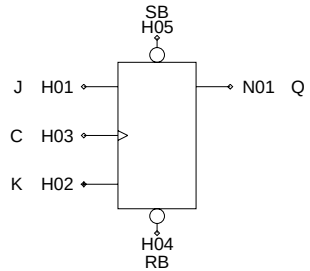


Truth Table for "Normal"

J	K	C	RB	SB	Q	QB	
0	0	↗	1	1	Hold		
0	1	↗	1	1	0	1	
1	0	↗	1	1	1	0	
1	1	↗	1	1	Invert		
X	X	↘	1	1	Hold		
X	X	X	0	1	0	1	
X	X	X	1	0	1	0	
X	X	X	0	0	0	0	← Prohibition

X:Irrelevant

Logic Diagram for "Q output"

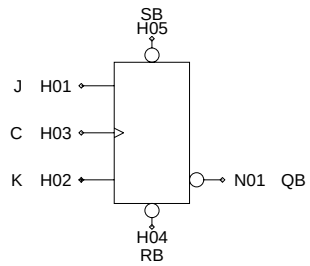


Truth Table for "Q output"

J	K	C	RB	SB	Q	QB	
0	0	↗	1	1	Hold		
0	1	↗	1	1	0	1	
1	0	↗	1	1	1	0	
1	1	↗	1	1	Invert		
X	X	↘	1	1	Hold		
X	X	X	0	1	0	1	
X	X	X	1	0	1	0	
X	X	X	0	0	0	0	← Prohibition

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

J	K	C	RB	SB	Q	QB	
0	0	↗	1	1	Hold		
0	1	↗	1	1	0	1	
1	0	↗	1	1	1	0	
1	1	↗	1	1	Invert		
X	X	↘	1	1	Hold		
X	X	X	0	1	0	1	
X	X	X	1	0	1	0	
X	X	X	0	0	0	0	← Prohibition

X:Irrelevant

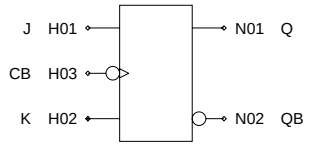
Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F777NL	C → Q	(HH)	0.296	0.458	0.723	0.013	0.021	0.034	J	1.0	Q	35
		(HL)	0.318	0.495	0.776	0.010	0.016	0.025	K	1.0	QB	35
	C → QB	(HH)	0.444	0.704	1.143	0.013	0.021	0.034	C	1.0		
		(HL)	0.416	0.653	1.035	0.010	0.016	0.026	RB	2.5		
	RB → Q	(LL)	0.138	0.213	0.318	0.010	0.016	0.025	SB	2.6		
	RB → QB	(LH)	0.265	0.512	0.837	0.013	0.021	0.034				
	SB → Q	(LH)	0.281	0.539	0.876	0.013	0.021	0.034				
	SB → QB	(LL)	0.185	0.359	0.552	0.010	0.016	0.026				
	Set up time	J	0.300		0.560							
	Set up time	K	0.290		0.600							
	Hold time	J	0.000		0.000							
	Hold time	K	0.000		0.000							
	Release time	RB	0.000		0.000							
	Release time	SB	0.090		0.090							
	Removal time	RB	0.340		0.590							
	Removal time	SB	0.120		0.160							
	Min Pulse	C	0.494		1.242							
	Min Pulse	RB	0.425		1.076							
	Min Pulse	SB	0.494		1.213							
F777	C → Q	(HH)	0.319	0.494	0.784	0.006	0.010	0.017	J	1.0	Q	71
		(HL)	0.341	0.530	0.833	0.005	0.008	0.013	K	1.0	QB	71
	C → QB	(HH)	0.495	0.783	1.271	0.006	0.011	0.017	C	1.0		
		(HL)	0.463	0.728	1.164	0.005	0.008	0.013	RB	2.5		
	RB → Q	(LL)	0.159	0.245	0.369	0.005	0.008	0.013	SB	2.6		
	RB → QB	(LH)	0.314	0.586	0.953	0.006	0.011	0.017				
	SB → Q	(LH)	0.305	0.626	1.013	0.006	0.010	0.017				
	SB → QB	(LL)	0.201	0.382	0.590	0.005	0.008	0.013				
	Set up time	J	0.300		0.560							
	Set up time	K	0.290		0.600							
	Hold time	J	0.000		0.000							
	Hold time	K	0.000		0.000							
	Release time	RB	0.000		0.000							
	Release time	SB	0.090		0.090							
	Removal time	RB	0.340		0.590							
	Removal time	SB	0.120		0.160							
	Min Pulse	C	0.546		1.370							
	Min Pulse	RB	0.498		1.231							
	Min Pulse	SB	0.563		1.369							
F777NP	C → Q	(HH)	0.368	0.573	0.918	0.003	0.005	0.009	J	1.0	Q	142
		(HL)	0.389	0.605	0.954	0.003	0.004	0.006	K	1.0	QB	140
	C → QB	(HH)	0.600	0.949	1.542	0.003	0.005	0.009	C	1.0		
		(HL)	0.560	0.886	1.425	0.003	0.004	0.007	RB	2.5		
	RB → Q	(LL)	0.201	0.314	0.479	0.003	0.004	0.006	SB	2.6		
	RB → QB	(LH)	0.412	0.747	1.214	0.003	0.005	0.009				
	SB → Q	(LH)	0.353	0.799	1.292	0.003	0.005	0.009				
	SB → QB	(LL)	0.241	0.447	0.694	0.003	0.004	0.007				
	Set up time	J	0.300		0.560							
	Set up time	K	0.290		0.600							
	Hold time	J	0.000		0.000							
	Hold time	K	0.000		0.000							
	Release time	RB	0.000		0.000							
	Release time	SB	0.090		0.090							
	Removal time	RB	0.340		0.590							
	Removal time	SB	0.120		0.160							
	Min Pulse	C	0.652		1.642							
	Min Pulse	RB	0.629		1.543							

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Min Pulse	SB	0.688		1.671							
F777NQL	C → Q	(HH)	0.297	0.460	0.728	0.013	0.021	0.034	J	1.0	Q	35
		(HL)	0.319	0.496	0.778	0.010	0.016	0.025	K	1.0		
	RB → Q	(LL)	0.138	0.215	0.321	0.010	0.016	0.025	C	1.0		
	SB → Q	(LH)	0.284	0.506	0.821	0.013	0.021	0.034	RB	2.5		
	Set up time	J	0.300		0.560				SB	2.6		
	Set up time	K	0.290		0.600							
	Hold time	J	0.000		0.000							
	Hold time	K	0.000		0.000							
	Release time	RB	0.000		0.000							
	Release time	SB	0.080		0.090							
	Removal time	RB	0.340		0.590							
	Removal time	SB	0.120		0.160							
	Min Pulse	C	0.370		0.877							
	Min Pulse	RB	0.228		0.556							
	Min Pulse	SB	0.460		1.146							
F777NQ	C → Q	(HH)	0.318	0.495	0.785	0.006	0.011	0.017	J	1.0	Q	71
		(HL)	0.341	0.530	0.833	0.005	0.008	0.013	K	1.0		
	RB → Q	(LL)	0.159	0.245	0.369	0.005	0.008	0.013	C	1.0		
	SB → Q	(LH)	0.307	0.546	0.885	0.006	0.011	0.017	RB	2.5		
	Set up time	J	0.300		0.560				SB	2.6		
	Set up time	K	0.290		0.600							
	Hold time	J	0.000		0.000							
	Hold time	K	0.000		0.000							
	Release time	RB	0.000		0.000							
	Release time	SB	0.080		0.090							
	Removal time	RB	0.340		0.590							
	Removal time	SB	0.120		0.160							
	Min Pulse	C	0.392		0.932							
	Min Pulse	RB	0.260		0.634							
	Min Pulse	SB	0.489		1.210							
F777NQP	C → Q	(HH)	0.367	0.573	0.920	0.003	0.005	0.009	J	1.0	Q	141
		(HL)	0.389	0.606	0.955	0.003	0.004	0.006	K	1.0		
	RB → Q	(LL)	0.202	0.314	0.479	0.003	0.004	0.006	C	1.0		
	SB → Q	(LH)	0.358	0.630	1.025	0.003	0.005	0.009	RB	2.5		
	Set up time	J	0.300		0.560				SB	2.6		
	Set up time	K	0.290		0.600							
	Hold time	J	0.000		0.000							
	Hold time	K	0.000		0.000							
	Release time	RB	0.000		0.000							
	Release time	SB	0.080		0.090							
	Removal time	RB	0.340		0.590							
	Removal time	SB	0.120		0.160							
	Min Pulse	C	0.440		1.054							
	Min Pulse	RB	0.333		0.794							
	Min Pulse	SB	0.547		1.352							
F777NBL	C → QB	(HH)	0.279	0.432	0.684	0.013	0.021	0.034	J	1.0	QB	35
		(HL)	0.261	0.407	0.627	0.010	0.016	0.026	K	1.0		
	RB → QB	(LH)	0.320	0.614	1.025	0.013	0.021	0.034	C	1.0		
	SB → QB	(LL)	0.238	0.432	0.694	0.010	0.016	0.026	RB	2.5		
	Set up time	J	0.290		0.530				SB	2.6		
	Set up time	K	0.300		0.620							
	Hold time	J	0.000		0.000							
	Hold time	K	0.000		0.000							
	Release time	RB	0.000		0.000							
	Release time	SB	0.090		0.100							

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Removal time	RB	0.320		0.550							
	Removal time	SB	0.110		0.150							
	Min Pulse	C	0.329		0.783							
	Min Pulse	RB	0.501		1.292							
	Min Pulse	SB	0.412		1.026							
F777NB	C → QB	(HH)	0.300	0.462	0.734	0.006	0.011	0.017	J	1.0	QB	70
		(HL)	0.279	0.443	0.697	0.005	0.008	0.013	K	1.0		
	RB → QB	(LH)	0.341	0.651	1.088	0.006	0.011	0.017	C	1.0		
	SB → QB	(LL)	0.255	0.462	0.750	0.005	0.008	0.013	RB	2.5		
	Set up time	J	0.290		0.520				SB	2.6		
	Set up time	K	0.300		0.620							
	Hold time	J	0.000		0.000							
	Hold time	K	0.000		0.000							
	Release time	RB	0.000		0.000							
	Release time	SB	0.100		0.110							
	Removal time	RB	0.300		0.520							
	Removal time	SB	0.110		0.130							
	Min Pulse	C	0.349		0.833							
	Min Pulse	RB	0.525		1.354							
	Min Pulse	SB	0.437		1.090							
F777NBP	C → QB	(HH)	0.352	0.543	0.874	0.003	0.005	0.009	J	1.0	QB	139
		(HL)	0.323	0.529	0.851	0.003	0.004	0.007	K	1.0		
	RB → QB	(LH)	0.395	0.742	1.244	0.003	0.005	0.009	C	1.0		
	SB → QB	(LL)	0.304	0.547	0.894	0.003	0.004	0.007	RB	2.5		
	Set up time	J	0.280		0.510				SB	2.6		
	Set up time	K	0.300		0.630							
	Hold time	J	0.000		0.000							
	Hold time	K	0.010		0.000							
	Release time	RB	0.000		0.000							
	Release time	SB	0.110		0.120							
	Removal time	RB	0.270		0.480							
	Removal time	SB	0.100		0.120							
	Min Pulse	C	0.401		0.973							
	Min Pulse	RB	0.582		1.512							
	Min Pulse	SB	0.499		1.255							

Function	JK-F/F (CB)						SSI Family					
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	F781NL	9	F781NQL	9	F781NBL	9						
x1	F781	10	F781NQ	9	F781NB	9						
x2	F781NP	12	F781NQP	10	F781NBP	10						
x4												

Logic Diagram for "Normal"

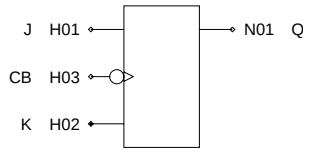


Truth Table for "Normal"

J	K	CB	Q	QB
0	0	↘	Hold	
0	1	↘	0	1
1	0	↘	1	0
1	1	↘	Invert	
X	X	↗	Hold	

X:Irrelevant

Logic Diagram for "Q output"

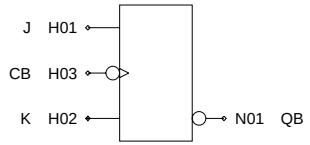


Truth Table for "Q output"

J	K	CB	Q	QB
0	0	↘	Hold	
0	1	↘	0	1
1	0	↘	1	0
1	1	↘	Invert	
X	X	↗	Hold	

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

J	K	CB	Q	QB
0	0	↘	Hold	
0	1	↘	0	1
1	0	↘	1	0
1	1	↘	Invert	
X	X	↗	Hold	

X:Irrelevant

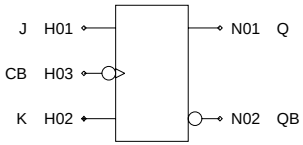
Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F781NL	CB → Q	(LH)	0.233	0.367	0.587	0.013	0.021	0.034	J	1.0	Q	35
		(LL)	0.272	0.444	0.715	0.010	0.016	0.026	K	1.0	QB	36
	CB → QB	(LH)	0.310	0.510	0.832	0.013	0.021	0.034	CB	1.0		
		(LL)	0.307	0.484	0.773	0.010	0.016	0.025				
	Set up time	J	0.310		0.610							
	Set up time	K	0.290		0.620							
	Hold time	J	0.070		0.000							
	Hold time	K	0.000		0.000							
	Min Pulse	CB	0.355		0.921							
F781	CB → Q	(LH)	0.298	0.483	0.775	0.006	0.010	0.017	J	1.0	Q	72
		(LL)	0.293	0.459	0.725	0.005	0.008	0.013	K	1.0	QB	72
	CB → QB	(LH)	0.383	0.609	0.973	0.006	0.010	0.017	CB	1.0		
		(LL)	0.427	0.690	1.112	0.005	0.008	0.013				
	Set up time	J	0.290		0.620							
	Set up time	K	0.300		0.560							
	Hold time	J	0.000		0.000							
	Hold time	K	0.110		0.030							
	Min Pulse	CB	0.471		1.203							
F781NP	CB → Q	(LH)	0.290	0.459	0.740	0.003	0.005	0.009	J	1.0	Q	142
		(LL)	0.325	0.542	0.890	0.003	0.004	0.007	K	1.0	QB	144
	CB → QB	(LH)	0.436	0.729	1.198	0.003	0.005	0.008	CB	1.0		
		(LL)	0.441	0.701	1.130	0.003	0.004	0.006				
	Set up time	J	0.310		0.610							
	Set up time	K	0.280		0.600							
	Hold time	J	0.080		0.000							
	Hold time	K	0.000		0.000							
	Min Pulse	CB	0.489		1.292							
F781NQL	CB → Q	(LH)	0.229	0.360	0.574	0.013	0.021	0.034	J	1.0	Q	35
		(LL)	0.268	0.437	0.703	0.010	0.016	0.026	K	1.0		
	Set up time	J	0.310		0.610				CB	1.0		
	Set up time	K	0.290		0.620							
	Hold time	J	0.070		0.000							
	Hold time	K	0.000		0.000							
	Min Pulse	CB	0.313		0.791							
F781NQ	CB → Q	(LH)	0.247	0.388	0.620	0.006	0.011	0.017	J	1.0	Q	71
		(LL)	0.282	0.465	0.753	0.005	0.008	0.013	K	1.0		
	Set up time	J	0.310		0.610				CB	1.0		
	Set up time	K	0.280		0.610							
	Hold time	J	0.070		0.000							
	Hold time	K	0.000		0.000							
	Min Pulse	CB	0.329		0.845							
F781NQP	CB → Q	(LH)	0.289	0.457	0.736	0.003	0.005	0.009	J	1.0	Q	142
		(LL)	0.324	0.541	0.889	0.003	0.004	0.007	K	1.0		
	Set up time	J	0.310		0.610				CB	1.0		
	Set up time	K	0.280		0.600							
	Hold time	J	0.080		0.000							
	Hold time	K	0.000		0.000							
	Min Pulse	CB	0.371		0.982							
F781NBL	CB → QB	(LH)	0.229	0.360	0.574	0.013	0.021	0.034	J	1.0	QB	35
		(LL)	0.268	0.437	0.703	0.010	0.016	0.026	K	1.0		
	Set up time	J	0.290		0.620				CB	1.0		
	Set up time	K	0.300		0.560							
	Hold time	J	0.000		0.000							
	Hold time	K	0.110		0.030							
	Min Pulse	CB	0.313		0.791							

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F781NB	CB → QB	(LH)	0.247	0.388	0.620	0.006	0.011	0.017	J	1.0	QB	71
		(LL)	0.281	0.464	0.753	0.005	0.008	0.013	K	1.0		
	Set up time	J	0.280		0.610				CB	1.0		
	Set up time	K	0.300		0.560							
	Hold time	J	0.000		0.000							
	Hold time	K	0.110		0.030							
	Min Pulse	CB	0.329		0.845							
F781NBP	CB → QB	(LH)	0.289	0.457	0.736	0.003	0.005	0.009	J	1.0	QB	142
		(LL)	0.324	0.541	0.889	0.003	0.004	0.007	K	1.0		
	Set up time	J	0.280		0.600				CB	1.0		
	Set up time	K	0.300		0.560							
	Hold time	J	0.000		0.000							
	Hold time	K	0.110		0.030							
	Min Pulse	CB	0.371		0.982							

[MEMO]

Function	JK-F/F (CB) (High Speed)							SSI Family			
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power												
x1	F7E1	10										
x2												
x4												

Logic Diagram for "Normal"



Truth Table for "Normal"

J	K	CB	Q	QB
0	0	↘	Hold	
0	1	↘	0	1
1	0	↘	1	0
1	1	↘	Invert	
X	X	↗	Hold	

X:Irrelevant

Logic Diagram for "Q output"

Truth Table for "Q output"

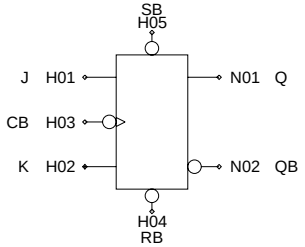
Logic Diagram for "QB output"

Truth Table for "QB output"

Block type	Switching speed								Input		Output	
	Path			t_{LD0} (ns)			t_1					
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F7E1	CB → Q		(LH)	0.247	0.388	0.619	0.006	0.011	0.017	J	1.0	Q	71
			(LL)	0.281	0.462	0.749	0.005	0.008	0.013	K	1.0	QB	72
	CB → QB		(LH)	0.344	0.570	0.931	0.006	0.010	0.017	CB	1.0		
			(LL)	0.346	0.546	0.873	0.005	0.008	0.013				
	Set up time	J		0.310		0.610							
	Set up time	K		0.290		0.610							
	Hold time	J		0.070		0.000							
	Hold time	K		0.000		0.000							
	Min Pulse	CB		0.392		1.023							

Function	JK-F/F (CB) with RB,SB							SSI Family			
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power	F787NL	11	F787NQL	11	F787NBL	11						
x1	F787	12	F787NQ	11	F787NB	11						
x2	F787NP	14	F787NQP	12	F787NBP	12						
x4												

Logic Diagram for "Normal"

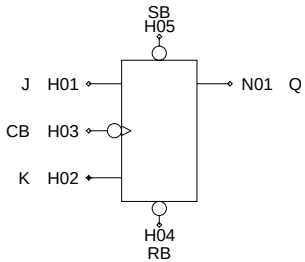


Truth Table for "Normal"

J	K	CB	RB	SB	Q	QB	
0	0	↘	1	1	Hold		
0	1	↘	1	1	0	1	
1	0	↘	1	1	1	0	
1	1	↘	1	1	Invert		
X	X	↗	1	1	Hold		
X	X	X	0	1	0	1	
X	X	X	1	0	1	0	
X	X	X	0	0	0	0	← Prohibition

X:Irrelevant

Logic Diagram for "Q output"

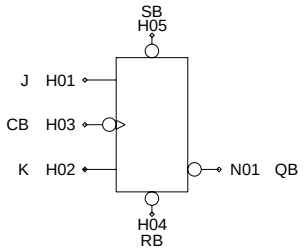


Truth Table for "Q output"

J	K	CB	RB	SB	Q	QB	
0	0	↘	1	1	Hold		
0	1	↘	1	1	0	1	
1	0	↘	1	1	1	0	
1	1	↘	1	1	Invert		
X	X	↗	1	1	Hold		
X	X	X	0	1	0	1	
X	X	X	1	0	1	0	
X	X	X	0	0	0	0	← Prohibition

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

J	K	CB	RB	SB	Q	QB	
0	0	↘	1	1	Hold		
0	1	↘	1	1	0	1	
1	0	↘	1	1	1	0	
1	1	↘	1	1	Invert		
X	X	↗	1	1	Hold		
X	X	X	0	1	0	1	
X	X	X	1	0	1	0	
X	X	X	0	0	0	0	← Prohibition

X:Irrelevant

Block type	Switching speed								Input		Output	
	Path			t_{LD0} (ns)			t_1					
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F787NL	CB → Q		(LH)	0.311	0.506	0.824	0.013	0.021	0.034	J	1.0	Q	35
			(LL)	0.286	0.451	0.717	0.010	0.016	0.025	K	1.0	QB	35
	CB → QB		(LH)	0.413	0.662	1.085	0.013	0.021	0.034	CB	1.0		
			(LL)	0.429	0.699	1.135	0.010	0.016	0.026	RB	2.5		
	RB → Q		(LL)	0.138	0.214	0.320	0.010	0.016	0.025	SB	2.6		
	RB → QB		(LH)	0.265	0.514	0.839	0.013	0.021	0.034				
	SB → Q		(LH)	0.282	0.545	0.885	0.013	0.021	0.034				
	SB → QB		(LL)	0.185	0.360	0.555	0.010	0.016	0.026				
	Set up time	J		0.330		0.680							
	Set up time	K		0.330		0.630							
	Hold time	J		0.000		0.000							
	Hold time	K		0.100		0.000							
	Release time	RB		0.000		0.000							
	Release time	SB		0.070		0.100							
	Removal time	RB		0.330		0.640							
	Removal time	SB		0.140		0.210							
	Min Pulse	CB		0.472		1.220							
	Min Pulse	RB		0.426		1.081							
	Min Pulse	SB		0.498		1.225							
F787	CB → Q		(LH)	0.333	0.540	0.880	0.006	0.010	0.017	J	1.0	Q	71
			(LL)	0.307	0.484	0.770	0.005	0.008	0.013	K	1.0	QB	71
	CB → QB		(LH)	0.462	0.739	1.210	0.006	0.011	0.017	CB	1.0		
			(LL)	0.476	0.772	1.258	0.005	0.008	0.013	RB	2.5		
	RB → Q		(LL)	0.159	0.244	0.367	0.005	0.008	0.013	SB	2.6		
	RB → QB		(LH)	0.314	0.586	0.953	0.006	0.011	0.017				
	SB → Q		(LH)	0.305	0.626	1.013	0.006	0.010	0.017				
	SB → QB		(LL)	0.201	0.383	0.589	0.005	0.008	0.013				
	Set up time	J		0.330		0.680							
	Set up time	K		0.330		0.630							
	Hold time	J		0.000		0.000							
	Hold time	K		0.100		0.000							
	Release time	RB		0.000		0.000							
	Release time	SB		0.070		0.090							
	Removal time	RB		0.330		0.640							
	Removal time	SB		0.140		0.210							
	Min Pulse	CB		0.519		1.343							
	Min Pulse	RB		0.498		1.232							
	Min Pulse	SB		0.563		1.369							
F787NP	CB → Q		(LH)	0.383	0.620	1.015	0.003	0.005	0.009	J	1.0	Q	142
			(LL)	0.356	0.560	0.890	0.003	0.004	0.006	K	1.0	QB	140
	CB → QB		(LH)	0.568	0.905	1.481	0.003	0.005	0.009	CB	1.0		
			(LL)	0.575	0.932	1.522	0.003	0.004	0.007	RB	2.5		
	RB → Q		(LL)	0.202	0.313	0.479	0.003	0.004	0.006	SB	2.6		
	RB → QB		(LH)	0.412	0.746	1.213	0.003	0.005	0.009				
	SB → Q		(LH)	0.353	0.798	1.293	0.003	0.005	0.009				
	SB → QB		(LL)	0.242	0.447	0.696	0.003	0.004	0.007				
	Set up time	J		0.330		0.680							
	Set up time	K		0.330		0.640							
	Hold time	J		0.000		0.000							
	Hold time	K		0.100		0.010							
	Release time	RB		0.000		0.000							
	Release time	SB		0.070		0.100							
	Removal time	RB		0.330		0.640							
	Removal time	SB		0.140		0.210							
	Min Pulse	CB		0.616		1.607							
	Min Pulse	RB		0.632		1.544							

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Min Pulse	SB	0.688		1.672							
F787NQL	CB → Q	(LH)	0.310	0.505	0.822	0.013	0.021	0.034	J	1.0	Q	35
		(LL)	0.287	0.451	0.717	0.010	0.016	0.025	K	1.0		
	RB → Q	(LL)	0.138	0.215	0.320	0.010	0.016	0.025	CB	1.0		
	SB → Q	(LH)	0.284	0.507	0.824	0.013	0.021	0.034	RB	2.5		
	Set up time	J	0.330		0.680				SB	2.6		
	Set up time	K	0.330		0.630							
	Hold time	J	0.000		0.000							
	Hold time	K	0.100		0.000							
	Release time	RB	0.000		0.000							
	Release time	SB	0.070		0.090							
	Removal time	RB	0.330		0.640							
	Removal time	SB	0.140		0.210							
	Min Pulse	CB	0.353		0.909							
	Min Pulse	RB	0.224		0.558							
	Min Pulse	SB	0.461		1.147							
F787NQ	CB → Q	(LH)	0.332	0.539	0.880	0.006	0.011	0.017	J	1.0	Q	71
		(LL)	0.308	0.485	0.770	0.005	0.008	0.013	K	1.0		
	RB → Q	(LL)	0.159	0.245	0.368	0.005	0.008	0.013	CB	1.0		
	SB → Q	(LH)	0.307	0.545	0.886	0.006	0.011	0.017	RB	2.5		
	Set up time	J	0.330		0.680				SB	2.6		
	Set up time	K	0.330		0.630							
	Hold time	J	0.000		0.000							
	Hold time	K	0.100		0.010							
	Release time	RB	0.000		0.000							
	Release time	SB	0.070		0.100							
	Removal time	RB	0.330		0.640							
	Removal time	SB	0.140		0.210							
	Min Pulse	CB	0.374		0.966							
	Min Pulse	RB	0.260		0.634							
	Min Pulse	SB	0.489		1.211							
F787NQP	CB → Q	(LH)	0.381	0.618	1.013	0.003	0.005	0.009	J	1.0	Q	141
		(LL)	0.355	0.561	0.892	0.003	0.004	0.006	K	1.0		
	RB → Q	(LL)	0.203	0.313	0.478	0.003	0.004	0.006	CB	1.0		
	SB → Q	(LH)	0.358	0.630	1.026	0.003	0.005	0.009	RB	2.5		
	Set up time	J	0.330		0.680				SB	2.6		
	Set up time	K	0.330		0.640							
	Hold time	J	0.000		0.000							
	Hold time	K	0.100		0.010							
	Release time	RB	0.000		0.000							
	Release time	SB	0.070		0.100							
	Removal time	RB	0.330		0.650							
	Removal time	SB	0.140		0.210							
	Min Pulse	CB	0.423		1.100							
	Min Pulse	RB	0.334		0.794							
	Min Pulse	SB	0.547		1.353							
F787NBL	CB → QB	(LH)	0.250	0.395	0.634	0.013	0.021	0.034	J	1.0	QB	35
		(LL)	0.260	0.427	0.683	0.010	0.016	0.026	K	1.0		
	RB → QB	(LH)	0.318	0.607	1.014	0.013	0.021	0.034	CB	1.0		
	SB → QB	(LL)	0.236	0.429	0.690	0.010	0.016	0.026	RB	2.5		
	Set up time	J	0.320		0.680				SB	2.6		
	Set up time	K	0.330		0.640							
	Hold time	J	0.000		0.000							
	Hold time	K	0.100		0.010							
	Release time	RB	0.000		0.000							
	Release time	SB	0.080		0.090							

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Removal time	RB	0.310		0.600							
	Removal time	SB	0.130		0.200							
	Min Pulse	CB	0.305		0.771							
	Min Pulse	RB	0.476		1.278							
	Min Pulse	SB	0.410		1.019							
F787NB	CB → QB	(LH)	0.275	0.435	0.704	0.006	0.011	0.017	J	1.0	QB	70
		(LL)	0.277	0.456	0.737	0.005	0.008	0.013	K	1.0		
	RB → QB	(LH)	0.341	0.647	1.082	0.006	0.011	0.017	CB	1.0		
	SB → QB	(LL)	0.256	0.462	0.750	0.005	0.008	0.013	RB	2.5		
	Set up time	J	0.310		0.670				SB	2.6		
	Set up time	K	0.340		0.640							
	Hold time	J	0.000		0.000							
	Hold time	K	0.100		0.010							
	Release time	RB	0.000		0.000							
	Release time	SB	0.080		0.100							
	Removal time	RB	0.290		0.570							
	Removal time	SB	0.130		0.190							
	Min Pulse	CB	0.321		0.829							
	Min Pulse	RB	0.503		1.345							
	Min Pulse	SB	0.437		1.089							
F787NBP	CB → QB	(LH)	0.331	0.525	0.859	0.003	0.005	0.009	J	1.0	QB	139
		(LL)	0.318	0.533	0.877	0.003	0.004	0.007	K	1.0		
	RB → QB	(LH)	0.395	0.738	1.238	0.003	0.005	0.009	CB	1.0		
	SB → QB	(LL)	0.304	0.547	0.895	0.003	0.004	0.007	RB	2.5		
	Set up time	J	0.300		0.650				SB	2.6		
	Set up time	K	0.340		0.650							
	Hold time	J	0.000		0.000							
	Hold time	K	0.110		0.020							
	Release time	RB	0.000		0.000							
	Release time	SB	0.090		0.110							
	Removal time	RB	0.260		0.520							
	Removal time	SB	0.120		0.180							
	Min Pulse	CB	0.377		0.968							
	Min Pulse	RB	0.561		1.503							
	Min Pulse	SB	0.500		1.254							

[MEMO]

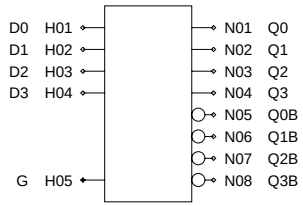
[MEMO]

2.12 Other Block

[MEMO]

Function	4-Bit D-Latch							SSI Family					
Block type	Standard type						Low Gate type						
	Normal		Q output		QB output		Normal		Q output		QB output		
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	
Low Power			L901	12									
x1	F901	20											
x2													
x4													

Logic Diagram for "Normal"



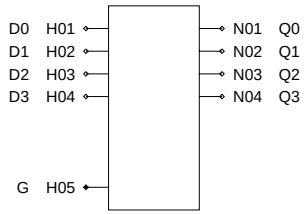
Truth Table for "Normal"

Dn	G	Qn	QnB
0	1	0	1
1	1	1	0
X	0	Latch	

n= 0 to 3

X:Irrelevant

Logic Diagram for "Q output"



Truth Table for "Q output"

Dn	G	Qn	QnB
0	1	0	1
1	1	1	0
X	0	Latch	

n= 0 to 3

X:Irrelevant

Logic Diagram for "QB output"

Truth Table for "QB output"

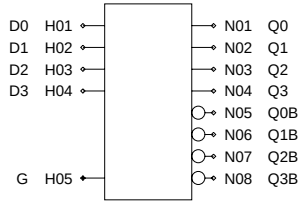
Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F901	D0 → Q0	(HH)	0.308	0.475	0.743	0.006	0.010	0.017	D0	1.0	Q0	72
		(LL)	0.312	0.506	0.811	0.005	0.008	0.013	D1	1.0	Q1	72
	D0 → Q0B	(HL)	0.248	0.376	0.578	0.005	0.008	0.013	D2	1.0	Q2	72
		(LH)	0.225	0.364	0.584	0.006	0.010	0.017	D3	1.0	Q3	72
	D1 → Q1	(HH)	0.308	0.474	0.745	0.006	0.010	0.017	G	2.4	Q0B	71
		(LL)	0.314	0.508	0.815	0.005	0.008	0.013			Q1B	71
	D1 → Q1B	(HL)	0.247	0.375	0.576	0.005	0.008	0.013			Q2B	71
		(LH)	0.225	0.364	0.583	0.006	0.010	0.017			Q3B	71
	D2 → Q2	(HH)	0.307	0.474	0.741	0.006	0.010	0.017				
		(LL)	0.312	0.504	0.808	0.005	0.008	0.013				
	D2 → Q2B	(HL)	0.249	0.377	0.580	0.005	0.008	0.013				
		(LH)	0.226	0.366	0.586	0.006	0.010	0.017				
	D3 → Q3	(HH)	0.308	0.474	0.745	0.006	0.010	0.017				
		(LL)	0.314	0.508	0.815	0.005	0.008	0.013				
	D3 → Q3B	(HL)	0.247	0.375	0.576	0.005	0.008	0.013				
		(LH)	0.225	0.364	0.583	0.006	0.010	0.017				
	G → Q0	(HH)	0.382	0.599	0.940	0.006	0.010	0.017				
		(HL)	0.373	0.581	0.905	0.005	0.008	0.013				
	G → Q1	(HH)	0.386	0.605	0.950	0.006	0.010	0.017				
		(HL)	0.379	0.591	0.923	0.005	0.008	0.013				
	G → Q2	(HH)	0.382	0.599	0.941	0.006	0.010	0.017				
		(HL)	0.373	0.581	0.906	0.005	0.008	0.013				
	G → Q3	(HH)	0.386	0.605	0.950	0.006	0.010	0.017				
		(HL)	0.379	0.591	0.923	0.005	0.008	0.013				
	G → Q0B	(HH)	0.286	0.440	0.679	0.006	0.010	0.017				
		(HL)	0.323	0.500	0.775	0.005	0.008	0.013				
	G → Q1B	(HH)	0.290	0.448	0.692	0.006	0.010	0.017				
		(HL)	0.326	0.504	0.782	0.005	0.008	0.013				
	G → Q2B	(HH)	0.288	0.443	0.684	0.006	0.011	0.017				
		(HL)	0.324	0.503	0.779	0.005	0.008	0.013				
	G → Q3B	(HH)	0.290	0.448	0.692	0.006	0.010	0.017				
		(HL)	0.326	0.504	0.782	0.005	0.008	0.013				
	Set up time	D0	0.220		0.420							
	Set up time	D1	0.220		0.400							
	Set up time	D2	0.220		0.410							
	Set up time	D3	0.220		0.400							
	Hold time	D0	0.030		0.000							
	Hold time	D1	0.040		0.000							
	Hold time	D2	0.040		0.000							
	Hold time	D3	0.040		0.000							
	Min Pulse	G	0.434		1.049							
L901	D0 → Q0	(HH)	0.143	0.224	0.335	0.013	0.021	0.034	D0	3.6	Q0	35
		(LL)	0.145	0.226	0.349	0.010	0.016	0.025	D1	3.6	Q1	35
	D1 → Q1	(HH)	0.146	0.228	0.342	0.013	0.021	0.034	D2	3.6	Q2	35
		(LL)	0.148	0.231	0.357	0.010	0.016	0.025	D3	3.6	Q3	35
	D2 → Q2	(HH)	0.143	0.224	0.335	0.013	0.021	0.034	G	2.5		
		(LL)	0.145	0.226	0.349	0.010	0.016	0.025				
	D3 → Q3	(HH)	0.146	0.228	0.342	0.013	0.021	0.034				
		(LL)	0.148	0.231	0.357	0.010	0.016	0.025				
	G → Q0	(HH)	0.237	0.356	0.542	0.013	0.021	0.034				
		(HL)	0.278	0.431	0.662	0.010	0.016	0.026				
	G → Q1	(HH)	0.239	0.360	0.548	0.013	0.021	0.034				
		(HL)	0.282	0.436	0.671	0.010	0.016	0.026				
	G → Q2	(HH)	0.237	0.356	0.542	0.013	0.021	0.034				
		(HL)	0.278	0.431	0.662	0.010	0.016	0.026				
	G → Q3	(HH)	0.239	0.360	0.548	0.013	0.021	0.034				

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			Input		Output	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
		(HL)	0.282	0.436	0.671	0.010	0.016	0.026				
	Set up time	D0	0.140		0.230							
	Set up time	D1	0.140		0.230							
	Set up time	D2	0.140		0.230							
	Set up time	D3	0.140		0.230							
	Hold time	D0	0.150		0.210							
	Hold time	D1	0.150		0.200							
	Hold time	D2	0.150		0.210							
	Hold time	D3	0.150		0.200							
	Min Pulse	G	0.330		0.765							

[MEMO]

Function	4-Bit D-Latch (High Speed)							SSI Family			
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power												
x1	F971	20										
x2												
x4												

Logic Diagram for "Normal"



Truth Table for "Normal"

Dn	G	Qn	QnB
0	1	0	1
1	1	1	0
X	0	Latch	

n= 0 to 3

X:Irrelevant

Logic Diagram for "Q output"

Truth Table for "Q output"

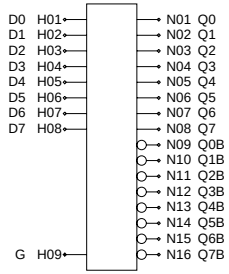
Logic Diagram for "QB output"

Truth Table for "QB output"

Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_1						
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F971	D0 → Q0		(HH)	0.202	0.298	0.459	0.006	0.011	0.017	D0	1.0	Q0	71
			(LL)	0.225	0.362	0.583	0.005	0.008	0.013	D1	1.0	Q1	71
	D0 → Q0B		(HL)	0.300	0.452	0.707	0.005	0.008	0.013	D2	1.0	Q2	71
			(LH)	0.285	0.465	0.757	0.006	0.010	0.017	D3	1.0	Q3	71
	D1 → Q1		(HH)	0.202	0.299	0.459	0.006	0.010	0.017	G	2.4	Q0B	72
			(LL)	0.224	0.362	0.585	0.005	0.008	0.013			Q1B	72
	D1 → Q1B		(HL)	0.302	0.455	0.710	0.005	0.008	0.013			Q2B	71
			(LH)	0.286	0.468	0.764	0.006	0.010	0.017			Q3B	72
	D2 → Q2		(HH)	0.202	0.298	0.457	0.006	0.010	0.017				
			(LL)	0.224	0.360	0.581	0.005	0.008	0.013				
	D2 → Q2B		(HL)	0.301	0.455	0.709	0.005	0.008	0.013				
			(LH)	0.285	0.466	0.760	0.006	0.010	0.017				
	D3 → Q3		(HH)	0.202	0.299	0.459	0.006	0.010	0.017				
			(LL)	0.224	0.362	0.585	0.005	0.008	0.013				
	D3 → Q3B		(HL)	0.302	0.455	0.710	0.005	0.008	0.013				
			(LH)	0.286	0.468	0.764	0.006	0.010	0.017				
	G → Q0		(HH)	0.272	0.420	0.650	0.006	0.010	0.017				
			(HL)	0.286	0.453	0.712	0.005	0.008	0.013				
	G → Q1		(HH)	0.275	0.424	0.658	0.006	0.010	0.017				
			(HL)	0.290	0.460	0.723	0.005	0.008	0.013				
	G → Q2		(HH)	0.272	0.420	0.650	0.006	0.010	0.017				
			(HL)	0.286	0.454	0.712	0.005	0.008	0.013				
	G → Q3		(HH)	0.275	0.424	0.658	0.006	0.010	0.017				
			(HL)	0.290	0.460	0.723	0.005	0.008	0.013				
	G → Q0B		(HH)	0.346	0.555	0.885	0.006	0.010	0.017				
			(HL)	0.370	0.574	0.898	0.005	0.008	0.013				
	G → Q1B		(HH)	0.351	0.565	0.903	0.006	0.010	0.017				
			(HL)	0.374	0.581	0.909	0.005	0.008	0.013				
	G → Q2B		(HH)	0.348	0.558	0.890	0.006	0.010	0.017				
			(HL)	0.372	0.577	0.903	0.005	0.008	0.013				
	G → Q3B		(HH)	0.351	0.565	0.903	0.006	0.010	0.017				
			(HL)	0.374	0.581	0.909	0.005	0.008	0.013				
	Set up time	D0		0.280		0.550							
	Set up time	D1		0.270		0.550							
	Set up time	D2		0.270		0.550							
	Set up time	D3		0.270		0.550							
	Hold time	D0		0.030		0.000							
	Hold time	D1		0.030		0.000							
	Hold time	D2		0.030		0.000							
	Hold time	D3		0.030		0.000							
	Min Pulse	G		0.423		1.008							

Function	8-Bit D-Latch							SSI Family					
Block type	Standard type						Low Gate type						
	Normal		Q output		QB output		Normal		Q output		QB output		
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	
Low Power			L902	22									
x1	F902	38											
x2													
x4													

Logic Diagram for "Normal"



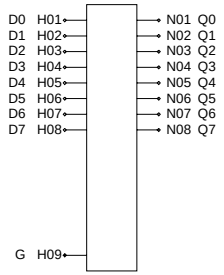
Truth Table for "Normal"

Dn	G	Qn	QnB
0	1	0	1
1	1	1	0
X	0	Latch	

n= 0 to 7

X:Irrelevant

Logic Diagram for "Q output"



Truth Table for "Q output"

Dn	G	Qn	QnB
0	1	0	1
1	1	1	0
X	0	Latch	

n= 0 to 7

X:Irrelevant

Logic Diagram for "QB output"

Truth Table for "QB output"

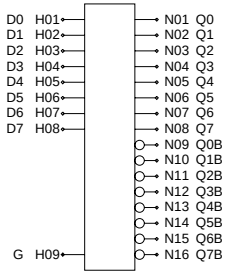
Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F902	D0 → Q0	(HH)	0.308	0.475	0.743	0.006	0.010	0.017	D0	1.0	Q0	72
		(LL)	0.313	0.505	0.811	0.005	0.008	0.013	D1	1.0	Q1	72
	D0 → Q0B	(HL)	0.249	0.376	0.577	0.005	0.008	0.013	D2	1.0	Q2	72
		(LH)	0.225	0.364	0.584	0.006	0.010	0.017	D3	1.0	Q3	72
	D1 → Q1	(HH)	0.308	0.476	0.744	0.006	0.010	0.017	D4	1.0	Q4	72
		(LL)	0.314	0.506	0.815	0.005	0.008	0.013	D5	1.0	Q5	72
	D1 → Q1B	(HL)	0.248	0.375	0.576	0.005	0.008	0.013	D6	1.0	Q6	72
		(LH)	0.224	0.362	0.583	0.006	0.010	0.017	D7	1.0	Q7	72
	D2 → Q2	(HH)	0.308	0.475	0.743	0.006	0.010	0.017	G	2.5	Q0B	71
		(LL)	0.313	0.504	0.812	0.005	0.008	0.013			Q1B	71
	D2 → Q2B	(HL)	0.251	0.379	0.582	0.005	0.008	0.013			Q2B	71
		(LH)	0.227	0.367	0.589	0.006	0.011	0.017			Q3B	71
	D3 → Q3	(HH)	0.308	0.476	0.744	0.006	0.010	0.017			Q4B	71
		(LL)	0.314	0.506	0.815	0.005	0.008	0.013			Q5B	71
	D3 → Q3B	(HL)	0.248	0.375	0.576	0.005	0.008	0.013			Q6B	71
		(LH)	0.224	0.362	0.583	0.006	0.010	0.017			Q7B	71
	D4 → Q4	(HH)	0.308	0.475	0.743	0.006	0.010	0.017				
		(LL)	0.313	0.505	0.812	0.005	0.008	0.013				
	D4 → Q4B	(HL)	0.249	0.377	0.578	0.005	0.008	0.013				
		(LH)	0.227	0.365	0.586	0.006	0.010	0.017				
	D5 → Q5	(HH)	0.308	0.476	0.744	0.006	0.010	0.017				
		(LL)	0.314	0.506	0.815	0.005	0.008	0.013				
	D5 → Q5B	(HL)	0.248	0.375	0.576	0.005	0.008	0.013				
		(LH)	0.224	0.362	0.583	0.006	0.010	0.017				
	D6 → Q6	(HH)	0.308	0.475	0.743	0.006	0.010	0.017				
		(LL)	0.313	0.504	0.812	0.005	0.008	0.013				
	D6 → Q6B	(HL)	0.251	0.379	0.582	0.005	0.008	0.013				
		(LH)	0.227	0.367	0.589	0.006	0.011	0.017				
	D7 → Q7	(HH)	0.308	0.476	0.744	0.006	0.010	0.017				
		(LL)	0.314	0.506	0.815	0.005	0.008	0.013				
	D7 → Q7B	(HL)	0.248	0.375	0.576	0.005	0.008	0.013				
		(LH)	0.224	0.362	0.583	0.006	0.010	0.017				
	G → Q0	(HH)	0.457	0.712	1.118	0.006	0.010	0.017				
		(HL)	0.418	0.639	0.991	0.005	0.008	0.013				
	G → Q1	(HH)	0.460	0.718	1.128	0.006	0.010	0.017				
		(HL)	0.425	0.650	1.009	0.005	0.008	0.013				
	G → Q2	(HH)	0.457	0.712	1.118	0.006	0.010	0.017				
		(HL)	0.418	0.639	0.992	0.005	0.008	0.013				
	G → Q3	(HH)	0.460	0.718	1.128	0.006	0.010	0.017				
		(HL)	0.425	0.650	1.009	0.005	0.008	0.013				
	G → Q4	(HH)	0.457	0.712	1.118	0.006	0.010	0.017				
		(HL)	0.419	0.640	0.992	0.005	0.008	0.013				
	G → Q5	(HH)	0.460	0.718	1.128	0.006	0.010	0.017				
		(HL)	0.425	0.650	1.009	0.005	0.008	0.013				
	G → Q6	(HH)	0.457	0.712	1.118	0.006	0.010	0.017				
		(HL)	0.418	0.639	0.992	0.005	0.008	0.013				
	G → Q7	(HH)	0.460	0.718	1.128	0.006	0.010	0.017				
		(HL)	0.425	0.650	1.009	0.005	0.008	0.013				
	G → Q0B	(HH)	0.331	0.498	0.765	0.006	0.010	0.017				
		(HL)	0.399	0.614	0.953	0.005	0.008	0.013				
	G → Q1B	(HH)	0.336	0.506	0.778	0.006	0.010	0.017				
		(HL)	0.402	0.618	0.960	0.005	0.008	0.013				
	G → Q2B	(HH)	0.332	0.501	0.770	0.006	0.011	0.017				
		(HL)	0.400	0.616	0.957	0.005	0.008	0.013				
	G → Q3B	(HH)	0.336	0.506	0.778	0.006	0.010	0.017				
		(HL)	0.402	0.618	0.960	0.005	0.008	0.013				

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	G → Q4B	(HH)	0.331	0.499	0.767	0.006	0.010	0.017				
		(HL)	0.399	0.614	0.954	0.005	0.008	0.013				
	G → Q5B	(HH)	0.336	0.506	0.778	0.006	0.010	0.017				
		(HL)	0.402	0.618	0.960	0.005	0.008	0.013				
	G → Q6B	(HH)	0.332	0.501	0.770	0.006	0.011	0.017				
		(HL)	0.400	0.616	0.957	0.005	0.008	0.013				
	G → Q7B	(HH)	0.336	0.506	0.778	0.006	0.010	0.017				
		(HL)	0.402	0.618	0.960	0.005	0.008	0.013				
	Set up time	D0	0.180		0.330							
	Set up time	D1	0.180		0.320							
	Set up time	D2	0.180		0.330							
	Set up time	D3	0.180		0.320							
	Set up time	D4	0.180		0.330							
	Set up time	D5	0.180		0.320							
	Set up time	D6	0.180		0.330							
	Set up time	D7	0.180		0.320							
	Hold time	D0	0.110		0.150							
	Hold time	D1	0.110		0.160							
	Hold time	D2	0.110		0.150							
	Hold time	D3	0.110		0.160							
	Hold time	D4	0.110		0.150							
	Hold time	D5	0.110		0.160							
	Hold time	D6	0.110		0.150							
	Hold time	D7	0.110		0.160							
	Min Pulse	G	0.522		1.249							
L902	D0 → Q0	(HH)	0.143	0.222	0.335	0.013	0.021	0.034	D0	3.6	Q0	35
		(LL)	0.145	0.226	0.349	0.010	0.016	0.025	D1	3.6	Q1	35
	D1 → Q1	(HH)	0.146	0.228	0.341	0.013	0.021	0.034	D2	3.6	Q2	35
		(LL)	0.149	0.231	0.357	0.010	0.016	0.025	D3	3.6	Q3	35
	D2 → Q2	(HH)	0.143	0.222	0.335	0.013	0.021	0.034	D4	3.6	Q4	35
		(LL)	0.145	0.226	0.349	0.010	0.016	0.025	D5	3.6	Q5	35
	D3 → Q3	(HH)	0.146	0.228	0.341	0.013	0.021	0.034	D6	3.6	Q6	35
		(LL)	0.149	0.231	0.357	0.010	0.016	0.025	D7	3.6	Q7	35
	D4 → Q4	(HH)	0.143	0.222	0.335	0.013	0.021	0.034	G	2.4		
		(LL)	0.145	0.226	0.349	0.010	0.016	0.025				
	D5 → Q5	(HH)	0.146	0.228	0.341	0.013	0.021	0.034				
		(LL)	0.149	0.231	0.357	0.010	0.016	0.025				
	D6 → Q6	(HH)	0.143	0.222	0.335	0.013	0.021	0.034				
		(LL)	0.145	0.226	0.349	0.010	0.016	0.025				
	D7 → Q7	(HH)	0.146	0.228	0.341	0.013	0.021	0.034				
		(LL)	0.149	0.231	0.357	0.010	0.016	0.025				
	G → Q0	(HH)	0.277	0.410	0.620	0.013	0.021	0.034				
		(HL)	0.346	0.532	0.818	0.010	0.016	0.026				
	G → Q1	(HH)	0.279	0.414	0.627	0.013	0.021	0.034				
		(HL)	0.349	0.537	0.827	0.010	0.016	0.026				
	G → Q2	(HH)	0.277	0.410	0.620	0.013	0.021	0.034				
		(HL)	0.346	0.532	0.818	0.010	0.016	0.026				
	G → Q3	(HH)	0.279	0.414	0.627	0.013	0.021	0.034				
		(HL)	0.349	0.537	0.827	0.010	0.016	0.026				
	G → Q4	(HH)	0.277	0.410	0.620	0.013	0.021	0.034				
		(HL)	0.346	0.532	0.818	0.010	0.016	0.026				
	G → Q5	(HH)	0.279	0.414	0.627	0.013	0.021	0.034				
		(HL)	0.349	0.537	0.827	0.010	0.016	0.026				
	G → Q6	(HH)	0.277	0.410	0.620	0.013	0.021	0.034				
		(HL)	0.346	0.532	0.818	0.010	0.016	0.026				
	G → Q7	(HH)	0.279	0.414	0.627	0.013	0.021	0.034				

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
		(HL)	0.349	0.537	0.827	0.010	0.016	0.026				
	Set up time	D0	0.100		0.180							
	Set up time	D1	0.100		0.180							
	Set up time	D2	0.100		0.180							
	Set up time	D3	0.100		0.180							
	Set up time	D4	0.100		0.180							
	Set up time	D5	0.100		0.180							
	Set up time	D6	0.100		0.180							
	Set up time	D7	0.100		0.180							
	Hold time	D0	0.210		0.340							
	Hold time	D1	0.210		0.330							
	Hold time	D2	0.210		0.340							
	Hold time	D3	0.210		0.330							
	Hold time	D4	0.210		0.340							
	Hold time	D5	0.210		0.330							
	Hold time	D6	0.210		0.340							
	Hold time	D7	0.210		0.330							
	Min Pulse	G	0.407		0.944							

Function	8-Bit D-Latch (High Speed)							SSI Family					
Block type	Standard type						Low Gate type						
	Normal		Q output		QB output		Normal		Q output		QB output		
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	
Low Power													
x1	F972	38											
x2													
x4													

Logic Diagram for "Normal"



Truth Table for "Normal"

Dn	G	Qn	QnB
0	1	0	1
1	1	1	0
X	0	Latch	

n= 0 to 7

X:Irrelevant

Logic Diagram for "Q output"

Truth Table for "Q output"

Logic Diagram for "QB output"

Truth Table for "QB output"

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F972	D0 → Q0	(HH)	0.202	0.299	0.459	0.006	0.010	0.017	D0	1.0	Q0	71
		(LL)	0.225	0.362	0.582	0.005	0.008	0.013	D1	1.0	Q1	71
	D0 → Q0B	(HL)	0.300	0.453	0.707	0.005	0.008	0.013	D2	1.0	Q2	71
		(LH)	0.284	0.465	0.757	0.006	0.010	0.017	D3	1.0	Q3	71
	D1 → Q1	(HH)	0.202	0.298	0.459	0.006	0.011	0.017	D4	1.0	Q4	71
		(LL)	0.224	0.362	0.585	0.005	0.008	0.013	D5	1.0	Q5	71
	D1 → Q1B	(HL)	0.301	0.454	0.710	0.005	0.008	0.013	D6	1.0	Q6	71
		(LH)	0.286	0.468	0.764	0.006	0.010	0.017	D7	1.0	Q7	71
	D2 → Q2	(HH)	0.202	0.299	0.459	0.006	0.010	0.017	G	2.5	Q0B	72
		(LL)	0.225	0.362	0.583	0.005	0.008	0.013			Q1B	72
	D2 → Q2B	(HL)	0.302	0.455	0.711	0.005	0.008	0.013			Q2B	71
		(LH)	0.286	0.467	0.762	0.006	0.010	0.017			Q3B	72
	D3 → Q3	(HH)	0.202	0.298	0.459	0.006	0.011	0.017			Q4B	71
		(LL)	0.224	0.362	0.585	0.005	0.008	0.013			Q5B	72
	D3 → Q3B	(HL)	0.301	0.454	0.710	0.005	0.008	0.013			Q6B	71
		(LH)	0.286	0.468	0.764	0.006	0.010	0.017			Q7B	72
	D4 → Q4	(HH)	0.202	0.299	0.459	0.006	0.010	0.017				
		(LL)	0.225	0.362	0.582	0.005	0.008	0.013				
	D4 → Q4B	(HL)	0.301	0.454	0.708	0.005	0.008	0.013				
		(LH)	0.285	0.466	0.759	0.006	0.010	0.017				
	D5 → Q5	(HH)	0.202	0.298	0.459	0.006	0.011	0.017				
		(LL)	0.224	0.362	0.585	0.005	0.008	0.013				
	D5 → Q5B	(HL)	0.301	0.454	0.710	0.005	0.008	0.013				
		(LH)	0.286	0.468	0.764	0.006	0.010	0.017				
	D6 → Q6	(HH)	0.202	0.299	0.459	0.006	0.010	0.017				
		(LL)	0.225	0.362	0.583	0.005	0.008	0.013				
	D6 → Q6B	(HL)	0.302	0.455	0.711	0.005	0.008	0.013				
		(LH)	0.286	0.467	0.762	0.006	0.010	0.017				
	D7 → Q7	(HH)	0.202	0.298	0.459	0.006	0.011	0.017				
		(LL)	0.224	0.362	0.585	0.005	0.008	0.013				
	D7 → Q7B	(HL)	0.301	0.454	0.710	0.005	0.008	0.013				
		(LH)	0.286	0.468	0.764	0.006	0.010	0.017				
	G → Q0	(HH)	0.349	0.538	0.831	0.006	0.010	0.017				
		(HL)	0.350	0.537	0.827	0.005	0.008	0.013				
	G → Q1	(HH)	0.352	0.542	0.839	0.006	0.010	0.017				
		(HL)	0.354	0.545	0.842	0.005	0.008	0.013				
	G → Q2	(HH)	0.349	0.538	0.831	0.006	0.010	0.017				
		(HL)	0.350	0.537	0.827	0.005	0.008	0.013				
	G → Q3	(HH)	0.352	0.542	0.839	0.006	0.010	0.017				
		(HL)	0.354	0.545	0.842	0.005	0.008	0.013				
	G → Q4	(HH)	0.349	0.538	0.831	0.006	0.010	0.017				
		(HL)	0.350	0.537	0.827	0.005	0.008	0.013				
	G → Q5	(HH)	0.352	0.542	0.839	0.006	0.010	0.017				
		(HL)	0.354	0.545	0.842	0.005	0.008	0.013				
	G → Q6	(HH)	0.349	0.538	0.831	0.006	0.010	0.017				
		(HL)	0.350	0.537	0.827	0.005	0.008	0.013				
	G → Q7	(HH)	0.352	0.542	0.839	0.006	0.010	0.017				
		(HL)	0.354	0.545	0.842	0.005	0.008	0.013				
	G → Q0B	(HH)	0.410	0.639	1.000	0.006	0.010	0.017				
		(HL)	0.447	0.692	1.080	0.005	0.008	0.013				
	G → Q1B	(HH)	0.416	0.651	1.021	0.006	0.010	0.017				
		(HL)	0.451	0.699	1.091	0.005	0.008	0.013				
	G → Q2B	(HH)	0.411	0.642	1.005	0.006	0.010	0.017				
		(HL)	0.448	0.695	1.085	0.005	0.008	0.013				
	G → Q3B	(HH)	0.416	0.651	1.021	0.006	0.010	0.017				
		(HL)	0.451	0.699	1.091	0.005	0.008	0.013				

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			Input		Output	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	G → Q4B	(HH)	0.410	0.640	1.002	0.006	0.010	0.017				
		(HL)	0.447	0.693	1.081	0.005	0.008	0.013				
	G → Q5B	(HH)	0.416	0.651	1.021	0.006	0.010	0.017				
		(HL)	0.451	0.699	1.091	0.005	0.008	0.013				
	G → Q6B	(HH)	0.411	0.642	1.005	0.006	0.010	0.017				
		(HL)	0.448	0.695	1.085	0.005	0.008	0.013				
	G → Q7B	(HH)	0.416	0.651	1.021	0.006	0.010	0.017				
		(HL)	0.451	0.699	1.091	0.005	0.008	0.013				
	Set up time	D0	0.230		0.470							
	Set up time	D1	0.230		0.470							
	Set up time	D2	0.230		0.470							
	Set up time	D3	0.230		0.470							
	Set up time	D4	0.230		0.470							
	Set up time	D5	0.230		0.470							
	Set up time	D6	0.230		0.470							
	Set up time	D7	0.230		0.470							
	Hold time	D0	0.100		0.140							
	Hold time	D1	0.090		0.140							
	Hold time	D2	0.100		0.140							
	Hold time	D3	0.090		0.140							
	Hold time	D4	0.100		0.140							
	Hold time	D5	0.090		0.140							
	Hold time	D6	0.100		0.140							
	Hold time	D7	0.090		0.140							
	Min Pulse	G	0.514		1.214							

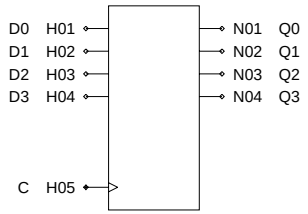
[MEMO]

Function	4-Bit D-F/F										SSI Family	
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power			L924	20								
x1												
x2												
x4												

Logic Diagram for "Normal"

Truth Table for "Normal"

Logic Diagram for "Q output"



Truth Table for "Q output"

D0	D1	D2	D3	C	Q0	Q1	Q2	Q3	Q0B	Q1B	Q2B	Q3B
D0	D1	D2	D3	↗	D0	D1	D2	D3	D0B	D1B	D2B	D3B
X	X	X	X	↘	Hold					HOLD		

X:Irrelevant

Logic Diagram for "QB output"

Truth Table for "QB output"

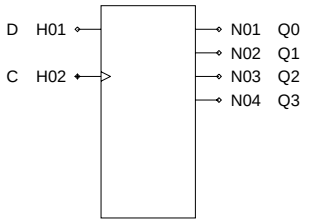
Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_1						
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L924	C → Q0		(HH)	0.318	0.486	0.756	0.013	0.021	0.034	D0	3.6	Q0	35
			(HL)	0.302	0.454	0.689	0.010	0.016	0.026	D1	3.6	Q1	35
	C → Q1		(HH)	0.320	0.491	0.763	0.013	0.021	0.034	D2	3.6	Q2	35
			(HL)	0.308	0.464	0.706	0.010	0.016	0.026	D3	3.6	Q3	35
	C → Q2		(HH)	0.318	0.486	0.756	0.013	0.021	0.034	C	2.4		
			(HL)	0.302	0.454	0.689	0.010	0.016	0.026				
	C → Q3		(HH)	0.320	0.491	0.763	0.013	0.021	0.034				
			(HL)	0.308	0.464	0.706	0.010	0.016	0.026				
	Set up time	D0		0.100		0.150							
	Set up time	D1		0.100		0.150							
	Set up time	D2		0.100		0.150							
	Set up time	D3		0.100		0.150							
	Hold time	D0		0.180		0.350							
	Hold time	D1		0.180		0.360							
	Hold time	D2		0.180		0.350							
	Hold time	D3		0.180		0.360							
	Min Pulse	C		0.383		0.883							

Function	4-Bit Shift Register								SSI Family			
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
Low Power			L914	20								
x1												
x2												
x4												

Logic Diagram for "Normal"

Truth Table for "Normal"

Logic Diagram for "Q output"



Truth Table for "Q output"

D	C	Q0	Q1	Q2	Q3	Q0B	Q1B	Q2B	Q3B
0	↗	0		Shift		1		SHIFT	
1	↗	1		Shift		0		SHIFT	
X	↘				Hold				

X:Irrelevant

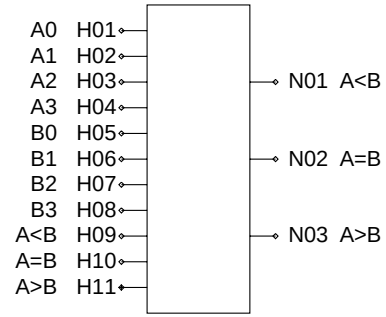
Logic Diagram for "QB output"

Truth Table for "QB output"

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L914	C → Q0	(HH)	0.310	0.472	0.733	0.013	0.021	0.034	D	3.6	Q0	35
		(HL)	0.295	0.445	0.676	0.010	0.016	0.026	C	2.4	Q1	35
	C → Q1	(HH)	0.313	0.477	0.740	0.013	0.021	0.034			Q2	35
		(HL)	0.300	0.454	0.691	0.010	0.016	0.026			Q3	35
	C → Q2	(HH)	0.310	0.472	0.733	0.013	0.021	0.034				
		(HL)	0.295	0.444	0.675	0.010	0.016	0.026				
	C → Q3	(HH)	0.313	0.477	0.741	0.013	0.021	0.034				
		(HL)	0.301	0.455	0.693	0.010	0.016	0.026				
	Set up time	D	0.100		0.150							
	Hold time	D	0.180		0.350							
	Min Pulse	C	0.378		0.865							

Function	4-Bit Magnitude Comparator					SSI Family	
Block type	Standard type						
	Normal		High speed				
Drivability	Name	cells	Name	cells			
Low Power							
x1	F985	32					
x2							
x4							

Logic Diagram



Truth Table

A3,B3	A2,B2	A1,B1	A0,B0	A<B	A=B	A>B	A<B	A=B	A>B
A3>B3	X	X	X	X	X	X	0	0	1
A3<B3	X	X	X	X	X	X	1	0	0
A3=B3	A2>B2	X	X	X	X	X	0	0	1
A3=B3	A2<B2	X	X	X	X	X	1	0	0
A3=B3	A2=B2	A1>B1	X	X	X	X	0	0	1
A3=B3	A2=B2	A1<B1	X	X	X	X	1	0	0
A3=B3	A2=B2	A1=B1	A0>B0	X	X	X	0	0	1
A3=B3	A2=B2	A1=B1	A0<B0	X	X	X	1	0	0
A3=B3	A2=B2	A1=B1	A0=B0	0	0	1	0	0	1
A3=B3	A2=B2	A1=B1	A0=B0	X	1	X	0	1	0
A3=B3	A2=B2	A1=B1	A0=B0	1	0	0	1	0	0
A3=B3	A2=B2	A1=B1	A0=B0	1	0	1	0	0	0
A3=B3	A2=B2	A1=B1	A0=B0	0	0	0	1	0	1

X:Irrelevant

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
F985	A0 → A<B	(HL)	0.628	1.012	1.656	0.005	0.008	0.013	A0	1.0	A<B	71
		(LH)	0.515	0.843	1.368	0.006	0.010	0.017	A1	1.0	A=B	71
	A0 → A=B	(HH)	0.571	0.916	1.494	0.006	0.010	0.017	A2	1.0	A>B	64
		(HL)	0.498	0.800	1.276	0.005	0.008	0.013	A3	1.0		
		(LH)	0.581	0.938	1.541	0.006	0.010	0.017	B0	2.3		
		(LL)	0.399	0.647	1.047	0.005	0.008	0.013	B1	2.3		
	A0 → A>B	(HH)	0.510	0.816	1.321	0.006	0.010	0.017	B2	2.2		
		(LL)	0.404	0.647	1.046	0.008	0.013	0.022	B3	2.2		
	A1 → A<B	(HL)	0.633	1.118	1.826	0.005	0.008	0.013	A<B	1.0		
		(LH)	0.560	1.245	2.005	0.006	0.010	0.017	A=B	3.7		
	A1 → A=B	(HH)	0.634	1.019	1.665	0.006	0.010	0.017	A>B	1.0		
		(HL)	0.550	0.883	1.411	0.005	0.008	0.013				
		(LH)	0.644	1.045	1.721	0.006	0.010	0.017				
		(LL)	0.444	0.721	1.177	0.005	0.008	0.013				
	A1 → A>B	(HH)	0.568	0.930	1.546	0.006	0.010	0.017				
		(LL)	0.662	1.082	1.743	0.008	0.013	0.022				
	A2 → A<B	(HL)	0.598	1.195	1.973	0.005	0.008	0.013				
		(LH)	0.598	1.284	2.102	0.006	0.010	0.017				
	A2 → A=B	(HH)	0.676	1.097	1.808	0.006	0.010	0.017				
		(HL)	0.582	0.933	1.492	0.005	0.008	0.013				
		(LH)	0.690	1.127	1.867	0.006	0.010	0.017				
		(LL)	0.483	0.786	1.284	0.005	0.008	0.013				
	A2 → A>B	(HH)	0.532	1.083	1.779	0.006	0.010	0.017				
		(LL)	0.560	1.121	1.844	0.008	0.013	0.022				
	A3 → A<B	(HL)	0.533	1.292	2.121	0.005	0.008	0.013				
		(LH)	0.536	1.197	1.981	0.006	0.010	0.017				
	A3 → A=B	(HH)	0.706	1.150	1.900	0.006	0.010	0.017				
		(HL)	0.621	0.998	1.595	0.005	0.008	0.013				
		(LH)	0.724	1.185	1.971	0.006	0.010	0.017				
		(LL)	0.516	0.842	1.378	0.005	0.008	0.013				
	A3 → A>B	(HH)	0.466	1.186	1.938	0.006	0.010	0.017				
		(LL)	0.438	1.035	1.722	0.008	0.013	0.022				
	B0 → A<B	(HH)	0.477	0.755	1.197	0.006	0.010	0.017				
		(LL)	0.506	0.837	1.405	0.005	0.008	0.013				
	B0 → A=B	(HH)	0.548	0.881	1.434	0.006	0.010	0.017				
		(HL)	0.361	0.559	0.875	0.005	0.008	0.013				
		(LH)	0.450	0.741	1.243	0.006	0.010	0.017				
		(LL)	0.432	0.686	1.095	0.005	0.008	0.013				
	B0 → A>B	(HL)	0.343	0.543	0.862	0.008	0.013	0.022				
		(LH)	0.446	0.704	1.141	0.006	0.010	0.017				
	B1 → A<B	(HH)	0.509	1.141	1.817	0.006	0.010	0.017				
		(LL)	0.532	0.964	1.588	0.005	0.008	0.013				
	B1 → A=B	(HH)	0.614	0.988	1.614	0.006	0.010	0.017				
		(HL)	0.412	0.635	1.002	0.005	0.008	0.013				
		(LH)	0.511	0.847	1.418	0.006	0.010	0.017				
		(LL)	0.484	0.771	1.229	0.005	0.008	0.013				
	B1 → A>B	(HL)	0.600	0.975	1.559	0.008	0.013	0.022				
		(LH)	0.502	0.816	1.366	0.006	0.010	0.017				
	B2 → A<B	(HH)	0.545	1.197	1.937	0.006	0.010	0.017				
		(LL)	0.496	1.049	1.737	0.005	0.008	0.013				
	B2 → A=B	(HH)	0.652	1.061	1.753	0.006	0.010	0.017				
		(HL)	0.456	0.701	1.113	0.005	0.008	0.013				
		(LH)	0.556	0.927	1.569	0.006	0.010	0.017				
		(LL)	0.517	0.821	1.310	0.005	0.008	0.013				
	B2 → A>B	(HL)	0.496	1.032	1.678	0.008	0.013	0.022				
		(LH)	0.430	0.937	1.539	0.006	0.010	0.017				

Block type	Switching speed										
	Path		t LD0 (ns)			t 1			Input		Output	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	B3 → A<B	(HH)	0.483	1.116	1.818	0.006	0.010	0.017				
		(LL)	0.431	1.141	1.875	0.005	0.008	0.013				
	B3 → A=B	(HH)	0.685	1.120	1.854	0.006	0.010	0.017				
		(HL)	0.493	0.755	1.203	0.005	0.008	0.013				
		(LH)	0.588	0.983	1.667	0.006	0.010	0.017				
		(LL)	0.557	0.887	1.413	0.005	0.008	0.013				
	B3 → A>B	(HL)	0.382	0.955	1.559	0.008	0.013	0.022				
		(LH)	0.364	1.035	1.694	0.006	0.010	0.017				
	A<B → A>B	(HL)	0.205	0.317	0.485	0.008	0.013	0.022				
		(LH)	0.225	0.372	0.618	0.006	0.010	0.017				
	A=B → A<B	(HL)	0.307	0.488	0.775	0.005	0.008	0.013				
		(LH)	0.315	0.499	0.808	0.006	0.010	0.017				
	A=B → A=B	(HH)	0.140	0.209	0.326	0.006	0.010	0.017				
		(LL)	0.137	0.211	0.314	0.005	0.008	0.013				
	A=B → A>B	(HL)	0.190	0.300	0.460	0.008	0.013	0.022				
		(LH)	0.237	0.374	0.602	0.006	0.010	0.017				
	A>B → A<B	(HL)	0.321	0.505	0.801	0.005	0.008	0.013				
		(LH)	0.302	0.496	0.825	0.006	0.010	0.017				

[MEMO]

[MEMO]

[MEMO]

Chapter 3

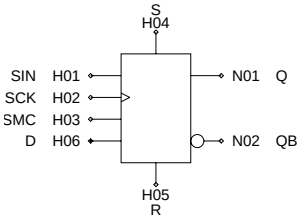
Scan Path Block

3.1 Standard Type

[MEMO]

Function	D-F/F with R,S,2 to 1 Selector							SSI Family			
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	S000	12										
x2												
x4												
x8												

Logic Diagram for "Normal"



Truth Table for "Normal"

SIN	SCK	SMC	S	R	D	Q	QB	
X	X	X	1	0	X	1	0	
X	X	X	0	1	X	0	1	
A	↗	0	0	0	X	A	AB	
X	↗	1	0	0	B	B	BB	
X	↘	X	0	0	X	Hold		
X	X	X	1	1	X	1	1	← Prohibition

X:Irrelevant

Logic Diagram for "Q output"

Truth Table for "Q output"

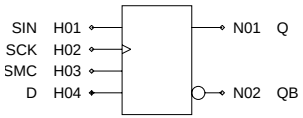
Logic Diagram for "QB output"

Truth Table for "QB output"

Block type	Switching speed								Input		Output	
	Path			t_{LD0} (ns)			t_1					
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
S000	SCK → Q		(HH)	0.304	0.475	0.746	0.006	0.010	0.017	SIN	1.0	Q	72
			(HL)	0.413	0.649	1.020	0.005	0.008	0.013	SCK	1.0	QB	71
	SCK → QB		(HH)	0.476	0.759	1.209	0.006	0.010	0.017	SMC	1.0		
			(HL)	0.477	0.759	1.204	0.005	0.008	0.013	S	2.6		
	S → Q		(HH)	0.151	0.218	0.310	0.006	0.010	0.017	R	2.5		
	S → QB		(HL)	0.323	0.646	1.005	0.005	0.009	0.014	D	1.0		
	R → Q		(HL)	0.364	0.591	0.924	0.005	0.008	0.013				
	R → QB		(HH)	0.148	0.264	0.381	0.006	0.010	0.017				
	Set up time	SIN		0.330		0.800							
	Set up time	SMC		0.330		0.880							
	Set up time	D		0.330		0.800							
	Hold time	SIN		0.000		0.000							
	Hold time	SMC		0.000		0.000							
	Hold time	D		0.000		0.000							
	Release time	S		0.000		0.000							
	Release time	R		0.100		0.340							
	Removal time	S		0.400		0.670							
	Removal time	R		0.110		0.100							
	Min Pulse	SCK		0.531		1.309							
	Min Pulse	S		0.526		1.301							
	Min Pulse	R		0.549		1.290							

Function	D-F/F with 2 to 1 Selector										SSI Family	
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	S001	9										
x2												
x4												
x8												

Logic Diagram for "Normal"



Truth Table for "Normal"

SIN	SCK	SMC	D	Q	QB
X	↗	1	B	B	BB
A	↗	0	X	A	AB
X	↘	X	X	Hold	

X:Irrelevant

Logic Diagram for "Q output"

Truth Table for "Q output"

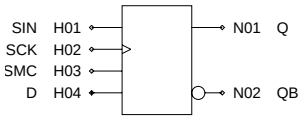
Logic Diagram for "QB output"

Truth Table for "QB output"

Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_1						
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
S001	SCK → Q		(HH)	0.263	0.404	0.626	0.013	0.021	0.034	SIN	1.0	Q	36
			(HL)	0.300	0.464	0.718	0.010	0.016	0.025	SCK	1.0	QB	36
	SCK → QB		(HH)	0.336	0.528	0.826	0.013	0.021	0.034	SMC	1.0		
			(HL)	0.322	0.500	0.780	0.010	0.016	0.025	D	1.0		
	Set up time	SIN		0.300		0.580							
	Set up time	SMC		0.310		0.660							
	Set up time	D		0.300		0.590							
	Hold time	SIN		0.000		0.000							
	Hold time	SMC		0.000		0.000							
	Hold time	D		0.000		0.000							
	Min Pulse	SCK		0.386		0.925							

Function	D-F/F with 2 to 1 Selector										SSI Family	
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	S002	10										
x2												
x4												
x8												

Logic Diagram for "Normal"



Truth Table for "Normal"

SIN	SCK	SMC	D	Q	QB
X	↗	1	B	B	BB
A	↗	0	X	A	AB
X	↘	X	X	Hold	

X:Irrelevant

Logic Diagram for "Q output"

Truth Table for "Q output"

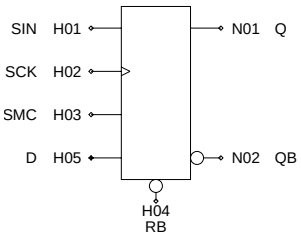
Logic Diagram for "QB output"

Truth Table for "QB output"

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
S002	SCK → Q	(HH)	0.279	0.431	0.669	0.006	0.010	0.017	SIN	1.0	Q	71
		(HL)	0.321	0.497	0.774	0.005	0.008	0.013	SCK	1.0	QB	72
	SCK → QB	(HH)	0.380	0.595	0.938	0.006	0.010	0.017	SMC	1.0		
		(HL)	0.367	0.571	0.895	0.005	0.008	0.013	D	1.0		
	Set up time	SIN	0.300		0.580							
	Set up time	SMC	0.310		0.660							
	Set up time	D	0.300		0.590							
	Hold time	SIN	0.000		0.000							
	Hold time	SMC	0.000		0.000							
	Hold time	D	0.000		0.000							
	Min Pulse	SCK	0.429		1.037							

Function	D-F/F with RB,2 to 1 Selector							SSI Family				
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	S004	11										
x2												
x4												
x8												

Logic Diagram for "Normal"



Truth Table for "Normal"

SIN	SCK	SMC	D	RB	Q	QB
X	↗	1	B	1	B	BB
A	↗	0	X	1	A	AB
X	↘	X	X	1	Hold	
X	X	X	X	0	0	1

X:Irrelevant

Logic Diagram for "Q output"

Truth Table for "Q output"

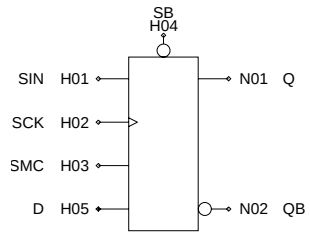
Logic Diagram for "QB output"

Truth Table for "QB output"

Block type	Switching speed								Input		Output	
	Path			t_{LD0} (ns)			t_1					
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
S004	SCK → Q		(HH)	0.324	0.503	0.800	0.006	0.011	0.017	SIN	3.8	Q	71
			(HL)	0.329	0.509	0.791	0.005	0.008	0.013	SCK	1.2	QB	71
	SCK → QB		(HH)	0.385	0.604	0.950	0.006	0.010	0.017	SMC	2.5		
			(HL)	0.412	0.645	1.028	0.005	0.008	0.013	RB	2.6		
	RB → Q		(LL)	0.161	0.249	0.374	0.005	0.008	0.013	D	3.9		
	RB → QB		(LH)	0.219	0.402	0.627	0.006	0.010	0.017				
	Set up time	SIN		0.240		0.480							
	Set up time	SMC		0.280		0.590							
	Set up time	D		0.240		0.480							
	Hold time	SIN		0.060		0.000							
	Hold time	SMC		0.020		0.000							
	Hold time	D		0.060		0.000							
	Release time	RB		0.000		0.000							
	Removal time	RB		0.330		0.580							
	Min Pulse	SCK		0.464		1.130							
	Min Pulse	RB		0.368		0.904							

Function	D-F/F with SB,2 to 1 Selector								SSI Family			
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	S005	11										
x2												
x4												
x8												

Logic Diagram for "Normal"



Truth Table for "Normal"

SIN	SCK	SMC	D	SB	Q	QB
X	↗	1	B	1	B	BB
A	↗	0	X	1	A	AB
X	↘	X	X	1	Hold	
X	X	X	X	0	1	0

X:Irrelevant

Logic Diagram for "Q output"

Truth Table for "Q output"

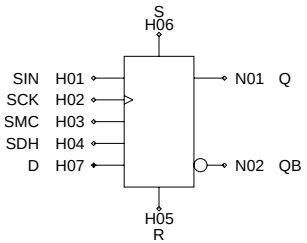
Logic Diagram for "QB output"

Truth Table for "QB output"

Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_1						
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
S005	SCK → Q		(HH)	0.282	0.434	0.673	0.006	0.010	0.017	SIN	3.7	Q	72
			(HL)	0.347	0.538	0.843	0.005	0.008	0.013	SCK	1.2	QB	72
	SCK → QB		(HH)	0.442	0.696	1.116	0.006	0.010	0.017	SMC	2.5		
			(HL)	0.370	0.575	0.899	0.005	0.008	0.013	SB	2.4		
	SB → Q		(LH)	0.271	0.474	0.759	0.006	0.010	0.017	D	3.8		
	SB → QB		(LL)	0.150	0.302	0.459	0.005	0.008	0.013				
	Set up time	SIN		0.230		0.490							
	Set up time	SMC		0.280		0.630							
	Set up time	D		0.230		0.490							
	Hold time	SIN		0.050		0.000							
	Hold time	SMC		0.000		0.000							
	Hold time	D		0.050		0.000							
	Release time	SB		0.090		0.100							
	Removal time	SB		0.110		0.150							
	Min Pulse	SCK		0.491		1.219							
	Min Pulse	SB		0.423		1.067							

Function	D-F/F with R,S,Hold,2 to 1 Selector							SSI Family			
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	S050	14										
x2												
x4												
x8												

Logic Diagram for "Normal"



Truth Table for "Normal"

SIN	SCK	SMC	SDH	S	R	D	Q	QB	
X	↗	X	1	0	0	X	Hold		
A	↗	0	0	0	0	X	A	AB	
X	↗	1	0	0	0	B	B	BB	
X	↘	X	X	0	0	X	Hold		
X	X	X	X	0	1	X	0	1	
X	X	X	X	1	0	X	1	0	
X	X	X	X	1	1	X	1	1	← Prohibition

X:Irrelevant

Logic Diagram for "Q output"

Truth Table for "Q output"

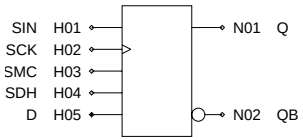
Logic Diagram for "QB output"

Truth Table for "QB output"

Block type	Switching speed								Input		Output	
	Path			t_{LD0} (ns)			t_1					
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
S050	SCK → Q		(HH)	0.301	0.469	0.737	0.006	0.010	0.017	SIN	3.6	Q	71
			(HL)	0.417	0.654	1.028	0.005	0.008	0.013	SCK	1.0	QB	71
	SCK → QB		(HH)	0.506	0.808	1.287	0.006	0.010	0.017	SMC	1.0		
			(HL)	0.531	0.844	1.343	0.005	0.008	0.013	SDH	1.0		
	R → Q		(HL)	0.371	0.631	0.989	0.005	0.008	0.013	R	2.6		
	R → QB		(HH)	0.175	0.296	0.434	0.006	0.010	0.017	S	2.5		
	S → Q		(HH)	0.155	0.223	0.319	0.006	0.010	0.017	D	3.8		
	S → QB		(HL)	0.383	0.736	1.150	0.005	0.009	0.014				
	Set up time	SIN		0.350		0.920							
	Set up time	SMC		0.400		1.110							
	Set up time	SDH		0.330		0.900							
	Set up time	D		0.350		0.930							
	Hold time	SIN		0.000		0.000							
	Hold time	SMC		0.000		0.000							
	Hold time	SDH		0.000		0.000							
	Hold time	D		0.000		0.000							
	Release time	R		0.100		0.360							
	Release time	S		0.000		0.000							
	Removal time	R		0.110		0.080							
	Removal time	S		0.390		0.660							
	Min Pulse	SCK		0.584		1.446							
	Min Pulse	R		0.605		1.388							
	Min Pulse	S		0.584		1.449							

Function	D-F/F with Hold,2 to 1 Selector								SSI Family			
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	S052	12										
x2												
x4												
x8												

Logic Diagram for "Normal"



Truth Table for "Normal"

SIN	SCK	SMC	SDH	D	Q	QB
X	↗	X	1	X	Hold	
A	↗	0	0	X	A	AB
X	↗	1	0	B	B	BB
X	↘	X	X	X	Hold	

X:Irrelevant

Logic Diagram for "Q output"

Truth Table for "Q output"

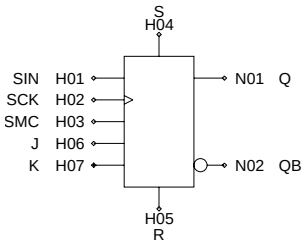
Logic Diagram for "QB output"

Truth Table for "QB output"

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
S052	SCK → Q	(HH)	0.281	0.432	0.670	0.006	0.010	0.017	SIN	3.6	Q	71
		(HL)	0.325	0.503	0.783	0.005	0.008	0.013	SCK	1.0	QB	72
	SCK → QB	(HH)	0.406	0.636	1.005	0.006	0.010	0.017	SMC	1.0		
		(HL)	0.398	0.621	0.973	0.005	0.008	0.013	SDH	1.0		
	Set up time	SIN	0.330		0.670				D	3.8		
	Set up time	SMC	0.370		0.890							
	Set up time	SDH	0.300		0.670							
	Set up time	D	0.330		0.670							
	Hold time	SIN	0.000		0.000							
	Hold time	SMC	0.000		0.000							
	Hold time	SDH	0.000		0.000							
	Hold time	D	0.000		0.000							
	Min Pulse	SCK	0.454		1.102							

Function	JK-F/F with R,S,D-F/F Function							SSI Family			
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	S100	14										
x2												
x4												
x8												

Logic Diagram for "Normal"



Truth Table for "Normal"

SIN	SCK	SMC	S	R	J	K	Qn	QBn	Qn+1	QBn+1	
X	X	X	1	0	X	X	X	X	1	0	
X	X	X	0	1	X	X	X	X	0	1	
A	↗	0	0	0	X	X	X	X	A	AB	
X	↗	1	0	0	B	X	0	1	B	BB	
X	↗	1	0	0	X	C	1	0	CB	C	
X	↘	X	0	0	X	X	X	X	Hold		
X	X	X	1	1	X	X	X	X	1	1	← Prohibition

X:Irrelevant

Logic Diagram for "Q output"

Truth Table for "Q output"

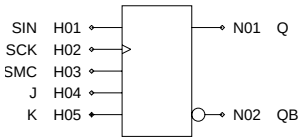
Logic Diagram for "QB output"

Truth Table for "QB output"

Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_1						
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
S100	SCK → Q		(HH)	0.301	0.469	0.735	0.006	0.010	0.017	SIN	1.0	Q	71
			(HL)	0.416	0.653	1.027	0.005	0.008	0.013	SCK	1.0	QB	71
	SCK → QB		(HH)	0.528	0.843	1.344	0.006	0.010	0.017	SMC	1.0		
			(HL)	0.573	0.914	1.456	0.005	0.009	0.014	S	2.5		
	S → Q		(HH)	0.155	0.223	0.319	0.006	0.010	0.017	R	2.6		
	S → QB		(HL)	0.425	0.806	1.266	0.005	0.009	0.014	J	1.0		
	R → Q		(HL)	0.374	0.659	1.037	0.005	0.008	0.013	K	1.0		
	R → QB		(HH)	0.195	0.322	0.479	0.006	0.010	0.017				
	Set up time	SIN		0.330		0.820							
	Set up time	SMC		0.370		1.030							
	Set up time	J		0.390		1.030							
	Set up time	K		0.380		0.870							
	Hold time	SIN		0.000		0.000							
	Hold time	SMC		0.000		0.000							
	Hold time	J		0.000		0.000							
	Hold time	K		0.000		0.000							
	Release time	S		0.000		0.000							
	Release time	R		0.100		0.360							
	Removal time	S		0.390		0.660							
	Removal time	R		0.100		0.080							
	Min Pulse	SCK		0.628		1.560							
	Min Pulse	S		0.624		1.562							
	Min Pulse	R		0.645		1.463							

Function	JK-F/F with D-F/F Function							SSI Family			
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	S102	12										
x2												
x4												
x8												

Logic Diagram for "Normal"



Truth Table for "Normal"

SIN	SCK	SMC	J	K	Qn	QBn	Qn+1	QBn+1
A	↗	0	X	X	X	X	A	AB
X	↗	1	B	X	0	1	B	BB
X	↗	1	X	C	1	0	CB	C
X	↘	X	X	X	X	X	Hold	

X:Irrelevant

Logic Diagram for "Q output"

Truth Table for "Q output"

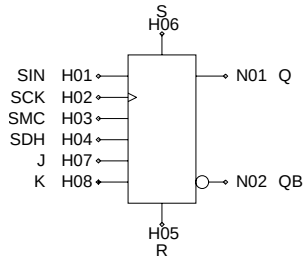
Logic Diagram for "QB output"

Truth Table for "QB output"

Block type	Switching speed								Input		Output	
	Path			t_{LD0} (ns)			t_1					
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
S102	SCK → Q		(HH)	0.282	0.433	0.672	0.006	0.010	0.017	SIN	1.0	Q	72
			(HL)	0.324	0.499	0.778	0.005	0.008	0.013	SCK	1.0	QB	72
	SCK → QB		(HH)	0.422	0.660	1.046	0.006	0.010	0.017	SMC	1.0		
			(HL)	0.423	0.660	1.037	0.005	0.008	0.013	J	1.0		
	Set up time	SIN		0.300		0.580				K	1.0		
	Set up time	SMC		0.340		0.750							
	Set up time	J		0.390		0.880							
	Set up time	K		0.370		0.830							
	Hold time	SIN		0.000		0.000							
	Hold time	SMC		0.000		0.000							
	Hold time	J		0.000		0.000							
	Hold time	K		0.000		0.000							
	Min Pulse	SCK		0.475		1.144							

Function	JK-F/F with R,S,Hold,D-F/F Function							SSI Family				
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	S150	17										
x2												
x4												
x8												

Logic Diagram for "Normal"



Truth Table for "Normal"

SIN	SCK	SMC	SDH	S	R	J	K	Qn	QBn	Qn+1	QBn+1	
X	↗	X	1	0	0	X	X	X	X	Hold		
A	↗	0	0	0	0	X	X	X	X	A	AB	
X	↗	1	0	0	0	B	X	0	1	B	BB	
X	↗	1	0	0	0	X	C	1	0	CB	C	
X	↘	X	X	0	0	X	X	X	X	Hold		
X	X	X	X	0	1	X	X	X	X	0	1	
X	X	X	X	1	0	X	X	X	X	1	0	
X	X	X	X	1	1	X	X	X	X	1	1	← Prohibition

X:Irrelevant

Logic Diagram for "Q output"

Truth Table for "Q output"

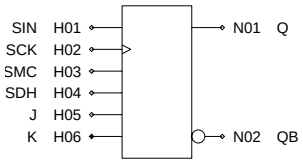
Logic Diagram for "QB output"

Truth Table for "QB output"

Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_1						
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
S150	SCK → Q		(HH)	0.301	0.469	0.736	0.006	0.010	0.017	SIN	3.6	Q	71
			(HL)	0.417	0.653	1.027	0.005	0.008	0.013	SCK	1.0	QB	71
	SCK → QB		(HH)	0.548	0.873	1.393	0.006	0.010	0.017	SMC	1.0		
			(HL)	0.616	0.983	1.565	0.006	0.009	0.014	SDH	1.0		
	R → Q		(HL)	0.376	0.685	1.080	0.005	0.008	0.013	R	2.6		
	R → QB		(HH)	0.212	0.346	0.517	0.006	0.011	0.017	S	2.5		
	S → Q		(HH)	0.155	0.223	0.320	0.006	0.010	0.017	J	1.0		
	S → QB		(HL)	0.466	0.873	1.373	0.006	0.009	0.014	K	1.0		
	Set up time	SIN		0.350		0.920							
	Set up time	SMC		0.440		1.200							
	Set up time	SDH		0.330		0.890							
	Set up time	J		0.450		1.340							
	Set up time	K		0.480		1.110							
	Hold time	SIN		0.000		0.000							
	Hold time	SMC		0.000		0.000							
	Hold time	SDH		0.000		0.000							
	Hold time	J		0.000		0.000							
	Hold time	K		0.000		0.000							
	Release time	R		0.100		0.360							
	Release time	S		0.000		0.000							
	Removal time	R		0.110		0.080							
	Removal time	S		0.390		0.660							
	Min Pulse	SCK		0.670		1.668							
	Min Pulse	R		0.682		1.522							
	Min Pulse	S		0.665		1.669							

Function	JK-F/F with Hold,D-F/F Function							SSI Family			
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	S152	15										
x2												
x4												
x8												

Logic Diagram for "Normal"



Truth Table for "Normal"

SIN	SCK	SMC	SDH	J	K	Qn	QBn	Qn+1	QBn+1
X	↗	X	1	X	X	X	X	Hold	
A	↗	0	0	X	X	X	X	A	AB
X	↗	1	0	B	X	0	1	B	BB
X	↗	1	0	X	C	1	0	CB	C
X	↘	X	X	X	X	X	X	Hold	

X:Irrelevant

Logic Diagram for "Q output"

Truth Table for "Q output"

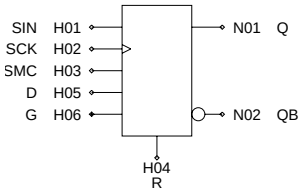
Logic Diagram for "QB output"

Truth Table for "QB output"

Block type	Switching speed								Input		Output	
	Path			t_{LD0} (ns)			t_1					
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
S152	SCK → Q		(HH)	0.281	0.432	0.670	0.006	0.010	0.017	SIN	3.6	Q	72
			(HL)	0.326	0.502	0.782	0.005	0.008	0.013	SCK	1.0	QB	72
	SCK → QB		(HH)	0.440	0.690	1.093	0.006	0.010	0.017	SMC	1.0		
			(HL)	0.446	0.698	1.097	0.005	0.008	0.013	SDH	1.0		
	Set up time	SIN		0.330		0.670				J	1.0		
	Set up time	SMC		0.420		1.010				K	1.0		
	Set up time	SDH		0.290		0.670							
	Set up time	J		0.420		1.090							
	Set up time	K		0.480		1.080							
	Hold time	SIN		0.000		0.000							
	Hold time	SMC		0.000		0.000							
	Hold time	SDH		0.000		0.000							
	Hold time	J		0.000		0.000							
	Hold time	K		0.000		0.000							
	Min Pulse	SCK		0.498		1.198							

Function	D-Latch with R,D-F/F Function							SSI Family			
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	S201	12										
x2												
x4												
x8												

Logic Diagram for "Normal"



Truth Table for "Normal"

SIN	SCK	SMC	R	D	G	Q	QB	
X	X	X	1	X	X	0	1	
A	↗	0	0	X	X	A	AB	
X	↘	0	0	X	X	Hold		
X	X	1	0	B	1	B	BB	
X	X	1	0	X	0	Latch		
X	1	Down	0	1	1	X	X	← Prohibition

X:Irrelevant

Logic Diagram for "Q output"

Truth Table for "Q output"

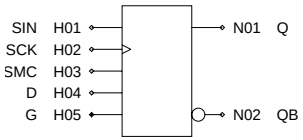
Logic Diagram for "QB output"

Truth Table for "QB output"

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
S201	SCK → Q	(HH)	0.563	0.893	1.446	0.006	0.010	0.017	SIN	3.7	Q	72
		(HL)	0.461	0.723	1.158	0.005	0.008	0.013	SCK	1.0	QB	71
	SCK → QB	(HH)	0.375	0.585	0.936	0.006	0.010	0.017	SMC	1.0		
		(HL)	0.508	0.799	1.285	0.005	0.008	0.013	R	2.4		
	R → Q	(HL)	0.291	0.438	0.665	0.005	0.008	0.013	D	1.3		
	R → QB	(HH)	0.157	0.225	0.323	0.006	0.010	0.017	G	1.0		
	D → Q	(HH)	0.477	0.754	1.217	0.006	0.010	0.017				
		(LL)	0.403	0.675	1.123	0.005	0.008	0.013				
	D → QB	(HL)	0.423	0.659	1.057	0.005	0.008	0.013				
		(LH)	0.316	0.537	0.900	0.006	0.010	0.017				
	G → Q	(HH)	0.565	0.894	1.444	0.006	0.010	0.017				
		(HL)	0.467	0.732	1.173	0.005	0.008	0.013				
	G → QB	(HH)	0.381	0.594	0.951	0.006	0.010	0.017				
		(HL)	0.510	0.801	1.284	0.005	0.008	0.013				
	Set up time	SIN	0.120		0.290							
	Set up time	SMC	0.550		1.040							
	Set up time	D	0.270		0.590							
	Hold time	SIN	0.150		0.380							
	Hold time	SMC	0.000		0.000							
	Hold time	D	0.000		0.000							
	Release time	R	0.070		0.000							
	Removal time	R	0.480		0.880							
	Min Pulse	SCK	0.630		1.553							
	Min Pulse	R	0.401		0.975							
	Min Pulse	G	0.632		1.553							

Function	D-Latch with D-F/F Function							SSI Family			
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	S202	11										
x2												
x4												
x8												

Logic Diagram for "Normal"



Truth Table for "Normal"

SIN	SCK	SMC	D	G	Q	QB	
A	↗	0	X	X	A	AB	
X	↘	0	X	X	Hold		
X	X	1	B	1	B	BB	
X	X	1	X	0	Latch		
X	1	Down	1	1	X	X	← Prohibition

X:Irrelevant

Logic Diagram for "Q output"

Truth Table for "Q output"

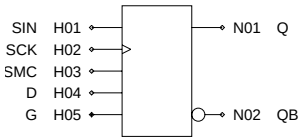
Logic Diagram for "QB output"

Truth Table for "QB output"

Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_1						
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
S202	SCK → Q		(HH)	0.468	0.734	1.184	0.006	0.010	0.017	SIN	3.7	Q	72
			(HL)	0.454	0.710	1.138	0.005	0.008	0.013	SCK	1.0	QB	71
	SCK → QB		(HH)	0.364	0.565	0.904	0.006	0.010	0.017	SMC	1.0		
			(HL)	0.408	0.632	1.013	0.005	0.008	0.013	D	1.2		
	D → Q		(HH)	0.380	0.591	0.954	0.006	0.010	0.017	G	1.0		
			(LL)	0.393	0.657	1.087	0.005	0.008	0.013				
	D → QB		(HL)	0.320	0.490	0.783	0.005	0.008	0.013				
			(LH)	0.302	0.511	0.853	0.006	0.010	0.017				
	G → Q		(HH)	0.467	0.733	1.180	0.006	0.010	0.017				
			(HL)	0.459	0.717	1.149	0.005	0.008	0.013				
	G → QB		(HH)	0.369	0.573	0.915	0.006	0.010	0.017				
			(HL)	0.407	0.632	1.010	0.005	0.008	0.013				
	Set up time	SIN		0.100		0.250							
	Set up time	SMC		0.550		1.030							
	Set up time	D		0.260		0.570							
	Hold time	SIN		0.160		0.380							
	Hold time	SMC		0.000		0.000							
	Hold time	D		0.030		0.000							
	Min Pulse	SCK		0.534		1.292							
	Min Pulse	G		0.535		1.290							

Function	D-Latch with D-F/F Function (High Speed)							SSI Family			
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	S204	11										
x2												
x4												
x8												

Logic Diagram for "Normal"



Truth Table for "Normal"

SIN	SCK	SMC	D	G	Q	QB	
A	↗	0	X	X	A	AB	
X	↘	0	X	X	Hold		
X	X	1	B	1	B	BB	
X	X	1	X	0	Latch		
X	1	Down	1	1	X	X	← Prohibition

X:Irrelevant

Logic Diagram for "Q output"

Truth Table for "Q output"

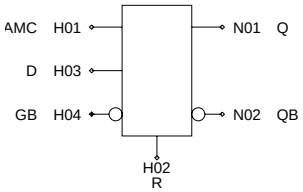
Logic Diagram for "QB output"

Truth Table for "QB output"

Block type	Switching speed								Input		Output	
	Path			t_{LD0} (ns)			t_1					
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
S204	SCK → Q		(HH)	0.367	0.567	0.920	0.006	0.011	0.017	SIN	3.7	Q	70
			(HL)	0.378	0.615	1.006	0.006	0.009	0.014	SCK	1.0	QB	71
	SCK → QB		(HH)	0.439	0.720	1.187	0.006	0.010	0.017	SMC	1.0		
			(HL)	0.469	0.726	1.175	0.005	0.008	0.013	D	1.2		
	D → Q		(HH)	0.281	0.431	0.703	0.006	0.011	0.017	G	1.0		
			(LL)	0.308	0.529	0.903	0.006	0.009	0.014				
	D → QB		(HL)	0.383	0.591	0.959	0.005	0.008	0.013				
			(LH)	0.369	0.636	1.087	0.006	0.010	0.017				
	G → Q		(HH)	0.368	0.569	0.920	0.006	0.011	0.017				
			(HL)	0.383	0.623	1.019	0.006	0.009	0.014				
	G → QB		(HH)	0.444	0.728	1.200	0.006	0.010	0.017				
			(HL)	0.470	0.728	1.175	0.005	0.008	0.013				
	Set up time	SIN		0.100		0.180							
	Set up time	SMC		0.560		1.140							
	Set up time	D		0.310		0.750							
	Hold time	SIN		0.160		0.370							
	Hold time	SMC		0.000		0.000							
	Hold time	D		0.010		0.000							
	Min Pulse	SCK		0.535		1.295							
	Min Pulse	G		0.536		1.306							

Function	D-Latch with R,Special Function,R							SSI Family			
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	S301	8										
x2												
x4												
x8												

Logic Diagram for "Normal"



Truth Table for "Normal"

AMC	R	D	GB	Q	QB
1	0	0	0	0	1
1	0	1	0	1	0
1	0	X	1	Latch	
X	1	X	X	0	1
0	0	0	0	0	1
0	0	0	1	0	1
0	0	1	0	0	1
0	0	1	1	1	0

X:Irrelevant

Logic Diagram for "Q output"

Truth Table for "Q output"

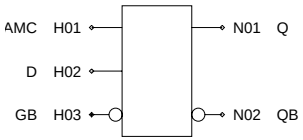
Logic Diagram for "QB output"

Truth Table for "QB output"

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
S301	AMC → Q	(HH)	0.420	0.671	1.099	0.006	0.010	0.017	AMC	2.5	Q	72
		(LH)	0.444	0.715	1.149	0.006	0.010	0.017	R	1.0	QB	71
		(LL)	0.430	0.702	1.138	0.005	0.008	0.013	D	1.0		
	AMC → QB	(HL)	0.359	0.567	0.924	0.005	0.008	0.013	GB	2.3		
		(LH)	0.338	0.555	0.902	0.006	0.010	0.017				
		(LL)	0.383	0.612	0.973	0.005	0.008	0.013				
	R → Q	(HL)	0.237	0.354	0.531	0.005	0.008	0.013				
		(LH)	0.277	0.453	0.736	0.006	0.010	0.017				
	R → QB	(HH)	0.145	0.209	0.297	0.006	0.010	0.017				
		(LL)	0.216	0.350	0.561	0.005	0.008	0.013				
	D → Q	(HH)	0.439	0.679	1.084	0.006	0.010	0.017				
		(LL)	0.313	0.513	0.828	0.005	0.008	0.013				
	D → QB	(HL)	0.378	0.576	0.908	0.005	0.008	0.013				
		(LH)	0.222	0.368	0.593	0.006	0.010	0.017				
	GB → Q	(HH)	0.438	0.698	1.151	0.006	0.010	0.017				
		(LH)	0.422	0.685	1.107	0.006	0.010	0.017				
		(LL)	0.328	0.742	1.201	0.005	0.008	0.013				
	GB → QB	(HL)	0.377	0.595	0.975	0.005	0.008	0.013				
		(LH)	0.237	0.591	0.961	0.006	0.010	0.017				
		(LL)	0.361	0.582	0.932	0.005	0.008	0.013				
	Set up time	D	0.300		0.570							
	Hold time	D	0.100		0.000							
	Release time	R	0.100		0.140							
	Removal time	R	0.120		0.070							
	Min Pulse	R	0.434		0.934							
	Min Pulse	GB	0.492		1.275							

Function	D-Latch with Special Function								SSI Family			
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	S302	7										
x2												
x4												
x8												

Logic Diagram for "Normal"



Truth Table for "Normal"

AMC	D	GB	Q	QB
1	0	0	0	1
1	1	0	1	0
1	X	1	Latch	
0	0	0	0	1
0	0	1	0	1
0	1	0	0	1
0	1	1	1	0

X:Irrelevant

Logic Diagram for "Q output"

Truth Table for "Q output"

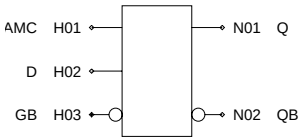
Logic Diagram for "QB output"

Truth Table for "QB output"

Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_1						
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
S302	AMC → Q		(HH)	0.342	0.542	0.890	0.006	0.010	0.017	AMC	2.5	Q	71
			(LH)	0.365	0.585	0.939	0.006	0.010	0.017	D	1.0	QB	71
			(LL)	0.429	0.699	1.130	0.005	0.008	0.013	GB	2.3		
	AMC → QB		(HL)	0.286	0.447	0.731	0.005	0.008	0.013				
			(LH)	0.344	0.561	0.910	0.006	0.010	0.017				
			(LL)	0.309	0.490	0.781	0.005	0.008	0.013				
	D → Q		(HH)	0.361	0.549	0.876	0.006	0.010	0.017				
			(LL)	0.311	0.507	0.817	0.005	0.008	0.013				
	D → QB		(HL)	0.305	0.454	0.717	0.005	0.008	0.013				
			(LH)	0.225	0.372	0.599	0.006	0.010	0.017				
	GB → Q		(HH)	0.359	0.572	0.942	0.006	0.010	0.017				
			(LH)	0.343	0.556	0.894	0.006	0.010	0.017				
			(LL)	0.324	0.737	1.194	0.005	0.008	0.013				
	GB → QB		(HL)	0.303	0.476	0.783	0.005	0.008	0.013				
			(LH)	0.239	0.598	0.972	0.006	0.010	0.017				
			(LL)	0.287	0.461	0.736	0.005	0.008	0.013				
	Set up time	D		0.250		0.460							
	Hold time	D		0.090		0.000							
	Min Pulse	GB		0.467		1.268							

Function	D-Latch with Special Function (High Speed)							SSI Family				
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	S303	7										
x2												
x4												
x8												

Logic Diagram for "Normal"



Truth Table for "Normal"

AMC	D	GB	Q	QB
1	0	0	0	1
1	1	0	1	0
1	X	1	Latch	
0	0	0	0	1
0	0	1	0	1
0	1	0	0	1
0	1	1	1	0

X:Irrelevant

Logic Diagram for "Q output"

Truth Table for "Q output"

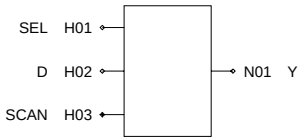
Logic Diagram for "QB output"

Truth Table for "QB output"

Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_1						
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
S303	AMC → Q		(HH)	0.247	0.390	0.654	0.006	0.011	0.017	AMC	2.5	Q	70
			(LH)	0.276	0.440	0.711	0.006	0.011	0.017	D	1.0	QB	71
			(LL)	0.372	0.611	0.997	0.006	0.009	0.014	GB	2.3		
	AMC → QB		(HL)	0.350	0.552	0.914	0.005	0.008	0.013				
			(LH)	0.437	0.722	1.185	0.006	0.010	0.017				
			(LL)	0.380	0.603	0.972	0.005	0.008	0.013				
	D → Q		(HH)	0.269	0.399	0.637	0.006	0.011	0.017				
			(LL)	0.223	0.368	0.595	0.005	0.008	0.013				
	D → QB		(HL)	0.372	0.561	0.898	0.005	0.008	0.013				
			(LH)	0.287	0.475	0.777	0.006	0.010	0.017				
	GB → Q		(HH)	0.266	0.420	0.707	0.006	0.011	0.017				
			(LH)	0.253	0.409	0.667	0.006	0.011	0.017				
			(LL)	0.241	0.632	1.040	0.005	0.009	0.014				
	GB → QB		(HL)	0.370	0.583	0.969	0.005	0.008	0.013				
			(LH)	0.288	0.763	1.249	0.006	0.010	0.017				
			(LL)	0.356	0.571	0.926	0.005	0.008	0.013				
	Set up time	D		0.320		0.600							
	Hold time	D		0.060		0.000							
	Min Pulse	GB		0.480		1.323							

Function	2 to 1 Data Selector								SSI Family			
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	S999	4										
x2												
x4												
x8												

Logic Diagram for "Normal"



Truth Table for "Normal"

SEL	D	SCAN	Y
1	A	X	A
0	X	B	B

X:Irrelevant

Logic Diagram for "Q output"

Truth Table for "Q output"

Logic Diagram for "QB output"

Truth Table for "QB output"

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
S999	SEL → Y	(HH)	0.216	0.332	0.518	0.006	0.011	0.017	SEL	1.0	Y	71
		(HL)	0.227	0.359	0.564	0.005	0.008	0.013	D	1.0		
		(LH)	0.200	0.317	0.502	0.006	0.011	0.017	SCAN	1.0		
		(LL)	0.228	0.373	0.597	0.005	0.008	0.013				
	D → Y	(HH)	0.180	0.263	0.403	0.006	0.011	0.017				
		(LL)	0.193	0.313	0.500	0.005	0.008	0.013				
	SCAN → Y	(HH)	0.177	0.261	0.396	0.006	0.010	0.017				
		(LL)	0.190	0.305	0.487	0.005	0.008	0.013				

[MEMO]

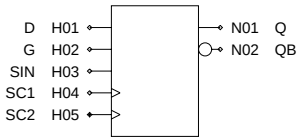
[MEMO]

3.2 LSSD Scan

[MEMO]

Function	Clocked LSSD D-Latch										SSI Family	
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	SD601	10										
x2	SD601NP	13										
x4												
x8												

Logic Diagram for "Normal"



Truth Table for "Normal"

D	G	SIN	SC1	SC2	Qn	QnB
0	1	X	X	X	0	1
1	1	X	X	X	1	0
X	0	X	X	0	Latch	
X	0	SIN	↗	↗	SIN	SINB

X:Irrelevant

Logic Diagram for "Q output"

Truth Table for "Q output"

Logic Diagram for "QB output"

Truth Table for "QB output"

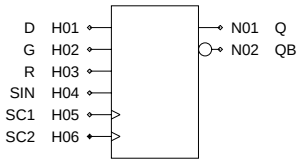
Block type	Switching speed									Input		Output	
	Path		t_{LD0} (ns)			t_1							
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		Symbol	Fanin	Symbol	Fanout
SD601	D → Q	(HH)	0.338	0.523	0.822	0.006	0.010	0.017		D	1.3	Q	72
		(LL)	0.356	0.574	0.921	0.005	0.008	0.013		G	1.3	QB	72
	D → QB	(HL)	0.246	0.374	0.576	0.005	0.008	0.013		SIN	1.3		
		(LH)	0.224	0.362	0.581	0.006	0.010	0.017		SC1	2.5		
	G → Q	(HH)	0.378	0.594	0.942	0.006	0.010	0.017		SC2	2.5		
		(HL)	0.392	0.621	0.984	0.005	0.008	0.013					
	G → QB	(HH)	0.261	0.409	0.643	0.006	0.010	0.017					
		(HL)	0.287	0.446	0.697	0.005	0.008	0.013					
	SIN → Q	(HH)	0.507	0.809	1.315	0.006	0.010	0.017					
		(LL)	0.543	0.913	1.528	0.005	0.008	0.013					
	SIN → QB	(HL)	0.450	0.712	1.152	0.005	0.008	0.013					
		(LH)	0.454	0.771	1.299	0.006	0.010	0.017					
	SC1 → Q	(HH)	0.473	0.759	1.244	0.006	0.010	0.017					
		(HL)	0.543	0.897	1.478	0.005	0.008	0.013					
	SC1 → QB	(HH)	0.454	0.755	1.249	0.006	0.010	0.017					
		(HL)	0.416	0.663	1.082	0.005	0.008	0.013					
	SC2 → Q	(HH)	0.354	0.549	0.877	0.006	0.010	0.017					
		(HL)	0.394	0.633	1.036	0.005	0.008	0.013					
	SC2 → QB	(HH)	0.306	0.491	0.808	0.006	0.010	0.017					
		(HL)	0.297	0.452	0.714	0.005	0.008	0.013					
	Set up time	D	0.260		0.480								
	Set up time	SIN	0.670		1.280								
	Set up time	SC1	0.620		1.190								
	Hold time	D	0.000		0.000								
	Hold time	SIN	0.000		0.000								
	Hold time	SC1	0.000		0.000								
	Min Pulse	G	0.436		1.069								
	Min Pulse	SC1	0.578		1.569								
	Min Pulse	SC2	0.442		1.138								
SD601NP	D → Q	(HH)	0.380	0.582	0.922	0.003	0.005	0.008		D	1.3	Q	143
		(LL)	0.426	0.689	1.115	0.003	0.004	0.007		G	1.3	QB	144
	D → QB	(HL)	0.260	0.388	0.601	0.003	0.004	0.006		SIN	1.3		
		(LH)	0.247	0.405	0.660	0.003	0.005	0.008		SC1	2.5		
	G → Q	(HH)	0.412	0.647	1.034	0.003	0.005	0.009		SC2	2.5		
		(HL)	0.458	0.739	1.191	0.003	0.004	0.007					
	G → QB	(HH)	0.280	0.455	0.737	0.003	0.005	0.008					
		(HL)	0.292	0.453	0.714	0.003	0.004	0.006					
	SIN → Q	(HH)	0.559	0.891	1.460	0.003	0.005	0.008					
		(LL)	0.617	1.049	1.770	0.003	0.004	0.006					
	SIN → QB	(HL)	0.471	0.745	1.216	0.003	0.004	0.006					
		(LH)	0.481	0.833	1.425	0.003	0.005	0.008					
	SC1 → Q	(HH)	0.526	0.843	1.389	0.003	0.005	0.008					
		(HL)	0.616	1.031	1.723	0.003	0.004	0.006					
	SC1 → QB	(HH)	0.481	0.815	1.379	0.003	0.005	0.008					
		(HL)	0.436	0.698	1.146	0.003	0.004	0.006					
	SC2 → Q	(HH)	0.412	0.634	1.026	0.003	0.005	0.008					
		(HL)	0.466	0.762	1.279	0.003	0.004	0.006					
	SC2 → QB	(HH)	0.330	0.547	0.933	0.003	0.005	0.008					
		(HL)	0.323	0.488	0.783	0.003	0.004	0.006					
	Set up time	D	0.300		0.600								
	Set up time	SIN	0.740		1.400								
	Set up time	SC1	0.690		1.310								
	Hold time	D	0.000		0.000								
	Hold time	SIN	0.000		0.000								
	Hold time	SC1	0.000		0.000								
	Min Pulse	G	0.502		1.276								

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Min Pulse	SC1	0.652		1.815							
	Min Pulse	SC2	0.532		1.386							

[MEMO]

Function	Clocked LSSD D-Latch with R							SSI Family			
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	SD602	11										
x2	SD602NP	14										
x4												
x8												

Logic Diagram for "Normal"



Truth Table for "Normal"

D	G	R	SIN	SC1	SC2	Qn	QnB
0	1	0	X	X	X	0	1
1	1	0	X	X	X	1	0
X	0	0	X	X	0	Latch	
X	X	1	X	X	0	0	1
X	0	0	SIN	↗	↗	SIN	SINB

X:Irrelevant

Logic Diagram for "Q output"

Truth Table for "Q output"

Logic Diagram for "QB output"

Truth Table for "QB output"

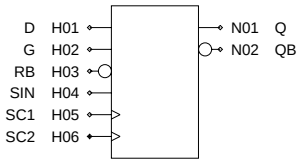
Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_1						
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
SD602	D → Q		(HH)	0.429	0.674	1.066	0.006	0.010	0.017	D	1.3	Q	71
			(LL)	0.361	0.583	0.938	0.005	0.008	0.013	G	1.3	QB	71
	D → QB		(HL)	0.330	0.509	0.793	0.005	0.008	0.013	R	1.3		
			(LH)	0.228	0.371	0.594	0.006	0.010	0.017	SIN	1.3		
	G → Q		(HH)	0.470	0.744	1.186	0.006	0.010	0.017	SC1	2.5		
			(HL)	0.399	0.631	1.000	0.005	0.008	0.013	SC2	2.5		
	G → QB		(HH)	0.266	0.418	0.656	0.006	0.010	0.017				
			(HL)	0.371	0.580	0.913	0.005	0.008	0.013				
	R → Q		(HL)	0.281	0.485	0.732	0.005	0.008	0.013				
			(LH)	0.318	0.519	0.841	0.006	0.010	0.017				
	R → QB		(HH)	0.148	0.211	0.300	0.006	0.011	0.017				
			(LL)	0.219	0.354	0.569	0.005	0.008	0.013				
	SIN → Q		(HH)	0.592	0.946	1.543	0.006	0.010	0.017				
			(LL)	0.546	0.923	1.540	0.005	0.008	0.013				
	SIN → QB		(HL)	0.535	0.849	1.376	0.005	0.008	0.013				
			(LH)	0.456	0.780	1.310	0.006	0.010	0.017				
	SC1 → Q		(HH)	0.558	0.899	1.471	0.006	0.010	0.017				
			(HL)	0.547	0.905	1.492	0.005	0.008	0.013				
	SC1 → QB		(HH)	0.457	0.762	1.263	0.006	0.010	0.017				
			(HL)	0.501	0.801	1.305	0.005	0.008	0.013				
	SC2 → Q		(HH)	0.439	0.687	1.106	0.006	0.010	0.017				
			(HL)	0.398	0.643	1.054	0.005	0.008	0.013				
	SC2 → QB		(HH)	0.309	0.500	0.824	0.006	0.010	0.017				
			(HL)	0.382	0.590	0.939	0.005	0.008	0.013				
	Set up time	D		0.320		0.560							
	Set up time	SIN		0.680		1.320							
	Set up time	SC1		0.630		1.230							
	Hold time	D		0.000		0.000							
	Hold time	SIN		0.000		0.000							
	Hold time	SC1		0.000		0.000							
	Release time	R		0.220		0.320							
	Removal time	R		0.020		0.000							
	Min Pulse	G		0.509		1.271							
	Min Pulse	R		0.482		1.046							
	Min Pulse	SC1		0.598		1.584							
	Min Pulse	SC2		0.503		1.212							
SD602NP	D → Q		(HH)	0.468	0.731	1.158	0.003	0.005	0.008	D	1.3	Q	143
			(LL)	0.424	0.687	1.109	0.003	0.004	0.007	G	1.3	QB	143
	D → QB		(HL)	0.330	0.507	0.792	0.003	0.004	0.007	R	2.5		
			(LH)	0.245	0.401	0.649	0.003	0.005	0.008	SIN	1.3		
	G → Q		(HH)	0.504	0.799	1.275	0.003	0.005	0.008	SC1	2.5		
			(HL)	0.461	0.740	1.182	0.003	0.004	0.007	SC2	2.5		
	G → QB		(HH)	0.281	0.453	0.723	0.003	0.005	0.008				
			(HL)	0.366	0.576	0.909	0.003	0.004	0.007				
	R → Q		(HL)	0.316	0.572	0.871	0.003	0.004	0.007				
			(LH)	0.335	0.545	0.882	0.003	0.005	0.008				
	R → QB		(HH)	0.137	0.197	0.281	0.003	0.005	0.008				
			(LL)	0.197	0.322	0.518	0.003	0.004	0.007				
	SIN → Q		(HH)	0.641	1.026	1.675	0.003	0.005	0.008				
			(LL)	0.613	1.038	1.745	0.003	0.004	0.006				
	SIN → QB		(HL)	0.543	0.864	1.405	0.003	0.004	0.007				
			(LH)	0.477	0.821	1.398	0.003	0.005	0.008				
	SC1 → Q		(HH)	0.608	0.978	1.605	0.003	0.005	0.008				
			(HL)	0.613	1.021	1.698	0.003	0.004	0.006				
	SC1 → QB		(HH)	0.477	0.805	1.352	0.003	0.005	0.008				
			(HL)	0.510	0.816	1.335	0.003	0.004	0.007				

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			Input		Output	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	SC2 → Q	(HH)	0.491	0.768	1.241	0.003	0.005	0.008				
		(HL)	0.464	0.757	1.254	0.003	0.004	0.006				
	SC2 → QB	(HH)	0.328	0.540	0.907	0.003	0.005	0.008				
		(HL)	0.393	0.606	0.970	0.003	0.004	0.007				
	Set up time	D	0.340		0.590							
	Set up time	SIN	0.720		1.390							
	Set up time	SC1	0.670		1.300							
	Hold time	D	0.000		0.000							
	Hold time	SIN	0.000		0.000							
	Hold time	SC1	0.000		0.000							
	Release time	R	0.220		0.290							
	Removal time	R	0.020		0.000							
	Min Pulse	G	0.544		1.359							
	Min Pulse	R	0.509		1.148							
	Min Pulse	SC1	0.648		1.787							
	Min Pulse	SC2	0.562		1.363							

[MEMO]

Function	Clocked LSSD D-Latch with RB							SSI Family			
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	SD603	11										
x2	SD603NP	14										
x4												
x8												

Logic Diagram for "Normal"



Truth Table for "Normal"

D	G	RB	SIN	SC1	SC2	Qn	QnB
0	1	1	X	X	X	0	1
1	1	1	X	X	X	1	0
X	0	1	X	X	0	Latch	
X	X	0	X	X	0	0	1
X	0	1	SIN	↗	↗	SIN	SINB

X:Irrelevant

Logic Diagram for "Q output"

Truth Table for "Q output"

Logic Diagram for "QB output"

Truth Table for "QB output"

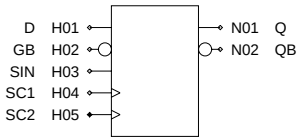
Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_1						
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
SD603	D → Q		(HH)	0.429	0.673	1.066	0.006	0.010	0.017	D	1.3	Q	71
			(LL)	0.361	0.584	0.938	0.005	0.008	0.013	G	1.3	QB	71
	D → QB		(HL)	0.330	0.510	0.793	0.005	0.008	0.013	RB	1.3		
			(LH)	0.228	0.371	0.594	0.006	0.010	0.017	SIN	1.3		
	G → Q		(HH)	0.470	0.744	1.186	0.006	0.010	0.017	SC1	2.5		
			(HL)	0.398	0.631	1.000	0.005	0.008	0.013	SC2	2.5		
	G → QB		(HH)	0.266	0.418	0.657	0.006	0.010	0.017				
			(HL)	0.371	0.580	0.913	0.005	0.008	0.013				
	RB → Q		(HH)	0.375	0.603	0.962	0.006	0.010	0.017				
			(LL)	0.295	0.531	0.835	0.005	0.008	0.013				
	RB → QB		(HL)	0.276	0.439	0.689	0.005	0.008	0.013				
			(LH)	0.161	0.256	0.401	0.006	0.011	0.017				
	SIN → Q		(HH)	0.592	0.947	1.543	0.006	0.010	0.017				
			(LL)	0.546	0.923	1.540	0.005	0.008	0.013				
	SIN → QB		(HL)	0.535	0.849	1.376	0.005	0.008	0.013				
			(LH)	0.456	0.779	1.310	0.006	0.010	0.017				
	SC1 → Q		(HH)	0.558	0.899	1.471	0.006	0.010	0.017				
			(HL)	0.546	0.905	1.492	0.005	0.008	0.013				
	SC1 → QB		(HH)	0.457	0.762	1.263	0.006	0.010	0.017				
			(HL)	0.501	0.801	1.305	0.005	0.008	0.013				
	SC2 → Q		(HH)	0.439	0.687	1.106	0.006	0.010	0.017				
			(HL)	0.398	0.643	1.053	0.005	0.008	0.013				
	SC2 → QB		(HH)	0.309	0.499	0.824	0.006	0.010	0.017				
			(HL)	0.382	0.590	0.939	0.005	0.008	0.013				
	Set up time	D		0.320		0.560							
	Set up time	SIN		0.680		1.320							
	Set up time	SC1		0.630		1.230							
	Hold time	D		0.000		0.000							
	Hold time	SIN		0.000		0.000							
	Hold time	SC1		0.000		0.000							
	Release time	RB		0.260		0.460							
	Removal time	RB		0.000		0.000							
	Min Pulse	G		0.509		1.270							
	Min Pulse	RB		0.432		1.115							
	Min Pulse	SC1		0.598		1.584							
	Min Pulse	SC2		0.503		1.212							
SD603NP	D → Q		(HH)	0.468	0.731	1.158	0.003	0.005	0.008	D	1.3	Q	143
			(LL)	0.424	0.688	1.109	0.003	0.004	0.007	G	1.3	QB	143
	D → QB		(HL)	0.330	0.507	0.792	0.003	0.004	0.007	RB	1.3		
			(LH)	0.245	0.401	0.650	0.003	0.005	0.008	SIN	1.3		
	G → Q		(HH)	0.504	0.799	1.275	0.003	0.005	0.008	SC1	2.5		
			(HL)	0.460	0.739	1.182	0.003	0.004	0.007	SC2	2.5		
	G → QB		(HH)	0.281	0.453	0.722	0.003	0.005	0.008				
			(HL)	0.366	0.576	0.909	0.003	0.004	0.007				
	RB → Q		(HH)	0.416	0.660	1.042	0.003	0.005	0.008				
			(LL)	0.363	0.664	1.036	0.003	0.004	0.007				
	RB → QB		(HL)	0.278	0.437	0.678	0.003	0.004	0.007				
			(LH)	0.183	0.288	0.446	0.003	0.005	0.008				
	SIN → Q		(HH)	0.641	1.026	1.675	0.003	0.005	0.008				
			(LL)	0.613	1.038	1.745	0.003	0.004	0.006				
	SIN → QB		(HL)	0.543	0.863	1.405	0.003	0.004	0.007				
			(LH)	0.477	0.821	1.398	0.003	0.005	0.008				
	SC1 → Q		(HH)	0.608	0.978	1.605	0.003	0.005	0.008				
			(HL)	0.613	1.021	1.699	0.003	0.004	0.006				
	SC1 → QB		(HH)	0.477	0.805	1.352	0.003	0.005	0.008				
			(HL)	0.510	0.816	1.335	0.003	0.004	0.007				

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			Input		Output	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	SC2 → Q	(HH)	0.491	0.768	1.241	0.003	0.005	0.008				
		(HL)	0.464	0.757	1.255	0.003	0.004	0.006				
	SC2 → QB	(HH)	0.328	0.540	0.907	0.003	0.005	0.008				
		(HL)	0.393	0.606	0.970	0.003	0.004	0.007				
	Set up time	D	0.340		0.590							
	Set up time	SIN	0.720		1.390							
	Set up time	SC1	0.670		1.300							
	Hold time	D	0.000		0.000							
	Hold time	SIN	0.000		0.000							
	Hold time	SC1	0.000		0.000							
	Release time	RB	0.300		0.500							
	Removal time	RB	0.000		0.000							
	Min Pulse	G	0.544		1.359							
	Min Pulse	RB	0.505		1.253							
	Min Pulse	SC1	0.648		1.787							
	Min Pulse	SC2	0.563		1.362							

[MEMO]

Function	Clocked LSSD D-Latch (GB)							SSI Family			
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	SD604	10										
x2	SD604NP	13										
x4												
x8												

Logic Diagram for "Normal"



Truth Table for "Normal"

D	GB	SIN	SC1	SC2	Qn	QnB
0	0	X	X	X	0	1
1	0	X	X	X	1	0
X	1	X	X	0	Latch	
X	1	SIN	↗	↗	SIN	SINB

X:Irrelevant

Logic Diagram for "Q output"

Truth Table for "Q output"

Logic Diagram for "QB output"

Truth Table for "QB output"

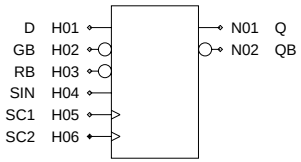
Block type	Switching speed									Input		Output	
	Path		t_{LD0} (ns)			t_1							
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		Symbol	Fanin	Symbol	Fanout
SD604	D → Q	(HH)	0.339	0.525	0.825	0.006	0.010	0.017		D	1.3	Q	72
		(LL)	0.356	0.575	0.924	0.005	0.008	0.013		GB	1.3	QB	72
	D → QB	(HL)	0.247	0.375	0.577	0.005	0.008	0.013		SIN	1.3		
		(LH)	0.225	0.363	0.583	0.006	0.010	0.017		SC1	2.5		
	GB → Q	(LH)	0.361	0.576	0.919	0.006	0.010	0.017		SC2	2.5		
		(LL)	0.393	0.638	1.026	0.005	0.008	0.013					
	GB → QB	(LH)	0.262	0.427	0.685	0.006	0.010	0.017					
		(LL)	0.269	0.426	0.670	0.005	0.008	0.013					
	SIN → Q	(HH)	0.508	0.809	1.319	0.006	0.010	0.017					
		(LL)	0.543	0.916	1.531	0.005	0.008	0.013					
	SIN → QB	(HL)	0.451	0.713	1.155	0.005	0.008	0.013					
		(LH)	0.454	0.773	1.301	0.006	0.010	0.017					
	SC1 → Q	(HH)	0.474	0.761	1.248	0.006	0.010	0.017					
		(HL)	0.544	0.899	1.481	0.005	0.008	0.013					
	SC1 → QB	(HH)	0.455	0.756	1.251	0.006	0.010	0.017					
		(HL)	0.417	0.665	1.084	0.005	0.008	0.013					
	SC2 → Q	(HH)	0.355	0.549	0.880	0.006	0.010	0.017					
		(HL)	0.396	0.636	1.039	0.005	0.008	0.013					
	SC2 → QB	(HH)	0.307	0.493	0.810	0.006	0.010	0.017					
		(HL)	0.297	0.452	0.717	0.005	0.008	0.013					
	Set up time	D	0.260		0.440								
	Set up time	SIN	0.670		1.280								
	Set up time	SC1	0.620		1.190								
	Hold time	D	0.000		0.000								
	Hold time	SIN	0.000		0.000								
	Hold time	SC1	0.000		0.000								
	Min Pulse	GB	0.430		1.105								
	Min Pulse	SC1	0.580		1.573								
	Min Pulse	SC2	0.444		1.141								
SD604NP	D → Q	(HH)	0.380	0.582	0.921	0.003	0.005	0.009		D	1.3	Q	143
		(LL)	0.426	0.688	1.116	0.003	0.004	0.007		GB	1.3	QB	144
	D → QB	(HL)	0.260	0.388	0.601	0.003	0.004	0.006		SIN	1.3		
		(LH)	0.248	0.405	0.660	0.003	0.005	0.008		SC1	2.5		
	GB → Q	(LH)	0.399	0.635	1.021	0.003	0.005	0.009		SC2	2.5		
		(LL)	0.455	0.746	1.213	0.003	0.004	0.007					
	GB → QB	(LH)	0.277	0.462	0.758	0.003	0.005	0.008					
		(LL)	0.279	0.440	0.699	0.003	0.004	0.006					
	SIN → Q	(HH)	0.559	0.891	1.460	0.003	0.005	0.008					
		(LL)	0.617	1.048	1.770	0.003	0.004	0.006					
	SIN → QB	(HL)	0.470	0.746	1.216	0.003	0.004	0.006					
		(LH)	0.481	0.833	1.426	0.003	0.005	0.008					
	SC1 → Q	(HH)	0.526	0.844	1.389	0.003	0.005	0.008					
		(HL)	0.616	1.031	1.723	0.003	0.004	0.006					
	SC1 → QB	(HH)	0.481	0.815	1.379	0.003	0.005	0.008					
		(HL)	0.436	0.698	1.146	0.003	0.004	0.006					
	SC2 → Q	(HH)	0.412	0.634	1.027	0.003	0.005	0.008					
		(HL)	0.466	0.762	1.278	0.003	0.004	0.006					
	SC2 → QB	(HH)	0.330	0.547	0.933	0.003	0.005	0.008					
		(HL)	0.324	0.488	0.783	0.003	0.004	0.006					
	Set up time	D	0.310		0.520								
	Set up time	SIN	0.740		1.400								
	Set up time	SC1	0.690		1.310								
	Hold time	D	0.000		0.000								
	Hold time	SIN	0.000		0.000								
	Hold time	SC1	0.000		0.000								
	Min Pulse	GB	0.493		1.291								

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Min Pulse	SC1	0.652		1.815							
	Min Pulse	SC2	0.532		1.386							

[MEMO]

Function	Clocked LSSD D-Latch (GB) with RB							SSI Family			
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	SD605	11										
x2	SD605NP	14										
x4												
x8												

Logic Diagram for "Normal"



Truth Table for "Normal"

D	GB	RB	SIN	SC1	SC2	Qn	QnB
0	0	1	X	X	X	0	1
1	0	1	X	X	X	1	0
X	1	1	X	X	0	Latch	
X	X	0	X	X	0	0	1
X	1	1	SIN	↗	↗	SIN	SINB

X:Irrelevant

Logic Diagram for "Q output"

Truth Table for "Q output"

Logic Diagram for "QB output"

Truth Table for "QB output"

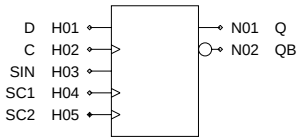
Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_1						
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
SD605	D → Q		(HH)	0.429	0.674	1.065	0.006	0.010	0.017	D	1.3	Q	71
			(LL)	0.361	0.583	0.938	0.005	0.008	0.013	GB	1.3	QB	71
	D → QB		(HL)	0.330	0.509	0.792	0.005	0.008	0.013	RB	1.2		
			(LH)	0.228	0.371	0.594	0.006	0.010	0.017	SIN	1.3		
	GB → Q		(LH)	0.451	0.725	1.160	0.006	0.010	0.017	SC1	2.5		
			(LL)	0.398	0.646	1.039	0.005	0.008	0.013	SC2	2.5		
	GB → QB		(LH)	0.266	0.434	0.697	0.006	0.010	0.017				
			(LL)	0.351	0.560	0.886	0.005	0.008	0.013				
	RB → Q		(HH)	0.375	0.603	0.962	0.006	0.010	0.017				
			(LL)	0.295	0.530	0.834	0.005	0.008	0.013				
	RB → QB		(HL)	0.276	0.439	0.689	0.005	0.008	0.013				
			(LH)	0.161	0.256	0.401	0.006	0.011	0.017				
	SIN → Q		(HH)	0.591	0.947	1.542	0.006	0.010	0.017				
			(LL)	0.546	0.923	1.541	0.005	0.008	0.013				
	SIN → QB		(HL)	0.534	0.849	1.376	0.005	0.008	0.013				
			(LH)	0.456	0.780	1.310	0.006	0.010	0.017				
	SC1 → Q		(HH)	0.559	0.899	1.470	0.006	0.010	0.017				
			(HL)	0.546	0.906	1.492	0.005	0.008	0.013				
	SC1 → QB		(HH)	0.457	0.763	1.263	0.006	0.010	0.017				
			(HL)	0.502	0.802	1.304	0.005	0.008	0.013				
	SC2 → Q		(HH)	0.439	0.688	1.106	0.006	0.010	0.017				
			(HL)	0.398	0.642	1.053	0.005	0.008	0.013				
	SC2 → QB		(HH)	0.309	0.500	0.824	0.006	0.010	0.017				
			(HL)	0.383	0.591	0.939	0.005	0.008	0.013				
	Set up time	D		0.330		0.610							
	Set up time	SIN		0.680		1.320							
	Set up time	SC1		0.630		1.230							
	Hold time	D		0.000		0.000							
	Hold time	SIN		0.000		0.000							
	Hold time	SC1		0.000		0.000							
	Release time	RB		0.260		0.460							
	Removal time	RB		0.000		0.000							
	Min Pulse	GB		0.487		1.241							
	Min Pulse	RB		0.432		1.115							
	Min Pulse	SC1		0.597		1.584							
	Min Pulse	SC2		0.502		1.212							
SD605NP	D → Q		(HH)	0.468	0.730	1.158	0.003	0.005	0.008	D	1.3	Q	143
			(LL)	0.424	0.688	1.110	0.003	0.004	0.007	GB	1.3	QB	143
	D → QB		(HL)	0.330	0.507	0.791	0.003	0.004	0.007	RB	1.3		
			(LH)	0.245	0.401	0.650	0.003	0.005	0.008	SIN	1.3		
	GB → Q		(LH)	0.489	0.784	1.256	0.003	0.005	0.008	SC1	2.5		
			(LL)	0.458	0.748	1.209	0.003	0.004	0.007	SC2	2.5		
	GB → QB		(LH)	0.279	0.462	0.750	0.003	0.005	0.008				
			(LL)	0.351	0.560	0.890	0.003	0.004	0.007				
	RB → Q		(HH)	0.416	0.661	1.042	0.003	0.005	0.008				
			(LL)	0.363	0.663	1.036	0.003	0.004	0.007				
	RB → QB		(HL)	0.278	0.437	0.678	0.003	0.004	0.007				
			(LH)	0.183	0.288	0.446	0.003	0.005	0.008				
	SIN → Q		(HH)	0.640	1.026	1.675	0.003	0.005	0.008				
			(LL)	0.613	1.038	1.746	0.003	0.004	0.006				
	SIN → QB		(HL)	0.542	0.864	1.405	0.003	0.004	0.007				
			(LH)	0.477	0.821	1.398	0.003	0.005	0.008				
	SC1 → Q		(HH)	0.608	0.978	1.605	0.003	0.005	0.008				
			(HL)	0.613	1.022	1.699	0.003	0.004	0.006				
	SC1 → QB		(HH)	0.477	0.805	1.352	0.003	0.005	0.008				
			(HL)	0.510	0.816	1.335	0.003	0.004	0.007				

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			Input		Output	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	SC2 → Q	(HH)	0.491	0.768	1.240	0.003	0.005	0.008				
		(HL)	0.464	0.757	1.256	0.003	0.004	0.006				
	SC2 → QB	(HH)	0.328	0.540	0.909	0.003	0.005	0.008				
		(HL)	0.393	0.606	0.970	0.003	0.004	0.007				
	Set up time	D	0.350		0.630							
	Set up time	SIN	0.720		1.390							
	Set up time	SC1	0.670		1.300							
	Hold time	D	0.000		0.000							
	Hold time	SIN	0.000		0.000							
	Hold time	SC1	0.000		0.000							
	Release time	RB	0.300		0.500							
	Removal time	RB	0.000		0.000							
	Min Pulse	GB	0.526		1.338							
	Min Pulse	RB	0.505		1.253							
	Min Pulse	SC1	0.648		1.786							
	Min Pulse	SC2	0.563		1.363							

[MEMO]

Function	Clocked LSSD D-F/F										SSI Family	
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	SD611	12										
x2	SD641	15										
x4	SD611T	19										
x8												

Logic Diagram for "Normal"



Truth Table for "Normal"

D	C	SIN	SC1	SC2	Qn+1	Qn+1B
0	↗	X	X	X	0	1
1	↗	X	X	X	1	0
X	↘	X	X	0	Qn	QnB
X	0	SIN	↗	↗	SIN	SINB

X:Irrelevant

Logic Diagram for "Q output"

Truth Table for "Q output"

Logic Diagram for "QB output"

Truth Table for "QB output"

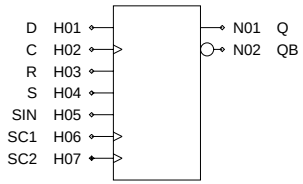
Block type	Switching speed									Input		Output	
	Path		t_{LD0} (ns)			t_1							
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		Symbol	Fanin	Symbol	Fanout
SD611	C → Q	(HH)	0.288	0.446	0.693	0.006	0.010	0.017		D	1.3	Q	71
		(HL)	0.329	0.511	0.795	0.005	0.008	0.013		C	1.3	QB	71
	C → QB	(HH)	0.423	0.665	1.049	0.006	0.010	0.017		SIN	1.3		
		(HL)	0.424	0.667	1.046	0.005	0.008	0.013		SC1	2.4		
	SIN → Q	(HH)	0.443	0.727	1.199	0.006	0.010	0.017		SC2	2.5		
		(LL)	0.437	0.712	1.176	0.005	0.008	0.013					
	SIN → QB	(HL)	0.535	0.874	1.437	0.005	0.008	0.013					
		(LH)	0.497	0.813	1.345	0.006	0.010	0.017					
	SC1 → Q	(HH)	0.410	0.680	1.127	0.006	0.010	0.017					
		(HL)	0.435	0.694	1.128	0.005	0.008	0.013					
	SC1 → QB	(HH)	0.495	0.796	1.298	0.006	0.010	0.017					
		(HL)	0.502	0.828	1.364	0.005	0.008	0.013					
	SC2 → Q	(HH)	0.316	0.509	0.839	0.006	0.010	0.017					
		(HL)	0.307	0.467	0.742	0.005	0.008	0.013					
	SC2 → QB	(HH)	0.366	0.569	0.911	0.006	0.010	0.017					
		(HL)	0.408	0.656	1.076	0.005	0.008	0.013					
	Set up time	D	0.220		0.370								
	Set up time	SIN	0.650		1.270								
	Set up time	SC1	0.490		1.040								
	Hold time	D	0.080		0.050								
	Hold time	SIN	0.000		0.000								
	Hold time	SC1	0.000		0.000								
	Min Pulse	C	0.476		1.148								
	Min Pulse	SC1	0.542		1.451								
	Min Pulse	SC2	0.456		1.178								
SD641	C → Q	(HH)	0.304	0.480	0.746	0.003	0.005	0.008		D	1.3	Q	143
		(HL)	0.330	0.510	0.795	0.003	0.004	0.006		C	1.3	QB	143
	C → QB	(HH)	0.453	0.711	1.126	0.003	0.005	0.008		SIN	1.3		
		(HL)	0.483	0.766	1.208	0.003	0.004	0.007		SC1	2.4		
	SIN → Q	(HH)	0.455	0.751	1.248	0.003	0.005	0.008		SC2	2.5		
		(LL)	0.443	0.723	1.195	0.003	0.004	0.006					
	SIN → QB	(HL)	0.592	0.970	1.601	0.003	0.004	0.006					
		(LH)	0.537	0.876	1.449	0.003	0.005	0.008					
	SC1 → Q	(HH)	0.422	0.704	1.176	0.003	0.005	0.008					
		(HL)	0.441	0.705	1.148	0.003	0.004	0.006					
	SC1 → QB	(HH)	0.535	0.858	1.402	0.003	0.005	0.008					
		(HL)	0.560	0.923	1.528	0.003	0.004	0.006					
	SC2 → Q	(HH)	0.327	0.532	0.889	0.003	0.005	0.008					
		(HL)	0.315	0.478	0.763	0.003	0.004	0.006					
	SC2 → QB	(HH)	0.408	0.632	1.016	0.003	0.005	0.008					
		(HL)	0.464	0.751	1.240	0.003	0.004	0.006					
	Set up time	D	0.210		0.360								
	Set up time	SIN	0.680		1.320								
	Set up time	SC1	0.520		1.090								
	Hold time	D	0.080		0.050								
	Hold time	SIN	0.000		0.000								
	Hold time	SC1	0.000		0.000								
	Min Pulse	C	0.536		1.311								
	Min Pulse	SC1	0.599		1.613								
	Min Pulse	SC2	0.520		1.346								
SD611T	C → Q	(HH)	0.342	0.541	0.845	0.002	0.003	0.004		D	1.3	Q	287
		(HL)	0.376	0.585	0.915	0.001	0.002	0.003		C	1.3	QB	285
	C → QB	(HH)	0.572	0.899	1.426	0.002	0.003	0.004		SIN	1.3		
		(HL)	0.612	0.970	1.534	0.001	0.002	0.003		SC1	2.4		
	SIN → Q	(HH)	0.507	0.835	1.381	0.002	0.003	0.004		SC2	2.5		
		(LL)	0.496	0.808	1.337	0.001	0.002	0.003					

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			Input		Output	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	SIN → QB	(HL)	0.732	1.194	1.956	0.001	0.002	0.003				
		(LH)	0.659	1.072	1.767	0.002	0.003	0.004				
	SC1 → Q	(HH)	0.474	0.788	1.309	0.002	0.003	0.004				
		(HL)	0.493	0.791	1.289	0.001	0.002	0.003				
	SC1 → QB	(HH)	0.657	1.054	1.718	0.002	0.003	0.004				
		(HL)	0.700	1.147	1.887	0.001	0.002	0.003				
	SC2 → Q	(HH)	0.378	0.616	1.023	0.002	0.003	0.004				
		(HL)	0.369	0.564	0.903	0.001	0.002	0.003				
	SC2 → QB	(HH)	0.532	0.827	1.333	0.002	0.003	0.004				
		(HL)	0.603	0.975	1.599	0.001	0.002	0.003				
	Set up time	D	0.210		0.360							
	Set up time	SIN	0.690		1.360							
	Set up time	SC1	0.560		1.210							
	Hold time	D	0.080		0.050							
	Hold time	SIN	0.000		0.000							
	Hold time	SC1	0.000		0.000							
	Min Pulse	C	0.664		1.636							
	Min Pulse	SC1	0.740		1.973							
	Min Pulse	SC2	0.659		1.703							

[MEMO]

Function	Clocked LSSD D-F/F with R,S							SSI Family			
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	SD614	14										
x2	SD644	17										
x4												
x8												

Logic Diagram for "Normal"



Truth Table for "Normal"

D	C	R	S	SIN	SC1	SC2	Qn+1	Qn+1B	
0	↗	0	0	X	X	X	0	1	
1	↗	0	0	X	X	X	1	0	
X	↘	0	0	X	X	0	Qn	QnB	
X	X	0	1	X	X	0	1	0	
X	X	1	0	X	X	0	0	1	
X	X	1	1	X	X	X	1	1	← Prohibition
X	0	0	0	SIN	↗	↗	SIN	SINB	

X:Irrelevant

Logic Diagram for "Q output"

Truth Table for "Q output"

Logic Diagram for "QB output"

Truth Table for "QB output"

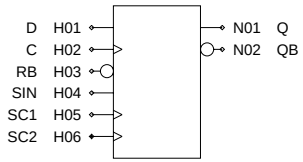
Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_1						
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
SD614	C → Q		(HH)	0.303	0.472	0.740	0.006	0.010	0.017	D	1.3	Q	71
			(HL)	0.417	0.654	1.027	0.005	0.008	0.013	C	1.3	QB	70
	C → QB		(HH)	0.521	0.831	1.322	0.006	0.010	0.017	R	2.4		
			(HL)	0.557	0.890	1.418	0.005	0.009	0.014	S	2.6		
	R → Q		(HL)	0.369	0.703	1.122	0.005	0.008	0.013	SIN	1.3		
	R → QB		(HH)	0.188	0.290	0.423	0.006	0.011	0.017	SC1	2.4		
	S → Q		(HH)	0.153	0.220	0.315	0.006	0.010	0.017	SC2	2.9		
	S → QB		(HL)	0.405	0.757	1.176	0.005	0.009	0.014				
	SIN → Q		(HH)	0.435	0.717	1.180	0.006	0.010	0.017				
			(LL)	0.519	0.847	1.390	0.005	0.008	0.013				
	SIN → QB		(HL)	0.616	1.010	1.655	0.005	0.008	0.013				
			(LH)	0.585	0.962	1.588	0.006	0.010	0.017				
	SC1 → Q		(HH)	0.402	0.669	1.107	0.006	0.010	0.017				
			(HL)	0.517	0.828	1.338	0.005	0.008	0.013				
	SC1 → QB		(HH)	0.583	0.943	1.537	0.006	0.010	0.017				
			(HL)	0.582	0.962	1.582	0.005	0.008	0.013				
	SC2 → Q		(HH)	0.315	0.506	0.827	0.006	0.010	0.017				
			(HL)	0.388	0.603	0.953	0.005	0.008	0.013				
	SC2 → QB		(HH)	0.454	0.718	1.151	0.006	0.010	0.017				
			(HL)	0.495	0.801	1.303	0.005	0.008	0.013				
	Set up time	D		0.240		0.630							
	Set up time	SIN		0.640		1.300							
	Set up time	SC1		0.470		1.000							
	Hold time	D		0.080		0.070							
	Hold time	SIN		0.000		0.000							
	Hold time	SC1		0.000		0.000							
	Release time	R		0.090		0.370							
	Release time	S		0.200		0.340							
	Removal time	R		0.390		0.700							
	Removal time	S		0.420		0.710							
	Min Pulse	C		0.611		1.523							
	Min Pulse	R		0.658		1.530							
	Min Pulse	S		0.592		1.472							
	Min Pulse	SC1		0.621		1.669							
	Min Pulse	SC2		0.551		1.415							
SD644	C → Q		(HH)	0.332	0.536	0.854	0.003	0.005	0.008	D	1.3	Q	143
			(HL)	0.415	0.649	1.021	0.003	0.004	0.007	C	1.3	QB	140
	C → QB		(HH)	0.557	0.885	1.408	0.003	0.005	0.008	R	2.4		
			(HL)	0.668	1.088	1.745	0.003	0.004	0.007	S	3.8		
	R → Q		(HL)	0.371	0.780	1.256	0.003	0.004	0.007	SIN	1.3		
	R → QB		(HH)	0.223	0.345	0.511	0.003	0.005	0.009	SC1	2.5		
	S → Q		(HH)	0.143	0.207	0.296	0.003	0.005	0.008	SC2	3.1		
	S → QB		(HL)	0.475	0.938	1.465	0.003	0.005	0.007				
	SIN → Q		(HH)	0.458	0.764	1.272	0.003	0.005	0.008				
			(LL)	0.526	0.861	1.417	0.003	0.004	0.007				
	SIN → QB		(HL)	0.718	1.186	1.954	0.003	0.004	0.007				
			(LH)	0.634	1.041	1.717	0.003	0.005	0.008				
	SC1 → Q		(HH)	0.425	0.715	1.198	0.003	0.005	0.008				
			(HL)	0.523	0.841	1.367	0.003	0.004	0.007				
	SC1 → QB		(HH)	0.631	1.021	1.667	0.003	0.005	0.008				
			(HL)	0.685	1.138	1.880	0.003	0.004	0.007				
	SC2 → Q		(HH)	0.337	0.553	0.923	0.003	0.005	0.008				
			(HL)	0.399	0.618	0.982	0.003	0.004	0.007				
	SC2 → QB		(HH)	0.507	0.798	1.282	0.003	0.005	0.008				
			(HL)	0.596	0.976	1.605	0.003	0.004	0.007				
	Set up time	D		0.240		0.590							

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Set up time	SIN	0.690		1.370							
	Set up time	SC1	0.510		1.080							
	Hold time	D	0.080		0.070							
	Hold time	SIN	0.000		0.000							
	Hold time	SC1	0.000		0.000							
	Release time	R	0.100		0.340							
	Release time	S	0.190		0.280							
	Removal time	R	0.410		0.740							
	Removal time	S	0.400		0.680							
	Min Pulse	C	0.721		1.847							
	Min Pulse	R	0.756		1.710							
	Min Pulse	S	0.693		1.730							
	Min Pulse	SC1	0.725		1.967							
	Min Pulse	SC2	0.664		1.720							

[MEMO]

Function	Clocked LSSD D-F/F with RB							SSI Family			
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	SD615	13										
x2	SD645	16										
x4												
x8												

Logic Diagram for "Normal"



Truth Table for "Normal"

D	C	RB	SIN	SC1	SC2	Qn+1	Qn+1B
0	↗	1	X	X	X	0	1
1	↗	1	X	X	X	1	0
X	↘	1	X	X	0	Qn	QnB
X	X	0	X	X	0	0	1
X	0	1	SIN	↗	↗	SIN	SINB

X:Irrelevant

Logic Diagram for "Q output"

Truth Table for "Q output"

Logic Diagram for "QB output"

Truth Table for "QB output"

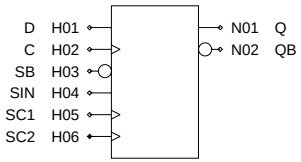
Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_1						
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
SD615	C → Q		(HH)	0.329	0.512	0.814	0.006	0.011	0.017	D	1.3	Q	70
			(HL)	0.333	0.517	0.807	0.005	0.008	0.013	C	1.3	QB	70
	C → QB		(HH)	0.427	0.670	1.060	0.006	0.010	0.017	RB	2.6		
			(HL)	0.468	0.736	1.178	0.005	0.008	0.013	SIN	1.3		
	RB → Q		(LL)	0.167	0.260	0.393	0.005	0.008	0.013	SC1	2.4		
	RB → QB		(LH)	0.263	0.446	0.696	0.006	0.011	0.017	SC2	2.5		
	SIN → Q		(HH)	0.499	0.814	1.346	0.006	0.011	0.017				
			(LL)	0.440	0.719	1.187	0.005	0.008	0.013				
	SIN → QB		(HL)	0.590	0.960	1.581	0.005	0.008	0.013				
			(LH)	0.498	0.817	1.351	0.006	0.010	0.017				
	SC1 → Q		(HH)	0.467	0.767	1.275	0.006	0.011	0.017				
			(HL)	0.438	0.701	1.139	0.005	0.008	0.013				
	SC1 → QB		(HH)	0.496	0.799	1.302	0.006	0.010	0.017				
			(HL)	0.558	0.913	1.510	0.005	0.008	0.013				
	SC2 → Q		(HH)	0.371	0.596	0.989	0.006	0.011	0.017				
			(HL)	0.309	0.474	0.755	0.005	0.008	0.013				
	SC2 → QB		(HH)	0.368	0.573	0.919	0.006	0.010	0.017				
			(HL)	0.462	0.741	1.224	0.005	0.008	0.013				
	Set up time	D		0.220		0.380							
	Set up time	SIN		0.640		1.270							
	Set up time	SC1		0.520		1.110							
	Hold time	D		0.080		0.060							
	Hold time	SIN		0.000		0.000							
	Hold time	SC1		0.000		0.000							
	Release time	RB		0.150		0.160							
	Removal time	RB		0.330		0.560							
	Min Pulse	C		0.518		1.277							
	Min Pulse	RB		0.411		0.988							
	Min Pulse	SC1		0.598		1.597							
	Min Pulse	SC2		0.510		1.325							
SD645	C → Q		(HH)	0.350	0.553	0.880	0.003	0.005	0.008	D	1.3	Q	142
			(HL)	0.339	0.526	0.825	0.003	0.004	0.006	C	1.3	QB	139
	C → QB		(HH)	0.465	0.731	1.161	0.003	0.005	0.009	RB	3.9		
			(HL)	0.536	0.852	1.362	0.003	0.004	0.007	SIN	1.3		
	RB → Q		(LL)	0.152	0.235	0.354	0.003	0.004	0.006	SC1	2.4		
	RB → QB		(LH)	0.281	0.486	0.761	0.003	0.005	0.009	SC2	2.5		
	SIN → Q		(HH)	0.518	0.851	1.416	0.003	0.005	0.008				
			(LL)	0.454	0.743	1.232	0.003	0.004	0.006				
	SIN → QB		(HL)	0.658	1.075	1.778	0.003	0.004	0.006				
			(LH)	0.548	0.896	1.486	0.003	0.005	0.008				
	SC1 → Q		(HH)	0.486	0.804	1.344	0.003	0.005	0.008				
			(HL)	0.451	0.725	1.184	0.003	0.004	0.006				
	SC1 → QB		(HH)	0.545	0.879	1.439	0.003	0.005	0.008				
			(HL)	0.625	1.027	1.705	0.003	0.004	0.006				
	SC2 → Q		(HH)	0.388	0.631	1.058	0.003	0.005	0.008				
			(HL)	0.326	0.499	0.800	0.003	0.004	0.006				
	SC2 → QB		(HH)	0.420	0.652	1.054	0.003	0.005	0.008				
			(HL)	0.528	0.854	1.419	0.003	0.004	0.006				
	Set up time	D		0.220		0.370							
	Set up time	SIN		0.680		1.340							
	Set up time	SC1		0.560		1.200							
	Hold time	D		0.080		0.060							
	Hold time	SIN		0.000		0.000							
	Hold time	SC1		0.000		0.000							
	Release time	RB		0.130		0.120							
	Removal time	RB		0.310		0.540							

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Min Pulse	C	0.589		1.462							
	Min Pulse	RB	0.421		1.040							
	Min Pulse	SC1	0.665		1.793							
	Min Pulse	SC2	0.585		1.524							

[MEMO]

Function	Clocked LSSD D-F/F with SB										SSI Family	
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	SD616	13										
x2	SD646	16										
x4												
x8												

Logic Diagram for "Normal"



Truth Table for "Normal"

D	C	SB	SIN	SC1	SC2	Qn+1	Qn+1B
0	↗	1	X	X	X	0	1
1	↗	1	X	X	X	1	0
X	↘	1	X	X	0	Qn	QnB
X	X	0	X	X	0	1	0
X	0	1	SIN	↗	↗	SIN	SINB

X:Irrelevant

Logic Diagram for "Q output"

Truth Table for "Q output"

Logic Diagram for "QB output"

Truth Table for "QB output"

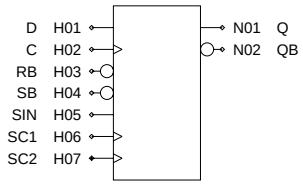
Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_1						
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
SD616	C → Q		(HH)	0.287	0.444	0.685	0.006	0.010	0.017	D	1.3	Q	71
			(HL)	0.343	0.536	0.843	0.005	0.008	0.013	C	1.3	QB	70
	C → QB		(HH)	0.500	0.793	1.286	0.006	0.011	0.017	SB	2.5		
			(HL)	0.429	0.674	1.055	0.005	0.008	0.013	SIN	1.3		
	SB → Q		(LH)	0.269	0.639	1.067	0.006	0.010	0.017	SC1	2.4		
	SB → QB		(LL)	0.205	0.372	0.567	0.005	0.008	0.013	SC2	2.5		
	SIN → Q		(HH)	0.442	0.726	1.200	0.006	0.010	0.017				
			(LL)	0.434	0.709	1.170	0.005	0.008	0.013				
	SIN → QB		(HL)	0.538	0.880	1.448	0.005	0.008	0.013				
			(LH)	0.539	0.882	1.470	0.006	0.010	0.017				
	SC1 → Q		(HH)	0.409	0.679	1.127	0.006	0.010	0.017				
			(HL)	0.431	0.691	1.120	0.005	0.008	0.013				
	SC1 → QB		(HH)	0.536	0.865	1.420	0.006	0.010	0.017				
			(HL)	0.505	0.832	1.376	0.005	0.008	0.013				
	SC2 → Q		(HH)	0.313	0.506	0.836	0.006	0.010	0.017				
			(HL)	0.304	0.462	0.733	0.005	0.008	0.013				
	SC2 → QB		(HH)	0.408	0.635	1.034	0.006	0.010	0.017				
			(HL)	0.409	0.660	1.084	0.005	0.008	0.013				
	Set up time	D		0.210		0.420							
	Set up time	SIN		0.650		1.280							
	Set up time	SC1		0.490		1.040							
	Hold time	D		0.070		0.040							
	Hold time	SIN		0.000		0.000							
	Hold time	SC1		0.000		0.000							
	Release time	SB		0.090		0.080							
	Removal time	SB		0.280		0.570							
	Min Pulse	C		0.550		1.386							
	Min Pulse	SB		0.532		1.414							
	Min Pulse	SC1		0.572		1.510							
	Min Pulse	SC2		0.472		1.186							
SD646	C → Q		(HH)	0.314	0.498	0.780	0.003	0.005	0.008	D	1.3	Q	142
			(HL)	0.364	0.566	0.896	0.003	0.004	0.006	C	1.3	QB	140
	C → QB		(HH)	0.569	0.902	1.476	0.003	0.005	0.009	SB	2.6		
			(HL)	0.503	0.801	1.267	0.003	0.004	0.007	SIN	1.3		
	SB → Q		(LH)	0.287	0.771	1.303	0.003	0.005	0.008	SC1	2.4		
	SB → QB		(LL)	0.247	0.463	0.710	0.003	0.004	0.007	SC2	2.5		
	SIN → Q		(HH)	0.468	0.776	1.298	0.003	0.005	0.008				
			(LL)	0.457	0.745	1.235	0.003	0.004	0.006				
	SIN → QB		(HL)	0.610	1.005	1.663	0.003	0.004	0.006				
			(LH)	0.610	0.996	1.669	0.003	0.005	0.009				
	SC1 → Q		(HH)	0.436	0.730	1.226	0.003	0.005	0.008				
			(HL)	0.454	0.728	1.189	0.003	0.004	0.006				
	SC1 → QB		(HH)	0.607	0.979	1.622	0.003	0.005	0.009				
			(HL)	0.578	0.959	1.591	0.003	0.004	0.006				
	SC2 → Q		(HH)	0.338	0.556	0.937	0.003	0.005	0.008				
			(HL)	0.329	0.501	0.803	0.003	0.004	0.006				
	SC2 → QB		(HH)	0.482	0.752	1.237	0.003	0.005	0.009				
			(HL)	0.480	0.784	1.303	0.003	0.004	0.006				
	Set up time	D		0.220		0.430							
	Set up time	SIN		0.690		1.350							
	Set up time	SC1		0.530		1.130							
	Hold time	D		0.070		0.040							
	Hold time	SIN		0.000		0.000							
	Hold time	SC1		0.000		0.000							
	Release time	SB		0.100		0.100							
	Removal time	SB		0.270		0.610							

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Min Pulse	C	0.619		1.573							
	Min Pulse	SB	0.648		1.681							
	Min Pulse	SC1	0.643		1.710							
	Min Pulse	SC2	0.553		1.411							

[MEMO]

Function	Clocked LSSD D-F/F with RB,SB							SSI Family			
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	SD617	14										
x2	SD647	17										
x4												
x8												

Logic Diagram for "Normal"



Truth Table for "Normal"

D	C	RB	SB	SIN	SC1	SC2	Qn+1	Qn+1B	
0	↗	1	1	X	X	X	0	1	
1	↗	1	1	X	X	X	1	0	
X	↘	1	1	X	X	0	Qn	QnB	
X	X	1	0	X	X	0	1	0	
X	X	0	1	X	X	0	0	1	
X	X	0	0	X	X	X	0	0	← Prohibition
X	0	1	1	SIN	↗	↗	SIN	SINB	

X:Irrelevant

Logic Diagram for "Q output"

Truth Table for "Q output"

Logic Diagram for "QB output"

Truth Table for "QB output"

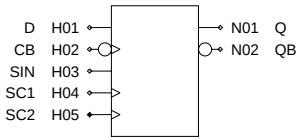
Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
SD617	C → Q	(HH)	0.331	0.516	0.820	0.006	0.011	0.017	D	1.3	Q	70
		(HL)	0.353	0.552	0.869	0.005	0.008	0.013	C	1.3	QB	68
	C → QB	(HH)	0.509	0.807	1.309	0.006	0.011	0.017	RB	2.6		
		(HL)	0.473	0.747	1.195	0.005	0.008	0.013	SB	2.4		
	RB → Q	(LL)	0.167	0.258	0.391	0.005	0.008	0.013	SIN	1.3		
	RB → QB	(LH)	0.324	0.577	0.933	0.006	0.011	0.017	SC1	2.4		
	SB → Q	(LH)	0.320	0.723	1.198	0.006	0.011	0.017	SC2	3.0		
	SB → QB	(LL)	0.203	0.368	0.562	0.005	0.008	0.013				
	SIN → Q	(HH)	0.497	0.810	1.339	0.006	0.011	0.017				
		(LL)	0.435	0.713	1.176	0.005	0.008	0.013				
	SIN → QB	(HL)	0.593	0.967	1.593	0.005	0.008	0.013				
		(LH)	0.540	0.888	1.479	0.006	0.010	0.017				
	SC1 → Q	(HH)	0.464	0.762	1.265	0.006	0.011	0.017				
		(HL)	0.432	0.695	1.125	0.005	0.008	0.013				
	SC1 → QB	(HH)	0.538	0.869	1.428	0.006	0.010	0.017				
		(HL)	0.561	0.919	1.519	0.005	0.008	0.013				
	SC2 → Q	(HH)	0.375	0.600	0.989	0.006	0.010	0.017				
		(HL)	0.307	0.471	0.745	0.005	0.008	0.013				
	SC2 → QB	(HH)	0.413	0.645	1.047	0.006	0.010	0.017				
		(HL)	0.471	0.756	1.241	0.005	0.008	0.013				
	Set up time	D	0.220		0.420							
	Set up time	SIN	0.640		1.260							
	Set up time	SC1	0.500		1.080							
	Hold time	D	0.070		0.050							
	Hold time	SIN	0.000		0.000							
	Hold time	SC1	0.000		0.000							
	Release time	RB	0.120		0.130							
	Release time	SB	0.080		0.090							
	Removal time	RB	0.360		0.610							
	Removal time	SB	0.330		0.660							
	Min Pulse	C	0.557		1.409							
	Min Pulse	RB	0.499		1.219							
	Min Pulse	SB	0.604		1.549							
	Min Pulse	SC1	0.600		1.604							
	Min Pulse	SC2	0.524		1.354							
SD647	C → Q	(HH)	0.355	0.561	0.889	0.003	0.005	0.008	D	1.3	Q	141
		(HL)	0.369	0.575	0.908	0.003	0.004	0.006	C	1.3	QB	136
	C → QB	(HH)	0.572	0.909	1.485	0.003	0.005	0.009	RB	3.9		
		(HL)	0.546	0.869	1.384	0.003	0.004	0.007	SB	2.4		
	RB → Q	(LL)	0.154	0.238	0.358	0.003	0.004	0.006	SIN	1.3		
	RB → QB	(LH)	0.359	0.662	1.079	0.003	0.005	0.009	SC1	2.4		
	SB → Q	(LH)	0.332	0.851	1.423	0.003	0.005	0.009	SC2	3.1		
	SB → QB	(LL)	0.248	0.458	0.703	0.003	0.004	0.007				
	SIN → Q	(HH)	0.519	0.852	1.418	0.003	0.005	0.009				
		(LL)	0.453	0.741	1.228	0.003	0.004	0.006				
	SIN → QB	(HL)	0.664	1.086	1.795	0.003	0.004	0.006				
		(LH)	0.607	0.995	1.665	0.003	0.005	0.009				
	SC1 → Q	(HH)	0.486	0.805	1.346	0.003	0.005	0.009				
		(HL)	0.450	0.724	1.182	0.003	0.004	0.006				
	SC1 → QB	(HH)	0.604	0.977	1.618	0.003	0.005	0.009				
		(HL)	0.631	1.038	1.722	0.003	0.004	0.006				
	SC2 → Q	(HH)	0.395	0.642	1.069	0.003	0.005	0.009				
		(HL)	0.329	0.502	0.804	0.003	0.004	0.006				
	SC2 → QB	(HH)	0.482	0.755	1.241	0.003	0.005	0.009				
		(HL)	0.541	0.875	1.447	0.003	0.004	0.006				
	Set up time	D	0.220		0.430							

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Set up time	SIN	0.680		1.330							
	Set up time	SC1	0.540		1.150							
	Hold time	D	0.070		0.060							
	Hold time	SIN	0.000		0.000							
	Hold time	SC1	0.000		0.000							
	Release time	RB	0.100		0.060							
	Release time	SB	0.090		0.100							
	Removal time	RB	0.340		0.580							
	Removal time	SB	0.330		0.700							
	Min Pulse	C	0.620		1.584							
	Min Pulse	RB	0.545		1.348							
	Min Pulse	SB	0.700		1.804							
	Min Pulse	SC1	0.669		1.809							
	Min Pulse	SC2	0.607		1.565							

[MEMO]

Function	Clocked LSSD D-F/F (CB)										SSI Family	
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	SD631	12										
x2	SD661	15										
x4												
x8												

Logic Diagram for "Normal"



Truth Table for "Normal"

D	CB	SIN	SC1	SC2	Qn+1	Qn+1B
0	↘	X	X	X	0	1
1	↘	X	X	X	1	0
X	↗	X	X	0	Qn	QnB
X	1	SIN	↗	↗	SIN	SINB

X:Irrelevant

Logic Diagram for "Q output"

Truth Table for "Q output"

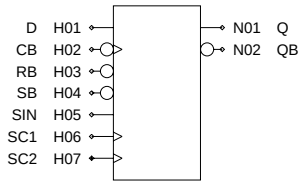
Logic Diagram for "QB output"

Truth Table for "QB output"

Block type	Switching speed									Input		Output	
	Path		t LD0 (ns)			t 1							
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		Symbol	Fanin	Symbol	Fanout
SD631	CB → Q	(LH)	0.299	0.485	0.780	0.006	0.010	0.017		D	1.3	Q	71
		(LL)	0.299	0.470	0.744	0.005	0.008	0.013		CB	1.3	QB	72
	CB → QB	(LH)	0.394	0.626	1.001	0.006	0.010	0.017		SIN	1.3		
		(LL)	0.435	0.705	1.133	0.005	0.008	0.013		SC1	2.4		
	SIN → Q	(HH)	0.442	0.726	1.199	0.006	0.010	0.017		SC2	2.5		
		(LL)	0.437	0.713	1.175	0.005	0.008	0.013					
	SIN → QB	(HL)	0.535	0.874	1.436	0.005	0.008	0.013					
		(LH)	0.497	0.814	1.345	0.006	0.010	0.017					
	SC1 → Q	(HH)	0.410	0.680	1.126	0.006	0.010	0.017					
		(HL)	0.435	0.694	1.127	0.005	0.008	0.013					
	SC1 → QB	(HH)	0.495	0.795	1.297	0.006	0.010	0.017					
		(HL)	0.501	0.827	1.362	0.005	0.008	0.013					
	SC2 → Q	(HH)	0.316	0.509	0.838	0.006	0.010	0.017					
		(HL)	0.306	0.467	0.742	0.005	0.008	0.013					
	SC2 → QB	(HH)	0.366	0.567	0.911	0.006	0.010	0.017					
		(HL)	0.407	0.656	1.075	0.005	0.008	0.013					
	Set up time	D	0.200		0.390								
	Set up time	SIN	0.640		1.270								
	Set up time	SC1	0.490		1.040								
	Hold time	D	0.090		0.140								
	Hold time	SIN	0.000		0.000								
	Hold time	SC1	0.000		0.000								
	Min Pulse	CB	0.478		1.223								
	Min Pulse	SC1	0.542		1.451								
	Min Pulse	SC2	0.456		1.180								
SD661	CB → Q	(LH)	0.313	0.515	0.833	0.003	0.005	0.008		D	1.3	Q	143
		(LL)	0.314	0.496	0.788	0.003	0.004	0.006		CB	1.3	QB	143
	CB → QB	(LH)	0.442	0.705	1.131	0.003	0.005	0.009		SIN	1.3		
		(LL)	0.497	0.810	1.307	0.003	0.004	0.007		SC1	2.4		
	SIN → Q	(HH)	0.467	0.774	1.291	0.003	0.005	0.008		SC2	2.5		
		(LL)	0.457	0.745	1.237	0.003	0.004	0.006					
	SIN → QB	(HL)	0.606	0.997	1.649	0.003	0.004	0.006					
		(LH)	0.552	0.901	1.496	0.003	0.005	0.008					
	SC1 → Q	(HH)	0.434	0.727	1.218	0.003	0.005	0.008					
		(HL)	0.454	0.727	1.188	0.003	0.004	0.006					
	SC1 → QB	(HH)	0.550	0.884	1.448	0.003	0.005	0.008					
		(HL)	0.573	0.951	1.576	0.003	0.004	0.006					
	SC2 → Q	(HH)	0.338	0.554	0.933	0.003	0.005	0.008					
		(HL)	0.329	0.501	0.802	0.003	0.004	0.006					
	SC2 → QB	(HH)	0.424	0.658	1.061	0.003	0.005	0.008					
		(HL)	0.477	0.778	1.291	0.003	0.004	0.006					
	Set up time	D	0.200		0.390								
	Set up time	SIN	0.690		1.340								
	Set up time	SC1	0.530		1.130								
	Hold time	D	0.100		0.140								
	Hold time	SIN	0.000		0.000								
	Hold time	SC1	0.000		0.000								
	Min Pulse	CB	0.542		1.399								
	Min Pulse	SC1	0.614		1.666								
	Min Pulse	SC2	0.536		1.397								

Function	Clocked LSSD D-F/F (CB) with RB,SB							SSI Family			
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	SD637	14										
x2	SD667	17										
x4												
x8												

Logic Diagram for "Normal"



Truth Table for "Normal"

D	CB	RB	SB	SIN	SC1	SC2	Qn+1	Qn+1B	
0	↘	1	1	X	X	X	0	1	
1	↘	1	1	X	X	X	1	0	
X	↗	1	1	X	X	0	Qn	QnB	
X	X	1	0	X	X	0	1	0	
X	X	0	1	X	X	0	0	1	
X	X	0	0	X	X	X	0	0	← Prohibition
X	1	1	1	SIN	↗	↗	SIN	SINB	

X:Irrelevant

Logic Diagram for "Q output"

Truth Table for "Q output"

Logic Diagram for "QB output"

Truth Table for "QB output"

Block type	Switching speed								Input		Output	
	Path			t_{LD0} (ns)			t_1					
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
SD637	CB → Q		(LH)	0.346	0.561	0.917	0.006	0.011	0.017	D	1.3	Q	70
			(LL)	0.318	0.504	0.803	0.005	0.008	0.013	CB	1.3	QB	69
	CB → QB		(LH)	0.476	0.762	1.248	0.006	0.011	0.017	RB	2.6		
			(LL)	0.489	0.791	1.290	0.005	0.008	0.013	SB	2.4		
	RB → Q		(LL)	0.167	0.257	0.390	0.005	0.008	0.013	SIN	1.3		
	RB → QB		(LH)	0.324	0.577	0.933	0.006	0.011	0.017	SC1	2.4		
	SB → Q		(LH)	0.320	0.723	1.198	0.006	0.011	0.017	SC2	3.0		
	SB → QB		(LL)	0.204	0.368	0.562	0.005	0.008	0.013				
	SIN → Q		(HH)	0.497	0.809	1.340	0.006	0.011	0.017				
			(LL)	0.435	0.712	1.174	0.005	0.008	0.013				
	SIN → QB		(HL)	0.593	0.966	1.593	0.005	0.008	0.013				
			(LH)	0.541	0.887	1.478	0.006	0.010	0.017				
	SC1 → Q		(HH)	0.464	0.761	1.264	0.006	0.011	0.017				
			(HL)	0.432	0.694	1.124	0.005	0.008	0.013				
	SC1 → QB		(HH)	0.538	0.869	1.427	0.006	0.011	0.017				
			(HL)	0.561	0.918	1.518	0.005	0.008	0.013				
	SC2 → Q		(HH)	0.374	0.599	0.986	0.006	0.010	0.017				
			(HL)	0.307	0.470	0.744	0.005	0.008	0.013				
	SC2 → QB		(HH)	0.413	0.645	1.048	0.006	0.011	0.017				
			(HL)	0.471	0.755	1.239	0.005	0.008	0.013				
	Set up time	D		0.240		0.460							
	Set up time	SIN		0.640		1.260							
	Set up time	SC1		0.500		1.080							
	Hold time	D		0.100		0.150							
	Hold time	SIN		0.000		0.000							
	Hold time	SC1		0.000		0.000							
	Release time	RB		0.120		0.130							
	Release time	SB		0.070		0.110							
	Removal time	RB		0.350		0.680							
	Removal time	SB		0.330		0.660							
	Min Pulse	CB		0.532		1.379							
	Min Pulse	RB		0.499		1.218							
	Min Pulse	SB		0.604		1.549							
	Min Pulse	SC1		0.600		1.604							
	Min Pulse	SC2		0.525		1.352							
SD667	CB → Q		(LH)	0.358	0.585	0.958	0.003	0.005	0.009	D	1.3	Q	141
			(LL)	0.340	0.537	0.862	0.003	0.004	0.006	CB	1.3	QB	134
	CB → QB		(LH)	0.546	0.874	1.444	0.003	0.005	0.009	RB	3.9		
			(LL)	0.548	0.891	1.450	0.003	0.004	0.007	SB	2.4		
	RB → Q		(LL)	0.153	0.238	0.357	0.003	0.004	0.006	SIN	1.3		
	RB → QB		(LH)	0.359	0.663	1.079	0.003	0.005	0.009	SC1	2.4		
	SB → Q		(LH)	0.331	0.852	1.423	0.003	0.005	0.009	SC2	3.1		
	SB → QB		(LL)	0.248	0.459	0.704	0.003	0.004	0.007				
	SIN → Q		(HH)	0.519	0.852	1.418	0.003	0.005	0.009				
			(LL)	0.453	0.741	1.228	0.003	0.004	0.006				
	SIN → QB		(HL)	0.664	1.085	1.796	0.003	0.004	0.006				
			(LH)	0.607	0.994	1.665	0.003	0.005	0.009				
	SC1 → Q		(HH)	0.486	0.804	1.345	0.003	0.005	0.009				
			(HL)	0.451	0.723	1.181	0.003	0.004	0.006				
	SC1 → QB		(HH)	0.605	0.977	1.618	0.003	0.005	0.009				
			(HL)	0.632	1.038	1.723	0.003	0.004	0.006				
	SC2 → Q		(HH)	0.395	0.642	1.069	0.003	0.005	0.008				
			(HL)	0.329	0.502	0.804	0.003	0.004	0.006				
	SC2 → QB		(HH)	0.482	0.755	1.241	0.003	0.005	0.009				
			(HL)	0.541	0.875	1.447	0.003	0.004	0.006				
	Set up time	D		0.240		0.460							

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Set up time	SIN	0.680		1.330							
	Set up time	SC1	0.540		1.150							
	Hold time	D	0.100		0.150							
	Hold time	SIN	0.000		0.000							
	Hold time	SC1	0.000		0.000							
	Release time	RB	0.100		0.060							
	Release time	SB	0.080		0.100							
	Removal time	RB	0.340		0.650							
	Removal time	SB	0.330		0.700							
	Min Pulse	CB	0.594		1.538							
	Min Pulse	RB	0.546		1.348							
	Min Pulse	SB	0.700		1.804							
	Min Pulse	SC1	0.670		1.812							
	Min Pulse	SC2	0.607		1.566							

[MEMO]

[MEMO]

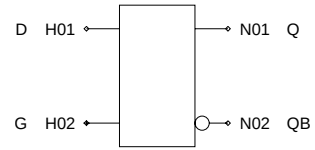
[MEMO]

3.3 NEC Scan

[MEMO]

Function	D-Latch										SSI Family	
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	SE601	12	SE601NQ	11	SE601NB	11						
x2	SE601NP	15	SE601NQP	13	SE601NBP	13						
x4												
x8												

Logic Diagram for "Normal"

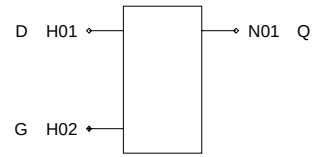


Truth Table for "Normal"

D	G	Q	QB
0	1	0	1
1	1	1	0
X	0	Latch	

X:Irrelevant

Logic Diagram for "Q output"

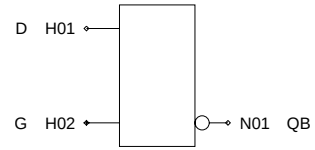


Truth Table for "Q output"

D	G	Q	QB
0	1	0	1
1	1	1	0
X	0	Latch	

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

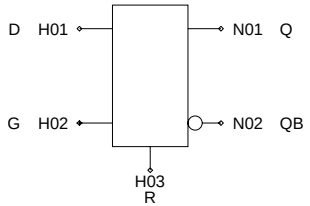
D	G	Q	QB
0	1	0	1
1	1	1	0
X	0	Latch	

X:Irrelevant

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
SE601	D → Q	(HH)	0.440	0.707	1.147	0.006	0.010	0.017	D	1.3	Q	72
		(LL)	0.435	0.704	1.147	0.005	0.008	0.013	G	2.4	QB	71
	D → QB	(HL)	0.349	0.555	0.896	0.005	0.008	0.013				
		(LH)	0.306	0.499	0.818	0.006	0.011	0.017				
	G → Q	(HH)	0.388	0.619	1.001	0.006	0.010	0.017				
		(HL)	0.411	0.632	1.002	0.005	0.008	0.013				
	G → QB	(HH)	0.283	0.427	0.673	0.006	0.011	0.017				
		(HL)	0.300	0.471	0.754	0.005	0.008	0.013				
	Set up time	D	0.470		0.970							
	Hold time	D	0.000		0.000							
	Min Pulse	G	0.495		1.140							
SE601NP	D → Q	(HH)	0.483	0.789	1.304	0.003	0.005	0.008	D	1.3	Q	144
		(LL)	0.457	0.738	1.210	0.003	0.004	0.006	G	2.1	QB	141
	D → QB	(HL)	0.445	0.722	1.187	0.003	0.004	0.007				
		(LH)	0.380	0.620	1.021	0.003	0.005	0.009				
	G → Q	(HH)	0.415	0.681	1.138	0.003	0.005	0.008				
		(HL)	0.422	0.647	1.036	0.003	0.004	0.006				
	G → QB	(HH)	0.346	0.529	0.848	0.003	0.005	0.009				
		(HL)	0.377	0.615	1.021	0.003	0.004	0.007				
	Set up time	D	0.530		1.180							
	Hold time	D	0.000		0.000							
	Min Pulse	G	0.502		1.266							
SE601NQ	D → Q	(HH)	0.377	0.596	0.956	0.006	0.010	0.017	D	1.3	Q	71
		(LL)	0.385	0.623	1.009	0.005	0.008	0.013	G	2.4		
	G → Q	(HH)	0.327	0.501	0.791	0.006	0.010	0.017				
		(HL)	0.363	0.555	0.872	0.005	0.008	0.013				
	Set up time	D	0.430		0.790							
	Hold time	D	0.000		0.000							
	Min Pulse	G	0.448		1.009							
SE601NQP	D → Q	(HH)	0.384	0.617	1.005	0.003	0.005	0.008	D	1.3	Q	144
		(LL)	0.371	0.601	0.980	0.003	0.004	0.006	G	2.1		
	G → Q	(HH)	0.325	0.516	0.837	0.003	0.005	0.008				
		(HL)	0.342	0.519	0.820	0.003	0.004	0.006				
	Set up time	D	0.440		0.900							
	Hold time	D	0.000		0.000							
	Min Pulse	G	0.421		0.969							
SE601NB	D → QB	(HL)	0.350	0.556	0.898	0.005	0.008	0.013	D	1.3	QB	71
		(LH)	0.306	0.499	0.818	0.006	0.011	0.017	G	2.4		
	G → QB	(HH)	0.283	0.428	0.675	0.006	0.011	0.017				
		(HL)	0.300	0.472	0.756	0.005	0.008	0.013				
	Set up time	D	0.450		0.900							
	Hold time	D	0.000		0.000							
	Min Pulse	G	0.440		1.015							
SE601NBP	D → QB	(HL)	0.340	0.540	0.877	0.003	0.004	0.007	D	1.3	QB	142
		(LH)	0.315	0.521	0.863	0.003	0.005	0.009	G	2.1		
	G → QB	(HH)	0.277	0.418	0.654	0.003	0.005	0.009				
		(HL)	0.293	0.459	0.734	0.003	0.004	0.007				
	Set up time	D	0.450		0.900							
	Hold time	D	0.000		0.000							
	Min Pulse	G	0.429		0.988							

Function	D-Latch with R							SSI Family				
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	SE602	13	SE602NQ	12	SE602NB	12						
x2	SE602NP	16	SE602NQP	14	SE602NBP	14						
x4												
x8												

Logic Diagram for "Normal"

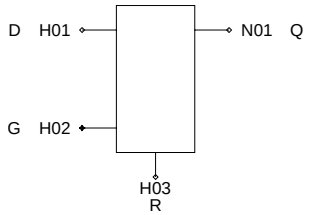


Truth Table for "Normal"

D	G	R	Q	QB
1	1	0	1	0
0	1	0	0	1
X	0	0	Latch	
X	X	1	0	1

X:Irrelevant

Logic Diagram for "Q output"

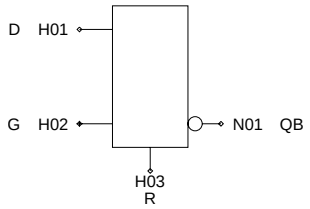


Truth Table for "Q output"

D	G	R	Q	QB
1	1	0	1	0
0	1	0	0	1
X	0	0	Latch	
X	X	1	0	1

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

D	G	R	Q	QB
1	1	0	1	0
0	1	0	0	1
X	0	0	Latch	
X	X	1	0	1

X:Irrelevant

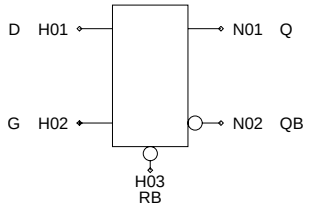
Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
SE602	D → Q	(HH)	0.581	0.947	1.548	0.006	0.010	0.017	D	1.3	Q	71
		(LL)	0.444	0.721	1.176	0.005	0.008	0.013	G	2.5	QB	71
	D → QB	(HL)	0.488	0.789	1.286	0.006	0.009	0.014	R	2.6		
		(LH)	0.316	0.519	0.851	0.006	0.010	0.017				
	G → Q	(HH)	0.415	0.677	1.119	0.006	0.010	0.017				
		(HL)	0.409	0.628	0.998	0.005	0.008	0.013				
	G → QB	(HH)	0.282	0.427	0.673	0.006	0.011	0.017				
		(HL)	0.326	0.525	0.864	0.006	0.009	0.014				
	R → Q	(HL)	0.338	0.533	0.836	0.005	0.008	0.013				
		(LH)	0.463	0.785	1.314	0.006	0.010	0.017				
	R → QB	(HH)	0.218	0.345	0.530	0.006	0.011	0.017				
		(LL)	0.370	0.627	1.052	0.006	0.009	0.014				
	Set up time	D	0.620		1.390							
	Hold time	D	0.000		0.000							
	Release time	R	0.490		1.100							
	Removal time	R	0.000		0.000							
	Min Pulse	G	0.493		1.249							
	Min Pulse	R	0.652		1.549							
SE602NP	D → Q	(HH)	0.677	1.111	1.832	0.003	0.005	0.008	D	1.3	Q	142
		(LL)	0.474	0.770	1.261	0.003	0.004	0.006	G	2.2	QB	141
	D → QB	(HL)	0.611	0.999	1.639	0.003	0.005	0.007	R	2.7		
		(LH)	0.374	0.611	1.006	0.003	0.005	0.009				
	G → Q	(HH)	0.488	0.807	1.364	0.003	0.005	0.008				
		(HL)	0.440	0.676	1.080	0.003	0.004	0.006				
	G → QB	(HH)	0.339	0.518	0.826	0.003	0.005	0.009				
		(HL)	0.422	0.696	1.175	0.003	0.005	0.007				
	R → Q	(HL)	0.371	0.596	0.947	0.003	0.004	0.006				
		(LH)	0.565	0.960	1.617	0.003	0.005	0.008				
	R → QB	(HH)	0.276	0.447	0.704	0.003	0.005	0.009				
		(LL)	0.498	0.848	1.424	0.003	0.005	0.007				
	Set up time	D	0.710		1.690							
	Hold time	D	0.000		0.000							
	Release time	R	0.590		1.410							
	Removal time	R	0.000		0.000							
	Min Pulse	G	0.570		1.503							
	Min Pulse	R	0.767		1.870							
SE602NQ	D → Q	(HH)	0.483	0.780	1.262	0.006	0.010	0.017	D	1.3	Q	71
		(LL)	0.393	0.639	1.035	0.005	0.008	0.013	G	2.5		
	G → Q	(HH)	0.340	0.529	0.841	0.006	0.010	0.017	R	2.6		
		(HL)	0.362	0.552	0.866	0.005	0.008	0.013				
	R → Q	(HL)	0.288	0.456	0.705	0.005	0.008	0.013				
		(LH)	0.367	0.619	1.027	0.006	0.010	0.017				
	Set up time	D	0.540		1.120							
	Hold time	D	0.000		0.000							
	Release time	R	0.410		0.830							
	Removal time	R	0.000		0.000							
	Min Pulse	G	0.445		1.004							
	Min Pulse	R	0.540		1.256							
SE602NQP	D → Q	(HH)	0.505	0.821	1.338	0.003	0.005	0.008	D	1.3	Q	144
		(LL)	0.385	0.626	1.018	0.003	0.004	0.006	G	2.2		
	G → Q	(HH)	0.348	0.553	0.897	0.003	0.005	0.008	R	2.7		
		(HL)	0.355	0.541	0.851	0.003	0.004	0.006				
	R → Q	(HL)	0.282	0.459	0.710	0.003	0.004	0.006				
		(LH)	0.393	0.669	1.120	0.003	0.005	0.008				
	Set up time	D	0.560		1.210							
	Hold time	D	0.000		0.000							

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Release time	R	0.440		0.940							
	Removal time	R	0.000		0.000							
	Min Pulse	G	0.439		1.038							
	Min Pulse	R	0.575		1.360							
SE602NB	D → QB	(HL)	0.489	0.791	1.289	0.006	0.009	0.014	D	1.3	QB	71
		(LH)	0.317	0.518	0.852	0.006	0.011	0.017	G	2.5		
	G → QB	(HH)	0.282	0.428	0.674	0.006	0.011	0.017	R	2.6		
		(HL)	0.327	0.527	0.867	0.006	0.009	0.014				
	R → QB	(HH)	0.217	0.345	0.531	0.006	0.011	0.017				
		(LL)	0.371	0.629	1.054	0.006	0.009	0.014				
	Set up time	D	0.580		1.300							
	Hold time	D	0.000		0.000							
	Release time	R	0.450		1.010							
	Removal time	R	0.000		0.000							
	Min Pulse	G	0.438		1.101							
	Min Pulse	R	0.589		1.396							
SE602NBP	D → QB	(HL)	0.445	0.721	1.180	0.003	0.004	0.007	D	1.3	QB	141
		(LH)	0.322	0.530	0.878	0.003	0.005	0.009	G	2.2		
	G → QB	(HH)	0.295	0.446	0.701	0.003	0.005	0.009	R	3.9		
		(HL)	0.334	0.536	0.877	0.003	0.004	0.007				
	R → QB	(HH)	0.215	0.379	0.591	0.003	0.005	0.009				
		(LL)	0.313	0.538	0.913	0.003	0.004	0.007				
	Set up time	D	0.550		1.200							
	Hold time	D	0.000		0.000							
	Release time	R	0.400		0.870							
	Removal time	R	0.000		0.000							
	Min Pulse	G	0.454		1.135							
	Min Pulse	R	0.530		1.265							

[MEMO]

Function	D-Latch with RB							SSI Family				
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	SE603	13	SE603NQ	12	SE603NB	12						
x2	SE603NP	16	SE603NQP	14	SE603NBP	14						
x4												
x8												

Logic Diagram for "Normal"

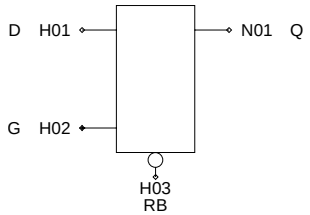


Truth Table for "Normal"

D	G	RB	Q	QB
1	1	1	1	0
0	1	1	0	1
X	0	1	Latch	
X	X	0	0	1

X:Irrelevant

Logic Diagram for "Q output"

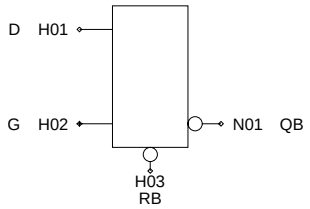


Truth Table for "Q output"

D	G	RB	Q	QB
1	1	1	1	0
0	1	1	0	1
X	0	1	Latch	
X	X	0	0	1

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

D	G	RB	Q	QB
1	1	1	1	0
0	1	1	0	1
X	0	1	Latch	
X	X	0	0	1

X:Irrelevant

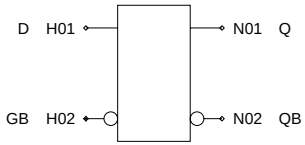
Block type	Switching speed									Input		Output	
	Path		t_{LD0} (ns)			t_1							
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		Symbol	Fanin	Symbol	Fanout
SE603	D → Q	(HH)	0.431	0.686	1.115	0.006	0.010	0.017		D	1.3	Q	71
		(LL)	0.391	0.633	1.029	0.005	0.008	0.013		G	2.4	QB	71
	D → QB	(HL)	0.524	0.835	1.358	0.005	0.008	0.013		RB	2.7		
		(LH)	0.452	0.733	1.198	0.006	0.011	0.017					
	G → Q	(HH)	0.382	0.592	0.955	0.006	0.011	0.017					
		(HL)	0.370	0.568	0.892	0.005	0.008	0.013					
	G → QB	(HH)	0.431	0.668	1.061	0.006	0.011	0.017					
		(HL)	0.474	0.741	1.196	0.005	0.008	0.013					
	RB → Q	(HH)	0.194	0.296	0.481	0.006	0.010	0.017					
		(LL)	0.186	0.292	0.444	0.005	0.008	0.013					
	RB → QB	(HL)	0.287	0.445	0.721	0.005	0.008	0.013					
		(LH)	0.248	0.455	0.711	0.006	0.011	0.017					
	Set up time	D	0.460		0.900								
	Hold time	D	0.000		0.000								
	Release time	RB	0.180		0.190								
	Removal time	RB	0.030		0.030								
	Min Pulse	G	0.549		1.311								
	Min Pulse	RB	0.468		1.017								
SE603NP	D → Q	(HH)	0.442	0.704	1.148	0.003	0.005	0.009		D	1.3	Q	143
		(LL)	0.397	0.645	1.050	0.003	0.004	0.006		G	2.1	QB	142
	D → QB	(HL)	0.585	0.934	1.520	0.003	0.004	0.006		RB	4.0		
		(LH)	0.495	0.805	1.313	0.003	0.005	0.009					
	G → Q	(HH)	0.379	0.596	0.966	0.003	0.005	0.009					
		(HL)	0.360	0.549	0.868	0.003	0.004	0.006					
	G → QB	(HH)	0.458	0.709	1.131	0.003	0.005	0.008					
		(HL)	0.523	0.825	1.338	0.003	0.004	0.006					
	RB → Q	(HH)	0.169	0.256	0.415	0.003	0.005	0.009					
		(LL)	0.161	0.250	0.378	0.003	0.004	0.006					
	RB → QB	(HL)	0.312	0.486	0.786	0.003	0.004	0.006					
		(LH)	0.260	0.485	0.759	0.003	0.005	0.009					
	Set up time	D	0.500		0.990								
	Hold time	D	0.000		0.000								
	Release time	RB	0.160		0.160								
	Removal time	RB	0.060		0.090								
	Min Pulse	G	0.597		1.451								
	Min Pulse	RB	0.480		1.045								
SE603NQ	D → Q	(HH)	0.430	0.684	1.114	0.006	0.011	0.017		D	1.3	Q	71
		(LL)	0.391	0.632	1.027	0.005	0.008	0.013		G	2.4		
	G → Q	(HH)	0.381	0.591	0.953	0.006	0.011	0.017		RB	2.7		
		(HL)	0.369	0.567	0.887	0.005	0.008	0.013					
	RB → Q	(HH)	0.193	0.294	0.480	0.006	0.011	0.017					
		(LL)	0.185	0.291	0.441	0.005	0.008	0.013					
	Set up time	D	0.450		0.870								
	Hold time	D	0.000		0.000								
	Release time	RB	0.160		0.160								
	Removal time	RB	0.050		0.070								
	Min Pulse	G	0.466		1.100								
	Min Pulse	RB	0.382		0.790								
SE603NQP	D → Q	(HH)	0.441	0.703	1.148	0.003	0.005	0.008		D	1.3	Q	142
		(LL)	0.397	0.644	1.047	0.003	0.004	0.006		G	2.1		
	G → Q	(HH)	0.378	0.594	0.967	0.003	0.005	0.009		RB	4.0		
		(HL)	0.359	0.549	0.864	0.003	0.004	0.006					
	RB → Q	(HH)	0.168	0.255	0.413	0.003	0.005	0.009					
		(LL)	0.159	0.248	0.377	0.003	0.004	0.006					
	Set up time	D	0.480		0.940								
	Hold time	D	0.000		0.000								

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Release time	RB	0.130		0.090							
	Removal time	RB	0.080		0.130							
	Min Pulse	G	0.463		1.113							
	Min Pulse	RB	0.345		0.704							
SE603NB	D → QB	(HL)	0.468	0.745	1.207	0.005	0.008	0.013	D	1.3	QB	70
		(LH)	0.402	0.656	1.071	0.006	0.011	0.017	G	2.4		
	G → QB	(HH)	0.382	0.590	0.937	0.006	0.011	0.017	RB	2.7		
		(HL)	0.420	0.656	1.048	0.005	0.008	0.013				
	RB → QB	(HL)	0.236	0.363	0.582	0.005	0.008	0.013				
		(LH)	0.200	0.372	0.582	0.006	0.011	0.017				
	Set up time	D	0.430		0.820							
	Hold time	D	0.000		0.000							
	Release time	RB	0.130		0.080							
	Removal time	RB	0.080		0.130							
	Min Pulse	G	0.496		1.163							
	Min Pulse	RB	0.377		0.831							
SE603NBP	D → QB	(HL)	0.497	0.788	1.280	0.003	0.004	0.006	D	1.3	QB	143
		(LH)	0.432	0.705	1.148	0.003	0.005	0.008	G	2.1		
	G → QB	(HH)	0.398	0.612	0.973	0.003	0.005	0.008	RB	2.8		
		(HL)	0.434	0.673	1.083	0.003	0.004	0.006				
	RB → QB	(HL)	0.252	0.386	0.624	0.003	0.004	0.006				
		(LH)	0.219	0.367	0.573	0.003	0.005	0.008				
	Set up time	D	0.480		0.930							
	Hold time	D	0.000		0.000							
	Release time	RB	0.190		0.200							
	Removal time	RB	0.020		0.010							
	Min Pulse	G	0.510		1.197							
	Min Pulse	RB	0.427		0.896							

[MEMO]

Function	D-Latch(GB)					SSI Family						
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	SE604	12	SE604NQ	11	SE604NB	11						
x2	SE604NP	15	SE604NQP	13	SE604NBP	13						
x4												
x8												

Logic Diagram for "Normal"

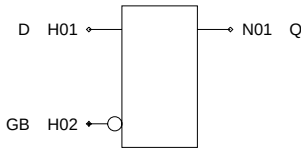


Truth Table for "Normal"

D	GB	Q	QB
1	0	1	0
0	0	0	1
X	1	Latch	

X:Irrelevant

Logic Diagram for "Q output"

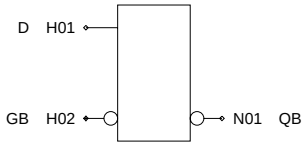


Truth Table for "Q output"

D	GB	Q	QB
1	0	1	0
0	0	0	1
X	1	Latch	

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

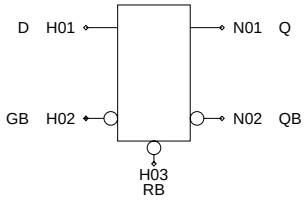
D	GB	Q	QB
1	0	1	0
0	0	0	1
X	1	Latch	

X:Irrelevant

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
SE604	D → Q	(HH)	0.440	0.706	1.145	0.006	0.010	0.017	D	1.3	Q	72
		(LL)	0.437	0.708	1.155	0.005	0.008	0.013	GB	2.4	QB	71
	D → QB	(HL)	0.349	0.554	0.895	0.005	0.008	0.013				
		(LH)	0.308	0.502	0.825	0.006	0.011	0.017				
	GB → Q	(LH)	0.419	0.679	1.098	0.006	0.010	0.017				
		(LL)	0.428	0.675	1.082	0.005	0.008	0.013				
	GB → QB	(LH)	0.300	0.470	0.753	0.006	0.011	0.017				
		(LL)	0.330	0.531	0.852	0.005	0.008	0.013				
	Set up time	D	0.430		0.900							
	Hold time	D	0.000		0.000							
	Min Pulse	GB	0.510		1.212							
SE604NP	D → Q	(HH)	0.484	0.788	1.302	0.003	0.005	0.008	D	1.3	Q	143
		(LL)	0.459	0.742	1.218	0.003	0.004	0.006	GB	2.2	QB	140
	D → QB	(HL)	0.445	0.721	1.184	0.003	0.004	0.007				
		(LH)	0.383	0.624	1.030	0.003	0.005	0.009				
	GB → Q	(LH)	0.454	0.759	1.258	0.003	0.005	0.008				
		(LL)	0.459	0.723	1.164	0.003	0.004	0.006				
	GB → QB	(LH)	0.383	0.604	0.975	0.003	0.005	0.009				
		(LL)	0.415	0.693	1.142	0.003	0.004	0.007				
	Set up time	D	0.500		1.050							
	Hold time	D	0.000		0.000							
	Min Pulse	GB	0.541		1.373							
SE604NQ	D → Q	(HH)	0.377	0.596	0.956	0.006	0.010	0.017	D	1.3	Q	71
		(LL)	0.386	0.625	1.014	0.005	0.008	0.013	GB	2.4		
	GB → Q	(LH)	0.355	0.564	0.905	0.006	0.010	0.017				
		(LL)	0.368	0.575	0.915	0.005	0.008	0.013				
	Set up time	D	0.370		0.770							
	Hold time	D	0.000		0.000							
	Min Pulse	GB	0.449		1.039							
SE604NQP	D → Q	(HH)	0.384	0.616	1.004	0.003	0.005	0.008	D	1.3	Q	144
		(LL)	0.373	0.603	0.984	0.003	0.004	0.006	GB	2.2		
	GB → Q	(LH)	0.365	0.591	0.958	0.003	0.005	0.008				
		(LL)	0.367	0.578	0.923	0.003	0.004	0.006				
	Set up time	D	0.400		0.820							
	Hold time	D	0.000		0.000							
	Min Pulse	GB	0.448		1.077							
SE604NB	D → QB	(HL)	0.350	0.555	0.897	0.005	0.008	0.013	D	1.3	QB	71
		(LH)	0.307	0.502	0.825	0.006	0.011	0.017	GB	2.4		
	GB → QB	(LH)	0.300	0.471	0.754	0.006	0.011	0.017				
		(LL)	0.330	0.532	0.855	0.005	0.008	0.013				
	Set up time	D	0.410		0.840							
	Hold time	D	0.000		0.000							
	Min Pulse	GB	0.455		1.097							
SE604NBP	D → QB	(HL)	0.337	0.536	0.873	0.003	0.004	0.007	D	1.3	QB	143
		(LH)	0.316	0.524	0.866	0.003	0.005	0.009	GB	2.2		
	GB → QB	(LH)	0.309	0.486	0.772	0.003	0.005	0.009				
		(LL)	0.326	0.526	0.844	0.003	0.004	0.007				
	Set up time	D	0.430		0.880							
	Hold time	D	0.000		0.000							
	Min Pulse	GB	0.461		1.079							

Function	D-Latch(GB) with RB						SSI Family					
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	SE605	13	SE605NQ	12	SE605NB	12						
x2	SE605NP	16	SE605NQP	14	SE605NBP	14						
x4												
x8												

Logic Diagram for "Normal"

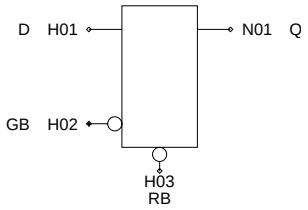


Truth Table for "Normal"

D	GB	RB	Q	QB
1	0	1	1	0
0	0	1	0	1
X	1	1	Latch	
X	X	0	0	1

X:Irrelevant

Logic Diagram for "Q output"

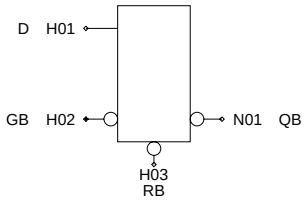


Truth Table for "Q output"

D	GB	RB	Q	QB
1	0	1	1	0
0	0	1	0	1
X	1	1	Latch	
X	X	0	0	1

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

D	GB	RB	Q	QB
1	0	1	1	0
0	0	1	0	1
X	1	1	Latch	
X	X	0	0	1

X:Irrelevant

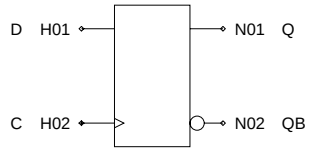
Block type	Switching speed									Input		Output	
	Path		t LD0 (ns)			t 1							
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		Symbol	Fanin	Symbol	Fanout
SE605	D → Q	(HH)	0.432	0.685	1.116	0.006	0.011	0.017		D	1.3	Q	71
		(LL)	0.393	0.635	1.033	0.005	0.008	0.013		GB	2.4	QB	71
	D → QB	(HL)	0.525	0.834	1.358	0.005	0.008	0.013		RB	2.6		
		(LH)	0.453	0.736	1.201	0.006	0.010	0.017					
	GB → Q	(LH)	0.411	0.655	1.069	0.006	0.011	0.017					
		(LL)	0.377	0.590	0.938	0.005	0.008	0.013					
	GB → QB	(LH)	0.437	0.690	1.108	0.006	0.011	0.017					
		(LL)	0.503	0.804	1.311	0.005	0.008	0.013					
	RB → Q	(HH)	0.194	0.295	0.481	0.006	0.011	0.017					
		(LL)	0.187	0.291	0.443	0.005	0.008	0.013					
	RB → QB	(HL)	0.287	0.444	0.722	0.005	0.008	0.013					
		(LH)	0.248	0.455	0.710	0.006	0.011	0.017					
	Set up time	D	0.410		0.820								
	Hold time	D	0.000		0.000								
	Release time	RB	0.160		0.160								
	Removal time	RB	0.050		0.050								
	Min Pulse	GB	0.568		1.408								
	Min Pulse	RB	0.468		1.017								
SE605NP	D → Q	(HH)	0.438	0.700	1.140	0.003	0.005	0.009		D	1.3	Q	143
		(LL)	0.392	0.637	1.036	0.003	0.004	0.006		GB	2.1	QB	142
	D → QB	(HL)	0.574	0.920	1.495	0.003	0.004	0.006		RB	4.0		
		(LH)	0.485	0.788	1.286	0.003	0.005	0.008					
	GB → Q	(LH)	0.420	0.674	1.099	0.003	0.005	0.009					
		(LL)	0.384	0.606	0.965	0.003	0.004	0.006					
	GB → QB	(LH)	0.476	0.757	1.216	0.003	0.005	0.008					
		(LL)	0.556	0.893	1.454	0.003	0.004	0.006					
	RB → Q	(HH)	0.170	0.259	0.418	0.003	0.005	0.009					
		(LL)	0.163	0.253	0.381	0.003	0.004	0.006					
	RB → QB	(HL)	0.307	0.478	0.773	0.003	0.004	0.006					
		(LH)	0.258	0.480	0.749	0.003	0.005	0.009					
	Set up time	D	0.430		0.870								
	Hold time	D	0.000		0.000								
	Release time	RB	0.130		0.110								
	Removal time	RB	0.090		0.130								
	Min Pulse	GB	0.626		1.554								
	Min Pulse	RB	0.474		1.036								
SE605NQ	D → Q	(HH)	0.431	0.684	1.115	0.006	0.011	0.017		D	1.3	Q	71
		(LL)	0.392	0.634	1.031	0.005	0.008	0.013		GB	2.4		
	GB → Q	(LH)	0.410	0.654	1.069	0.006	0.011	0.017		RB	2.7		
		(LL)	0.375	0.590	0.936	0.005	0.008	0.013					
	RB → Q	(HH)	0.193	0.294	0.479	0.006	0.011	0.017					
		(LL)	0.185	0.290	0.441	0.005	0.008	0.013					
	Set up time	D	0.390		0.790								
	Hold time	D	0.000		0.000								
	Release time	RB	0.140		0.140								
	Removal time	RB	0.070		0.100								
	Min Pulse	GB	0.485		1.196								
	Min Pulse	RB	0.382		0.791								
SE605NQP	D → Q	(HH)	0.437	0.698	1.138	0.003	0.005	0.009		D	1.3	Q	142
		(LL)	0.391	0.635	1.034	0.003	0.004	0.006		GB	2.1		
	GB → Q	(LH)	0.418	0.672	1.098	0.003	0.005	0.009		RB	4.0		
		(LL)	0.382	0.604	0.963	0.003	0.004	0.006					
	RB → Q	(HH)	0.170	0.257	0.417	0.003	0.005	0.009					
		(LL)	0.162	0.252	0.379	0.003	0.004	0.006					
	Set up time	D	0.400		0.820								
	Hold time	D	0.000		0.000								

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Release time	RB	0.100		0.050							
	Removal time	RB	0.110		0.180							
	Min Pulse	GB	0.496		1.232							
	Min Pulse	RB	0.346		0.709							
SE605NB	D → QB	(HL)	0.468	0.746	1.209	0.005	0.008	0.013	D	1.3	QB	70
		(LH)	0.403	0.656	1.075	0.006	0.011	0.017	GB	2.4		
	GB → QB	(LH)	0.387	0.612	0.983	0.006	0.011	0.017	RB	2.7		
		(LL)	0.449	0.718	1.164	0.005	0.008	0.013				
	RB → QB	(HL)	0.236	0.364	0.582	0.005	0.008	0.013				
		(LH)	0.200	0.372	0.581	0.006	0.011	0.017				
	Set up time	D	0.370		0.750							
	Hold time	D	0.000		0.000							
	Release time	RB	0.100		0.050							
	Removal time	RB	0.110		0.170							
	Min Pulse	GB	0.514		1.260							
	Min Pulse	RB	0.377		0.831							
SE605NBP	D → QB	(HL)	0.490	0.778	1.260	0.003	0.004	0.006	D	1.3	QB	142
		(LH)	0.422	0.686	1.121	0.003	0.005	0.008	GB	2.1		
	GB → QB	(LH)	0.406	0.641	1.028	0.003	0.005	0.008	RB	2.8		
		(LL)	0.469	0.747	1.216	0.003	0.004	0.006				
	RB → QB	(HL)	0.253	0.389	0.627	0.003	0.004	0.006				
		(LH)	0.217	0.372	0.580	0.003	0.005	0.008				
	Set up time	D	0.390		0.790							
	Hold time	D	0.000		0.000							
	Release time	RB	0.140		0.130							
	Removal time	RB	0.070		0.080							
	Min Pulse	GB	0.536		1.312							
	Min Pulse	RB	0.416		0.889							

[MEMO]

Function	D-F/F										SSI Family	
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	SE611	11										
x2												
x4	SE611NT	18	SE611NQT	14	SE611NBT	14						
x8												

Logic Diagram for "Normal"

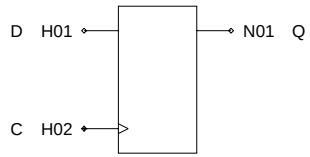


Truth Table for "Normal"

D	C	Q	QB
0	↗	0	1
1	↗	1	0
X	↘	Hold	

X:Irrelevant

Logic Diagram for "Q output"

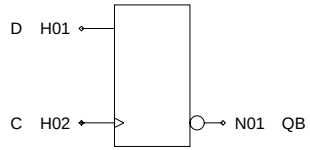


Truth Table for "Q output"

D	C	Q	QB
0	↗	0	1
1	↗	1	0
X	↘	Hold	

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

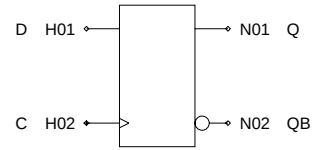
D	C	Q	QB
0	↗	0	1
1	↗	1	0
X	↘	Hold	

X:Irrelevant

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
SE611	C → Q	(HH)	0.299	0.461	0.722	0.006	0.010	0.017	D	1.3	Q	72
		(HL)	0.329	0.500	0.781	0.005	0.008	0.013	C	2.5	QB	72
	C → QB	(HH)	0.405	0.626	0.993	0.006	0.010	0.017				
		(HL)	0.412	0.641	1.014	0.005	0.008	0.013				
	Set up time	D	0.240		0.410							
	Hold time	D	0.030		0.000							
	Min Pulse	C	0.498		1.151							
SE611NT	C → Q	(HH)	0.350	0.557	0.898	0.002	0.003	0.004	D	1.4	Q	286
		(HL)	0.368	0.564	0.890	0.001	0.002	0.003	C	2.5	QB	288
	C → QB	(HH)	0.537	0.836	1.338	0.002	0.003	0.004				
		(HL)	0.592	0.940	1.517	0.001	0.002	0.003				
	Set up time	D	0.240		0.420							
	Hold time	D	0.030		0.000							
	Min Pulse	C	0.716		1.737							
SE611NQT	C → Q	(HH)	0.348	0.554	0.894	0.002	0.003	0.004	D	1.4	Q	284
		(HL)	0.367	0.561	0.886	0.001	0.002	0.003	C	2.5		
	Set up time	D	0.240		0.420							
	Hold time	D	0.030		0.000							
	Min Pulse	C	0.502		1.214							
SE611NBT	C → QB	(HH)	0.331	0.505	0.797	0.002	0.003	0.004	D	1.3	QB	280
		(HL)	0.351	0.565	0.924	0.001	0.002	0.003	C	2.5		
	Set up time	D	0.290		0.480							
	Hold time	D	0.000		0.000							
	Min Pulse	C	0.508		1.267							

Function	D-F/F										SSI Family	
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	SE641	11	SE641NQ	10	SE641NB	10						
x2	SE641NP	14	SE641NQP	12	SE641NBP	12						
x4												
x8												

Logic Diagram for "Normal"

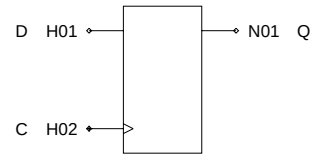


Truth Table for "Normal"

D	C	Q	QB
0	↗	0	1
1	↗	1	0
X	↘	Hold	

X:Irrelevant

Logic Diagram for "Q output"

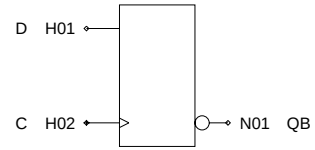


Truth Table for "Q output"

D	C	Q	QB
0	↗	0	1
1	↗	1	0
X	↘	Hold	

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

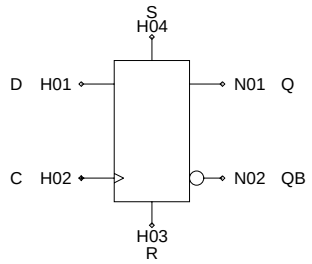
D	C	Q	QB
0	↗	0	1
1	↗	1	0
X	↘	Hold	

X:Irrelevant

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
SE641	C → Q	(HH)	0.299	0.461	0.722	0.006	0.010	0.017	D	1.3	Q	72
		(HL)	0.329	0.500	0.781	0.005	0.008	0.013	C	2.5	QB	72
	C → QB	(HH)	0.405	0.626	0.993	0.006	0.010	0.017				
		(HL)	0.412	0.641	1.014	0.005	0.008	0.013				
	Set up time	D	0.240		0.410							
	Hold time	D	0.030		0.000							
	Min Pulse	C	0.498		1.151							
SE641NP	C → Q	(HH)	0.318	0.507	0.819	0.003	0.005	0.008	D	1.4	Q	144
		(HL)	0.334	0.509	0.801	0.003	0.004	0.006	C	2.5	QB	145
	C → QB	(HH)	0.441	0.684	1.089	0.003	0.005	0.008				
		(HL)	0.476	0.759	1.225	0.003	0.004	0.006				
	Set up time	D	0.240		0.420							
	Hold time	D	0.030		0.000							
	Min Pulse	C	0.575		1.390							
SE641NQ	C → Q	(HH)	0.300	0.462	0.727	0.006	0.010	0.017	D	1.3	Q	72
		(HL)	0.329	0.502	0.786	0.005	0.008	0.013	C	2.5		
	Set up time	D	0.240		0.420							
	Hold time	D	0.030		0.000							
	Min Pulse	C	0.448		1.028							
SE641NQP	C → Q	(HH)	0.318	0.505	0.817	0.003	0.005	0.008	D	1.4	Q	144
		(HL)	0.333	0.507	0.800	0.003	0.004	0.006	C	2.5		
	Set up time	D	0.240		0.420							
	Hold time	D	0.030		0.000							
	Min Pulse	C	0.468		1.130							
SE641NB	C → QB	(HH)	0.349	0.535	0.847	0.006	0.011	0.017	D	1.3	QB	72
		(HL)	0.368	0.571	0.899	0.005	0.008	0.013	C	2.5		
	Set up time	D	0.240		0.410							
	Hold time	D	0.030		0.000							
	Min Pulse	C	0.455		1.037							
SE641NBP	C → QB	(HH)	0.277	0.419	0.655	0.003	0.005	0.009	D	1.3	QB	142
		(HL)	0.293	0.461	0.737	0.003	0.004	0.007	C	2.5		
	Set up time	D	0.280		0.480							
	Hold time	D	0.000		0.000							
	Min Pulse	C	0.456		1.090							

Function	D-F/F with R,S										SSI Family	
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	SE614	13										
x2												
x4			SE614NQT	16	SE614NBT	16						
x8												

Logic Diagram for "Normal"

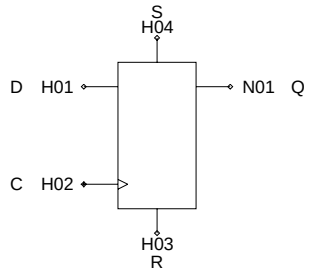


Truth Table for "Normal"

D	C	R	S	Q	QB	
0	↗	0	0	0	1	
1	↗	0	0	1	0	
X	↘	0	0	Hold		
X	X	0	1	1	0	
X	X	1	0	0	1	
X	X	1	1	1	1	← Prohibition

X:Irrelevant

Logic Diagram for "Q output"

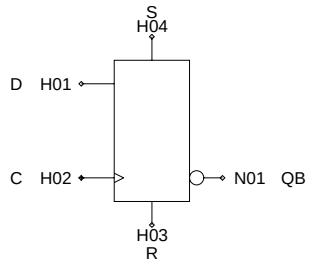


Truth Table for "Q output"

D	C	R	S	Q	QB	
0	↗	0	0	0	1	
1	↗	0	0	1	0	
X	↘	0	0	Hold		
X	X	0	1	1	0	
X	X	1	0	0	1	
X	X	1	1	1	1	← Prohibition

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

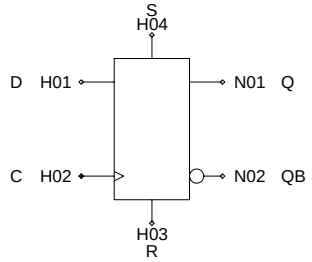
D	C	R	S	Q	QB	
0	↗	0	0	0	1	
1	↗	0	0	1	0	
X	↘	0	0	Hold		
X	X	0	1	1	0	
X	X	1	0	0	1	
X	X	1	1	1	1	← Prohibition

X:Irrelevant

Block type	Switching speed									Input		Output	
	Path		t LD0 (ns)			t 1							
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		Symbol	Fanin	Symbol	Fanout
SE614	C → Q	(HH)	0.324	0.507	0.813	0.006	0.010	0.017		D	1.2	Q	72
		(HL)	0.422	0.655	1.036	0.005	0.008	0.013		C	2.4	QB	71
	C → QB	(HH)	0.511	0.806	1.289	0.006	0.010	0.017		R	2.7		
		(HL)	0.544	0.869	1.400	0.005	0.008	0.013		S	2.6		
	R → Q	(HL)	0.365	0.621	0.975	0.005	0.008	0.013					
	R → QB	(HH)	0.170	0.290	0.423	0.006	0.010	0.017					
	S → Q	(HH)	0.151	0.217	0.309	0.006	0.010	0.017					
	S → QB	(HL)	0.370	0.720	1.130	0.005	0.009	0.014					
	Set up time	D	0.290		0.610								
	Hold time	D	0.010		0.000								
	Release time	R	0.140		0.310								
	Release time	S	0.000		0.000								
	Removal time	R	0.060		0.000								
	Removal time	S	0.280		0.460								
	Min Pulse	C	0.647		1.567								
	Min Pulse	R	0.595		1.371								
	Min Pulse	S	0.604		1.496								
SE614NQT	C → Q	(HH)	0.388	0.623	1.011	0.002	0.003	0.004		D	1.3	Q	284
		(HL)	0.500	0.781	1.238	0.001	0.002	0.003		C	2.5		
	R → Q	(HL)	0.445	0.699	1.100	0.001	0.002	0.003		R	2.7		
	S → Q	(HH)	0.178	0.252	0.362	0.002	0.003	0.004		S	3.8		
	Set up time	D	0.290		0.620								
	Hold time	D	0.020		0.000								
	Release time	R	0.150		0.330								
	Release time	S	0.000		0.000								
	Removal time	R	0.060		0.000								
	Removal time	S	0.270		0.430								
	Min Pulse	C	0.630		1.554								
	Min Pulse	R	0.614		1.461								
	Min Pulse	S	0.644		1.518								
SE614NBT	C → QB	(HH)	0.479	0.750	1.198	0.002	0.003	0.004		D	1.3	QB	282
		(HL)	0.552	0.879	1.409	0.001	0.002	0.003		C	2.5		
	R → QB	(HH)	0.185	0.283	0.411	0.002	0.003	0.004		R	3.8		
	S → QB	(HL)	0.378	0.667	1.043	0.001	0.002	0.003		S	2.6		
	Set up time	D	0.290		0.600								
	Hold time	D	0.010		0.000								
	Release time	R	0.140		0.300								
	Release time	S	0.000		0.000								
	Removal time	R	0.060		0.000								
	Removal time	S	0.280		0.460								
	Min Pulse	C	0.689		1.652								
	Min Pulse	R	0.373		0.843								
	Min Pulse	S	0.569		1.443								

Function	D-F/F with R,S										SSI Family	
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	SE644	13	SE644NQ	12	SE644NB	12						
x2	SE644NP	16	SE644NQP	14	SE644NBP	14						
x4												
x8												

Logic Diagram for "Normal"

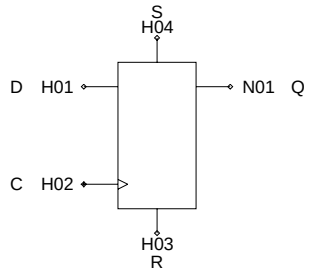


Truth Table for "Normal"

D	C	R	S	Q	QB	
0	↗	0	0	0	1	
1	↗	0	0	1	0	
X	↘	0	0	Hold		
X	X	0	1	1	0	
X	X	1	0	0	1	
X	X	1	1	1	1	← Prohibition

X:Irrelevant

Logic Diagram for "Q output"

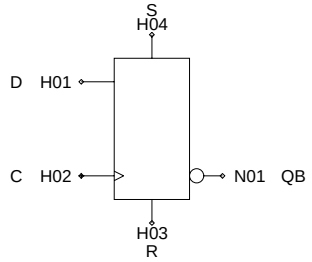


Truth Table for "Q output"

D	C	R	S	Q	QB	
0	↗	0	0	0	1	
1	↗	0	0	1	0	
X	↘	0	0	Hold		
X	X	0	1	1	0	
X	X	1	0	0	1	
X	X	1	1	1	1	← Prohibition

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

D	C	R	S	Q	QB	
0	↗	0	0	0	1	
1	↗	0	0	1	0	
X	↘	0	0	Hold		
X	X	0	1	1	0	
X	X	1	0	0	1	
X	X	1	1	1	1	← Prohibition

X:Irrelevant

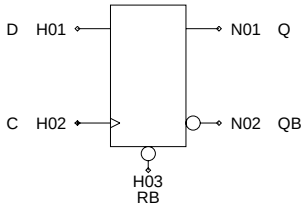
Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_1						
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
SE644	C → Q		(HH)	0.324	0.507	0.813	0.006	0.010	0.017	D	1.2	Q	72
			(HL)	0.422	0.655	1.036	0.005	0.008	0.013	C	2.4	QB	71
	C → QB		(HH)	0.511	0.806	1.289	0.006	0.010	0.017	R	2.7		
			(HL)	0.544	0.869	1.400	0.005	0.008	0.013	S	2.6		
	R → Q		(HL)	0.365	0.621	0.975	0.005	0.008	0.013				
	R → QB		(HH)	0.170	0.290	0.423	0.006	0.010	0.017				
	S → Q		(HH)	0.151	0.217	0.309	0.006	0.010	0.017				
	S → QB		(HL)	0.370	0.720	1.130	0.005	0.009	0.014				
	Set up time	D		0.290		0.610							
	Hold time	D		0.010		0.000							
	Release time	R		0.140		0.310							
	Release time	S		0.000		0.000							
	Removal time	R		0.060		0.000							
	Removal time	S		0.280		0.460							
	Min Pulse	C		0.647		1.567							
	Min Pulse	R		0.595		1.371							
	Min Pulse	S		0.604		1.496							
SE644NP	C → Q		(HH)	0.344	0.552	0.901	0.003	0.005	0.008	D	1.3	Q	144
			(HL)	0.419	0.649	1.030	0.003	0.004	0.007	C	2.5	QB	142
	C → QB		(HH)	0.544	0.856	1.372	0.003	0.005	0.008	R	2.7		
			(HL)	0.639	1.035	1.680	0.003	0.004	0.007	S	3.8		
	R → Q		(HL)	0.369	0.674	1.066	0.003	0.004	0.007				
	R → QB		(HH)	0.203	0.347	0.515	0.003	0.005	0.009				
	S → Q		(HH)	0.141	0.203	0.289	0.003	0.005	0.008				
	S → QB		(HL)	0.434	0.888	1.396	0.003	0.004	0.007				
	Set up time	D		0.290		0.620							
	Hold time	D		0.020		0.000							
	Release time	R		0.150		0.320							
	Release time	S		0.000		0.000							
	Removal time	R		0.060		0.000							
	Removal time	S		0.270		0.430							
	Min Pulse	C		0.772		1.918							
	Min Pulse	R		0.682		1.508							
	Min Pulse	S		0.734		1.833							
SE644NQ	C → Q		(HH)	0.324	0.506	0.812	0.006	0.010	0.017	D	1.2	Q	72
			(HL)	0.422	0.656	1.037	0.005	0.008	0.013	C	2.4		
	R → Q		(HL)	0.361	0.566	0.883	0.005	0.008	0.013	R	2.6		
	S → Q		(HH)	0.151	0.217	0.309	0.006	0.010	0.017	S	2.6		
	Set up time	D		0.290		0.610							
	Hold time	D		0.010		0.000							
	Release time	R		0.140		0.320							
	Release time	S		0.000		0.000							
	Removal time	R		0.060		0.000							
	Removal time	S		0.280		0.460							
	Min Pulse	C		0.549		1.319							
	Min Pulse	R		0.510		1.225							
	Min Pulse	S		0.509		1.255							
SE644NQP	C → Q		(HH)	0.343	0.553	0.902	0.003	0.005	0.008	D	1.3	Q	144
			(HL)	0.420	0.650	1.031	0.003	0.004	0.007	C	2.5		
	R → Q		(HL)	0.365	0.570	0.893	0.003	0.004	0.007	R	2.7		
	S → Q		(HH)	0.141	0.204	0.290	0.003	0.005	0.008	S	3.8		
	Set up time	D		0.290		0.620							
	Hold time	D		0.020		0.000							
	Release time	R		0.150		0.320							
	Release time	S		0.000		0.000							
	Removal time	R		0.060		0.000							

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Removal time	S	0.270		0.430							
	Min Pulse	C	0.578		1.427							
	Min Pulse	R	0.535		1.257							
	Min Pulse	S	0.542		1.348							
SE644NB	C → QB	(HH)	0.416	0.650	1.040	0.006	0.010	0.017	D	1.2	QB	71
		(HL)	0.493	0.784	1.260	0.005	0.008	0.013	C	2.4		
	R → QB	(HH)	0.168	0.286	0.416	0.006	0.011	0.017	R	2.7		
	S → QB	(HL)	0.316	0.652	1.032	0.005	0.009	0.014	S	2.6		
	Set up time	D	0.290		0.600							
	Hold time	D	0.010		0.000							
	Release time	R	0.140		0.300							
	Release time	S	0.000		0.000							
	Removal time	R	0.060		0.000							
	Removal time	S	0.280		0.460							
	Min Pulse	C	0.593		1.426							
	Min Pulse	R	0.379		0.834							
	Min Pulse	S	0.488		1.298							
SE644NBP	C → QB	(HH)	0.444	0.694	1.109	0.003	0.005	0.008	D	1.3	QB	143
		(HL)	0.476	0.753	1.208	0.003	0.004	0.007	C	2.5		
	R → QB	(HH)	0.150	0.238	0.341	0.003	0.005	0.008	R	3.8		
	S → QB	(HL)	0.302	0.545	0.848	0.003	0.004	0.007	S	2.6		
	Set up time	D	0.290		0.600							
	Hold time	D	0.010		0.000							
	Release time	R	0.140		0.310							
	Release time	S	0.000		0.000							
	Removal time	R	0.060		0.000							
	Removal time	S	0.280		0.460							
	Min Pulse	C	0.584		1.393							
	Min Pulse	R	0.299		0.702							
	Min Pulse	S	0.462		1.180							

[MEMO]

Function	D-F/F with RB											SSI Family	
Block type	Standard type						Low Gate type						
	Normal		Q output		QB output		Normal		Q output		QB output		
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	
x1	SE615	12	SE615NQ	11	SE615NB	11							
x2													
x4			SE615NQT	15	SE615NBT	15							
x8													

Logic Diagram for "Normal"

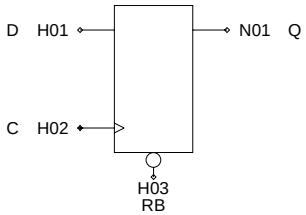


Truth Table for "Normal"

D	C	RB	Q	QB
0	↗	1	0	1
1	↗	1	1	0
X	↘	1	Hold	
X	X	0	0	1

X:Irrelevant

Logic Diagram for "Q output"

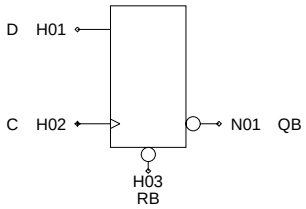


Truth Table for "Q output"

D	C	RB	Q	QB
0	↗	1	0	1
1	↗	1	1	0
X	↘	1	Hold	
X	X	0	0	1

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

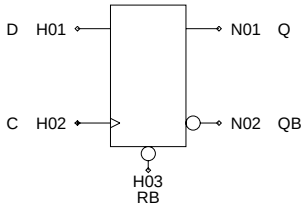
D	C	RB	Q	QB
0	↗	1	0	1
1	↗	1	1	0
X	↘	1	Hold	
X	X	0	0	1

X:Irrelevant

Block type	Switching speed									Input		Output	
	Path		t_{LD0} (ns)			t_1							
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		Symbol	Fanin	Symbol	Fanout
SE615	C → Q	(HH)	0.349	0.539	0.864	0.006	0.010	0.017		D	1.3	Q	71
		(HL)	0.338	0.516	0.809	0.005	0.008	0.013		C	2.4	QB	71
	C → QB	(HH)	0.416	0.644	1.021	0.006	0.010	0.017		RB	2.6		
		(HL)	0.465	0.725	1.165	0.005	0.008	0.013					
	RB → Q	(LL)	0.162	0.254	0.381	0.005	0.008	0.013					
	RB → QB	(LH)	0.241	0.436	0.681	0.006	0.010	0.017					
	Set up time	D	0.250		0.460								
	Hold time	D	0.020		0.000								
	Release time	RB	0.000		0.000								
	Removal time	RB	0.220		0.410								
	Min Pulse	C	0.552		1.302								
	Min Pulse	RB	0.416		0.978								
SE615NQ	C → Q	(HH)	0.349	0.541	0.868	0.006	0.011	0.017		D	1.3	Q	71
		(HL)	0.340	0.519	0.811	0.005	0.008	0.013		C	2.4		
	RB → Q	(LL)	0.165	0.257	0.385	0.005	0.008	0.013		RB	2.6		
	Set up time	D	0.250		0.460								
	Hold time	D	0.020		0.000								
	Release time	RB	0.000		0.000								
	Removal time	RB	0.220		0.410								
	Min Pulse	C	0.499		1.168								
	Min Pulse	RB	0.333		0.892								
SE615NQT	C → Q	(HH)	0.414	0.652	1.060	0.002	0.003	0.004		D	1.3	Q	280
		(HL)	0.391	0.600	0.949	0.001	0.002	0.003		C	2.4		
	RB → Q	(LL)	0.194	0.301	0.458	0.001	0.002	0.003		RB	3.9		
	Set up time	D	0.250		0.460								
	Hold time	D	0.020		0.000								
	Release time	RB	0.000		0.000								
	Removal time	RB	0.210		0.380								
	Min Pulse	C	0.573		1.386								
	Min Pulse	RB	0.456		1.068								
SE615NB	C → QB	(HH)	0.360	0.555	0.880	0.006	0.011	0.017		D	1.3	QB	71
		(HL)	0.405	0.629	1.002	0.005	0.008	0.013		C	2.4		
	RB → QB	(LH)	0.186	0.348	0.545	0.006	0.011	0.017		RB	2.6		
	Set up time	D	0.250		0.460								
	Hold time	D	0.020		0.000								
	Release time	RB	0.000		0.000								
	Removal time	RB	0.220		0.410								
	Min Pulse	C	0.492		1.138								
	Min Pulse	RB	0.325		0.767								
SE615NBT	C → QB	(HH)	0.402	0.621	0.983	0.002	0.003	0.004		D	1.3	QB	283
		(HL)	0.446	0.693	1.112	0.001	0.002	0.003		C	2.4		
	RB → QB	(LH)	0.228	0.377	0.585	0.002	0.003	0.004		RB	2.6		
	Set up time	D	0.250		0.460								
	Hold time	D	0.020		0.000								
	Release time	RB	0.000		0.000								
	Removal time	RB	0.220		0.410								
	Min Pulse	C	0.539		1.256								
	Min Pulse	RB	0.378		0.890								

Function	D-F/F with RB										SSI Family	
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1												
x2	SE645NP	15	SE645NQP	13	SE645NBP	13						
x4												
x8												

Logic Diagram for "Normal"

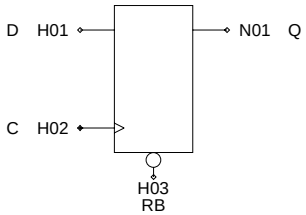


Truth Table for "Normal"

D	C	RB	Q	QB
0	↗	1	0	1
1	↗	1	1	0
X	↘	1	Hold	
X	X	0	0	1

X:Irrelevant

Logic Diagram for "Q output"

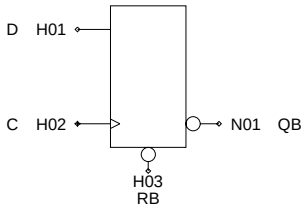


Truth Table for "Q output"

D	C	RB	Q	QB
0	↗	1	0	1
1	↗	1	1	0
X	↘	1	Hold	
X	X	0	0	1

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

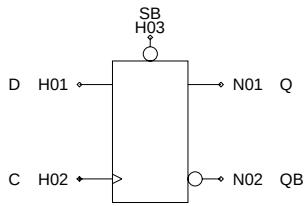
D	C	RB	Q	QB
0	↗	1	0	1
1	↗	1	1	0
X	↘	1	Hold	
X	X	0	0	1

X:Irrelevant

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
SE645NP	C → Q	(HH)	0.364	0.573	0.928	0.003	0.005	0.008	D	1.3	Q	143
		(HL)	0.346	0.529	0.835	0.003	0.004	0.006	C	2.4	QB	143
	C → QB	(HH)	0.456	0.708	1.129	0.003	0.005	0.008	RB	3.9		
		(HL)	0.526	0.833	1.349	0.003	0.004	0.006				
	RB → Q	(LL)	0.150	0.234	0.351	0.003	0.004	0.006				
	RB → QB	(LH)	0.262	0.484	0.760	0.003	0.005	0.009				
	Set up time	D	0.250		0.460							
	Hold time	D	0.020		0.000							
	Release time	RB	0.000		0.000							
	Removal time	RB	0.210		0.380							
	Min Pulse	C	0.627		1.512							
	Min Pulse	RB	0.446		1.065							
SE645NQP	C → Q	(HH)	0.363	0.571	0.925	0.003	0.005	0.009	D	1.3	Q	143
		(HL)	0.345	0.526	0.831	0.003	0.004	0.006	C	2.4		
	RB → Q	(LL)	0.151	0.233	0.348	0.003	0.004	0.006	RB	3.9		
	Set up time	D	0.250		0.460							
	Hold time	D	0.020		0.000							
	Release time	RB	0.000		0.000							
	Removal time	RB	0.210		0.380							
	Min Pulse	C	0.517		1.242							
	Min Pulse	RB	0.321		0.884							
SE645NBP	C → QB	(HH)	0.380	0.584	0.927	0.003	0.005	0.008	D	1.3	QB	143
		(HL)	0.414	0.642	1.029	0.003	0.004	0.006	C	2.4		
	RB → QB	(LH)	0.204	0.341	0.530	0.003	0.005	0.008	RB	2.6		
	Set up time	D	0.250		0.460							
	Hold time	D	0.020		0.000							
	Release time	RB	0.000		0.000							
	Removal time	RB	0.220		0.410							
	Min Pulse	C	0.500		1.162							
	Min Pulse	RB	0.350		0.816							

Function	D-F/F with SB							SSI Family				
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	SE616	12	SE616NQ	11	SE616NB	11						
x2												
x4			SE616NQT	15	SE616NBT	15						
x8												

Logic Diagram for "Normal"

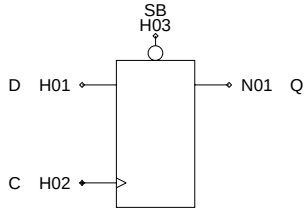


Truth Table for "Normal"

D	C	SB	Q	QB
0	↗	1	0	1
1	↗	1	1	0
X	↘	1	Hold	
X	X	0	1	0

X:Irrelevant

Logic Diagram for "Q output"

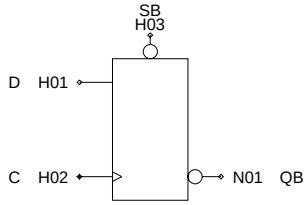


Truth Table for "Q output"

D	C	SB	Q	QB
0	↗	1	0	1
1	↗	1	1	0
X	↘	1	Hold	
X	X	0	1	0

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

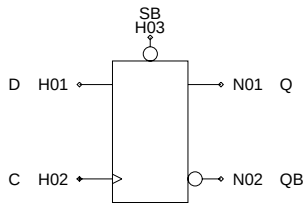
D	C	SB	Q	QB
0	↗	1	0	1
1	↗	1	1	0
X	↘	1	Hold	
X	X	0	1	0

X:Irrelevant

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
SE616	C → Q	(HH)	0.307	0.472	0.739	0.006	0.010	0.017	D	1.3	Q	71
		(HL)	0.352	0.539	0.855	0.005	0.008	0.013	C	2.5	QB	72
	C → QB	(HH)	0.480	0.749	1.217	0.006	0.010	0.017	SB	2.5		
		(HL)	0.425	0.660	1.044	0.005	0.008	0.013				
	SB → Q	(LH)	0.265	0.515	0.828	0.006	0.011	0.017				
	SB → QB	(LL)	0.177	0.344	0.529	0.005	0.008	0.013				
	Set up time	D	0.250		0.510							
	Hold time	D	0.000		0.000							
	Release time	SB	0.100		0.150							
	Removal time	SB	0.100		0.100							
	Min Pulse	C	0.560		1.351							
	Min Pulse	SB	0.459		1.159							
SE616NQ	C → Q	(HH)	0.305	0.468	0.737	0.006	0.011	0.017	D	1.3	Q	71
		(HL)	0.351	0.537	0.851	0.005	0.008	0.013	C	2.5		
	SB → Q	(LH)	0.265	0.436	0.700	0.006	0.011	0.017	SB	2.5		
	Set up time	D	0.250		0.510							
	Hold time	D	0.000		0.000							
	Release time	SB	0.100		0.150							
	Removal time	SB	0.100		0.100							
	Min Pulse	C	0.507		1.201							
	Min Pulse	SB	0.393		0.997							
SE616NQT	C → Q	(HH)	0.355	0.565	0.910	0.002	0.003	0.004	D	1.4	Q	283
		(HL)	0.406	0.620	0.991	0.001	0.002	0.003	C	2.5		
	SB → Q	(LH)	0.316	0.527	0.856	0.002	0.003	0.004	SB	2.4		
	Set up time	D	0.250		0.540							
	Hold time	D	0.000		0.000							
	Release time	SB	0.110		0.180							
	Removal time	SB	0.090		0.090							
	Min Pulse	C	0.564		1.362							
	Min Pulse	SB	0.469		1.182							
SE616NB	C → QB	(HH)	0.416	0.647	1.056	0.006	0.011	0.017	D	1.3	QB	71
		(HL)	0.382	0.591	0.930	0.005	0.008	0.013	C	2.5		
	SB → QB	(LL)	0.176	0.341	0.526	0.005	0.008	0.013	SB	2.5		
	Set up time	D	0.250		0.510							
	Hold time	D	0.000		0.000							
	Release time	SB	0.100		0.150							
	Removal time	SB	0.100		0.100							
	Min Pulse	C	0.497		1.189							
	Min Pulse	SB	0.365		0.889							
SE616NBT	C → QB	(HH)	0.471	0.734	1.196	0.002	0.003	0.004	D	1.4	QB	281
		(HL)	0.427	0.663	1.041	0.001	0.002	0.003	C	2.5		
	SB → QB	(LL)	0.197	0.344	0.526	0.001	0.002	0.003	SB	3.6		
	Set up time	D	0.250		0.520							
	Hold time	D	0.000		0.000							
	Release time	SB	0.110		0.150							
	Removal time	SB	0.100		0.100							
	Min Pulse	C	0.561		1.368							
	Min Pulse	SB	0.361		0.912							

Function	D-F/F with SB										SSI Family	
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1												
x2	SE646NP	15	SE646NQP	13	SE646NBP	13						
x4												
x8												

Logic Diagram for "Normal"

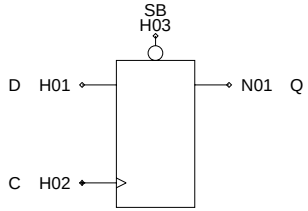


Truth Table for "Normal"

D	C	SB	Q	QB
0	↗	1	0	1
1	↗	1	1	0
X	↘	1	Hold	
X	X	0	1	0

X:Irrelevant

Logic Diagram for "Q output"

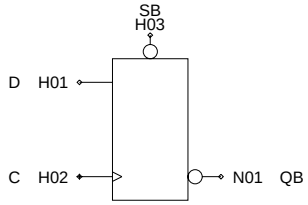


Truth Table for "Q output"

D	C	SB	Q	QB
0	↗	1	0	1
1	↗	1	1	0
X	↘	1	Hold	
X	X	0	1	0

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

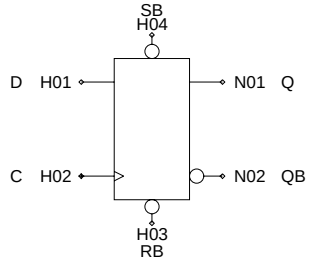
D	C	SB	Q	QB
0	↗	1	0	1
1	↗	1	1	0
X	↘	1	Hold	
X	X	0	1	0

X:Irrelevant

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
SE646NP	C → Q	(HH)	0.326	0.518	0.837	0.003	0.005	0.008	D	1.4	Q	144
		(HL)	0.371	0.564	0.902	0.003	0.004	0.006	C	2.5	QB	144
	C → QB	(HH)	0.539	0.840	1.381	0.003	0.005	0.009	SB	2.4		
		(HL)	0.486	0.774	1.248	0.003	0.004	0.006				
	SB → Q	(LH)	0.280	0.621	1.020	0.003	0.005	0.008				
	SB → QB	(LL)	0.218	0.455	0.701	0.003	0.004	0.007				
	Set up time	D	0.250		0.540							
	Hold time	D	0.000		0.000							
	Release time	SB	0.110		0.180							
	Removal time	SB	0.090		0.090							
	Min Pulse	C	0.624		1.539							
	Min Pulse	SB	0.553		1.391							
SE646NQP	C → Q	(HH)	0.325	0.518	0.836	0.003	0.005	0.008	D	1.4	Q	143
		(HL)	0.369	0.562	0.899	0.003	0.004	0.006	C	2.5		
	SB → Q	(LH)	0.284	0.477	0.780	0.003	0.005	0.008	SB	2.4		
	Set up time	D	0.250		0.540							
	Hold time	D	0.000		0.000							
	Release time	SB	0.110		0.180							
	Removal time	SB	0.090		0.090							
	Min Pulse	C	0.524		1.251							
	Min Pulse	SB	0.434		1.104							
SE646NBP	C → QB	(HH)	0.427	0.663	1.078	0.003	0.005	0.009	D	1.4	QB	142
		(HL)	0.383	0.593	0.935	0.003	0.004	0.006	C	2.5		
	SB → QB	(LL)	0.157	0.278	0.422	0.003	0.004	0.006	SB	3.6		
	Set up time	D	0.250		0.520							
	Hold time	D	0.000		0.000							
	Release time	SB	0.110		0.150							
	Removal time	SB	0.100		0.100							
	Min Pulse	C	0.509		1.221							
	Min Pulse	SB	0.288		0.753							

Function	D-F/F with RB,SB							SSI Family				
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	SE617	13										
x2												
x4			SE617NQT	16	SE617NBT	16						
x8												

Logic Diagram for "Normal"

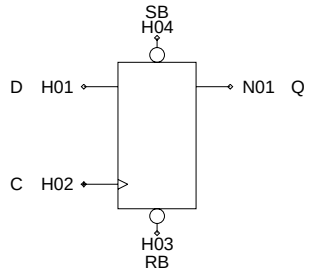


Truth Table for "Normal"

D	C	RB	SB	Q	QB	
0	↗	1	1	0	1	
1	↗	1	1	1	0	
X	↘	1	1	Hold		
X	X	0	1	0	1	
X	X	1	0	1	0	
X	X	0	0	0	0	← Prohibition

X:Irrelevant

Logic Diagram for "Q output"

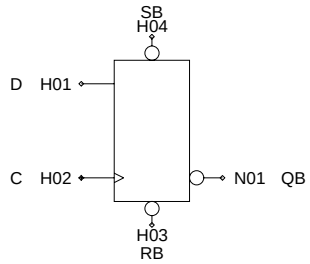


Truth Table for "Q output"

D	C	RB	SB	Q	QB	
0	↗	1	1	0	1	
1	↗	1	1	1	0	
X	↘	1	1	Hold		
X	X	0	1	0	1	
X	X	1	0	1	0	
X	X	0	0	0	0	← Prohibition

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

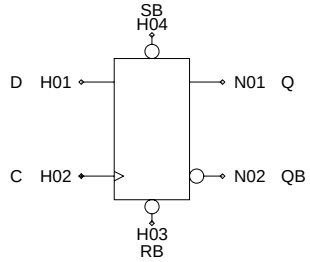
D	C	RB	SB	Q	QB	
0	↗	1	1	0	1	
1	↗	1	1	1	0	
X	↘	1	1	Hold		
X	X	0	1	0	1	
X	X	1	0	1	0	
X	X	0	0	0	0	← Prohibition

X:Irrelevant

Block type	Switching speed									Input		Output	
	Path		t LD0 (ns)			t 1							
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		Symbol	Fanin	Symbol	Fanout
SE617	C → Q	(HH)	0.356	0.553	0.888	0.006	0.010	0.017		D	1.3	Q	71
		(HL)	0.361	0.555	0.877	0.005	0.008	0.013		C	2.5	QB	71
	C → QB	(HH)	0.492	0.770	1.249	0.006	0.010	0.017		RB	2.6		
		(HL)	0.480	0.751	1.210	0.005	0.008	0.013		SB	2.5		
	RB → Q	(LL)	0.160	0.248	0.374	0.005	0.008	0.013					
	RB → QB	(LH)	0.292	0.554	0.898	0.006	0.011	0.017					
	SB → Q	(LH)	0.308	0.605	0.980	0.006	0.010	0.017					
	SB → QB	(LL)	0.180	0.350	0.539	0.005	0.008	0.013					
	Set up time	D	0.260		0.530								
	Hold time	D	0.000		0.000								
	Release time	RB	0.000		0.000								
	Release time	SB	0.100		0.150								
	Removal time	RB	0.230		0.430								
	Removal time	SB	0.110		0.110								
	Min Pulse	C	0.573		1.386								
	Min Pulse	RB	0.467		1.213								
	Min Pulse	SB	0.528		1.318								
SE617NQT	C → Q	(HH)	0.424	0.669	1.090	0.002	0.003	0.004		D	1.3	Q	280
		(HL)	0.426	0.657	1.050	0.001	0.002	0.003		C	2.5		
	RB → Q	(LL)	0.193	0.300	0.456	0.001	0.002	0.003		RB	3.9		
	SB → Q	(LH)	0.379	0.632	1.034	0.002	0.003	0.004		SB	2.5		
	Set up time	D	0.260		0.540								
	Hold time	D	0.000		0.000								
	Release time	RB	0.000		0.000								
	Release time	SB	0.100		0.170								
	Removal time	RB	0.220		0.390								
	Removal time	SB	0.100		0.100								
	Min Pulse	C	0.590		1.429								
	Min Pulse	RB	0.502		1.286								
	Min Pulse	SB	0.543		1.352								
SE617NBT	C → QB	(HH)	0.484	0.758	1.233	0.002	0.003	0.004		D	1.3	QB	278
		(HL)	0.474	0.741	1.186	0.001	0.002	0.003		C	2.5		
	RB → QB	(LH)	0.283	0.497	0.807	0.002	0.003	0.004		RB	2.7		
	SB → QB	(LL)	0.201	0.348	0.533	0.001	0.002	0.003		SB	3.8		
	Set up time	D	0.260		0.530								
	Hold time	D	0.000		0.000								
	Release time	RB	0.000		0.000								
	Release time	SB	0.100		0.150								
	Removal time	RB	0.230		0.430								
	Removal time	SB	0.100		0.110								
	Min Pulse	C	0.576		1.401								
	Min Pulse	RB	0.430		1.122								
	Min Pulse	SB	0.411		0.929								

Function	D-F/F with RB,SB							SSI Family				
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	SE647	13	SE647NQ	12	SE647NB	12						
x2	SE647NP	16	SE647NQP	14	SE647NBP	14						
x4												
x8												

Logic Diagram for "Normal"

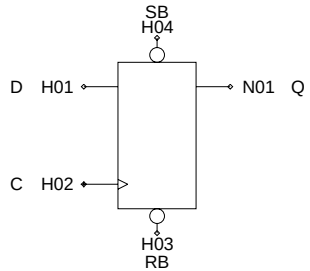


Truth Table for "Normal"

D	C	RB	SB	Q	QB	
0	↗	1	1	0	1	
1	↗	1	1	1	0	
X	↘	1	1	Hold		
X	X	0	1	0	1	
X	X	1	0	1	0	
X	X	0	0	0	0	← Prohibition

X:Irrelevant

Logic Diagram for "Q output"

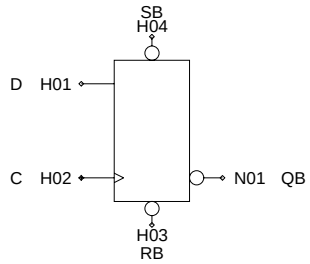


Truth Table for "Q output"

D	C	RB	SB	Q	QB	
0	↗	1	1	0	1	
1	↗	1	1	1	0	
X	↘	1	1	Hold		
X	X	0	1	0	1	
X	X	1	0	1	0	
X	X	0	0	0	0	← Prohibition

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

D	C	RB	SB	Q	QB	
0	↗	1	1	0	1	
1	↗	1	1	1	0	
X	↘	1	1	Hold		
X	X	0	1	0	1	
X	X	1	0	1	0	
X	X	0	0	0	0	← Prohibition

X:Irrelevant

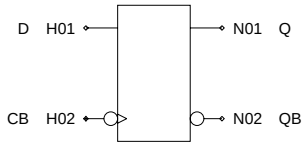
Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_1						
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
SE647	C → Q		(HH)	0.356	0.553	0.888	0.006	0.010	0.017	D	1.3	Q	71
			(HL)	0.361	0.555	0.877	0.005	0.008	0.013	C	2.5	QB	71
	C → QB		(HH)	0.492	0.770	1.249	0.006	0.010	0.017	RB	2.6		
			(HL)	0.480	0.751	1.210	0.005	0.008	0.013	SB	2.5		
	RB → Q		(LL)	0.160	0.248	0.374	0.005	0.008	0.013				
	RB → QB		(LH)	0.292	0.554	0.898	0.006	0.011	0.017				
	SB → Q		(LH)	0.308	0.605	0.980	0.006	0.010	0.017				
	SB → QB		(LL)	0.180	0.350	0.539	0.005	0.008	0.013				
	Set up time	D		0.260		0.530							
	Hold time	D		0.000		0.000							
	Release time	RB		0.000		0.000							
	Release time	SB		0.100		0.150							
	Removal time	RB		0.230		0.430							
	Removal time	SB		0.110		0.110							
	Min Pulse	C		0.573		1.386							
	Min Pulse	RB		0.467		1.213							
	Min Pulse	SB		0.528		1.318							
SE647NP	C → Q		(HH)	0.371	0.585	0.949	0.003	0.005	0.008	D	1.3	Q	143
			(HL)	0.377	0.578	0.922	0.003	0.004	0.006	C	2.5	QB	140
	C → QB		(HH)	0.554	0.868	1.424	0.003	0.005	0.009	RB	3.8		
			(HL)	0.540	0.858	1.389	0.003	0.004	0.006	SB	2.6		
	RB → Q		(LL)	0.149	0.230	0.346	0.003	0.004	0.006				
	RB → QB		(LH)	0.327	0.645	1.055	0.003	0.005	0.009				
	SB → Q		(LH)	0.319	0.714	1.161	0.003	0.005	0.008				
	SB → QB		(LL)	0.224	0.442	0.684	0.003	0.004	0.007				
	Set up time	D		0.260		0.540							
	Hold time	D		0.000		0.000							
	Release time	RB		0.000		0.000							
	Release time	SB		0.100		0.170							
	Removal time	RB		0.220		0.390							
	Removal time	SB		0.100		0.100							
	Min Pulse	C		0.643		1.587							
	Min Pulse	RB		0.533		1.396							
	Min Pulse	SB		0.638		1.534							
SE647NQ	C → Q		(HH)	0.356	0.552	0.888	0.006	0.011	0.017	D	1.3	Q	71
			(HL)	0.361	0.554	0.876	0.005	0.008	0.013	C	2.5		
	RB → Q		(LL)	0.160	0.248	0.374	0.005	0.008	0.013	RB	2.6		
	SB → Q		(LH)	0.309	0.517	0.842	0.006	0.011	0.017	SB	2.5		
	Set up time	D		0.260		0.530							
	Hold time	D		0.000		0.000							
	Release time	RB		0.000		0.000							
	Release time	SB		0.100		0.150							
	Removal time	RB		0.230		0.430							
	Removal time	SB		0.110		0.110							
	Min Pulse	C		0.519		1.235							
	Min Pulse	RB		0.407		1.064							
	Min Pulse	SB		0.456		1.144							
SE647NQP	C → Q		(HH)	0.371	0.585	0.952	0.003	0.005	0.008	D	1.3	Q	142
			(HL)	0.376	0.579	0.922	0.003	0.004	0.006	C	2.5		
	RB → Q		(LL)	0.149	0.231	0.347	0.003	0.004	0.006	RB	3.8		
	SB → Q		(LH)	0.324	0.546	0.892	0.003	0.005	0.008	SB	2.6		
	Set up time	D		0.260		0.540							
	Hold time	D		0.000		0.000							
	Release time	RB		0.000		0.000							
	Release time	SB		0.100		0.170							
	Removal time	RB		0.220		0.390							

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Removal time	SB	0.100		0.100							
	Min Pulse	C	0.535		1.284							
	Min Pulse	RB	0.415		1.090							
	Min Pulse	SB	0.486		1.210							
SE647NB	C → QB	(HH)	0.430	0.672	1.090	0.006	0.011	0.017	D	1.3	QB	70
		(HL)	0.420	0.656	1.047	0.005	0.008	0.013	C	2.5		
	RB → QB	(LH)	0.232	0.464	0.761	0.006	0.011	0.017	RB	2.6		
	SB → QB	(LL)	0.179	0.348	0.535	0.005	0.008	0.013	SB	2.5		
	Set up time	D	0.260		0.530							
	Hold time	D	0.000		0.000							
	Release time	RB	0.000		0.000							
	Release time	SB	0.100		0.150							
	Removal time	RB	0.230		0.430							
	Removal time	SB	0.110		0.110							
	Min Pulse	C	0.512		1.230							
	Min Pulse	RB	0.334		0.999							
	Min Pulse	SB	0.376		0.908							
SE647NBP	C → QB	(HH)	0.440	0.686	1.111	0.003	0.005	0.009	D	1.3	QB	141
		(HL)	0.429	0.670	1.076	0.003	0.004	0.006	C	2.5		
	RB → QB	(LH)	0.238	0.425	0.685	0.003	0.005	0.009	RB	2.7		
	SB → QB	(LL)	0.160	0.280	0.427	0.003	0.004	0.006	SB	3.8		
	Set up time	D	0.260		0.530							
	Hold time	D	0.000		0.000							
	Release time	RB	0.000		0.000							
	Release time	SB	0.100		0.150							
	Removal time	RB	0.230		0.430							
	Removal time	SB	0.100		0.110							
	Min Pulse	C	0.523		1.256							
	Min Pulse	RB	0.374		0.970							
	Min Pulse	SB	0.298		0.767							

[MEMO]

Function	D-F/F (CB)										SSI Family	
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	SE631	11										
x2												
x4	SE631NT	18	SE631NQT	14	SE631NBT	14						
x8												

Logic Diagram for "Normal"

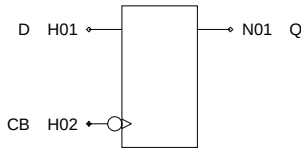


Truth Table for "Normal"

D	CB	Q	QB
0	↘	0	1
1	↘	1	0
X	↗	Hold	

X:Irrelevant

Logic Diagram for "Q output"

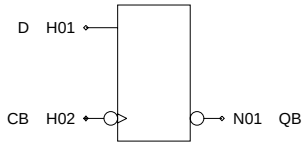


Truth Table for "Q output"

D	CB	Q	QB
0	↘	0	1
1	↘	1	0
X	↗	Hold	

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

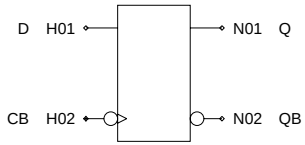
D	CB	Q	QB
0	↘	0	1
1	↘	1	0
X	↗	Hold	

X:Irrelevant

Block type	Switching speed									Input		Output	
	Path			t_{LD0} (ns)			t_1						
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
SE631	CB → Q		(LH)	0.338	0.537	0.858	0.006	0.010	0.017	D	1.3	Q	72
			(LL)	0.347	0.543	0.861	0.005	0.008	0.013	CB	2.4	QB	72
	CB → QB		(LH)	0.422	0.666	1.069	0.006	0.010	0.017				
			(LL)	0.448	0.714	1.144	0.005	0.008	0.013				
	Set up time	D		0.230		0.460							
	Hold time	D		0.030		0.020							
	Min Pulse	CB		0.527		1.259							
SE631NT	CB → Q		(LH)	0.390	0.632	1.019	0.002	0.003	0.004	D	1.4	Q	287
			(LL)	0.396	0.622	0.993	0.001	0.002	0.003	CB	2.4	QB	288
	CB → QB		(LH)	0.564	0.893	1.438	0.002	0.003	0.004				
			(LL)	0.629	1.012	1.630	0.001	0.002	0.003				
	Set up time	D		0.230		0.460							
	Hold time	D		0.030		0.020							
	Min Pulse	CB		0.751		1.834							
SE631NQT	CB → Q		(LH)	0.387	0.627	1.010	0.002	0.003	0.004	D	1.4	Q	284
			(LL)	0.394	0.620	0.989	0.001	0.002	0.003	CB	2.4		
	Set up time	D		0.230		0.460							
	Hold time	D		0.030		0.030							
	Min Pulse	CB		0.536		1.307							
SE631NBT	CB → QB		(LH)	0.372	0.585	0.931	0.002	0.003	0.004	D	1.4	QB	279
			(LL)	0.389	0.637	1.042	0.001	0.002	0.003	CB	2.4		
	Set up time	D		0.260		0.560							
	Hold time	D		0.000		0.000							
	Min Pulse	CB		0.541		1.356							

Function	D-F/F (CB)										SSI Family	
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	SE661	11	SE661NQ	10	SE661NB	10						
x2	SE661NP	14	SE661NQP	12	SE661NBP	12						
x4												
x8												

Logic Diagram for "Normal"

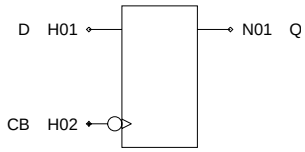


Truth Table for "Normal"

D	CB	Q	QB
0	↘	0	1
1	↘	1	0
X	↗	Hold	

X:Irrelevant

Logic Diagram for "Q output"

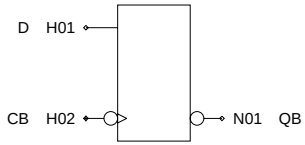


Truth Table for "Q output"

D	CB	Q	QB
0	↘	0	1
1	↘	1	0
X	↗	Hold	

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

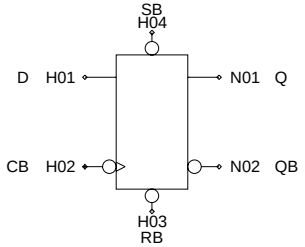
D	CB	Q	QB
0	↘	0	1
1	↘	1	0
X	↗	Hold	

X:Irrelevant

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
SE661	CB → Q	(LH)	0.338	0.537	0.858	0.006	0.010	0.017	D	1.3	Q	72
		(LL)	0.347	0.543	0.861	0.005	0.008	0.013	CB	2.4	QB	72
	CB → QB	(LH)	0.422	0.666	1.069	0.006	0.010	0.017				
		(LL)	0.448	0.714	1.144	0.005	0.008	0.013				
	Set up time	D	0.230		0.460							
	Hold time	D	0.030		0.020							
	Min Pulse	CB	0.527		1.259							
SE661NP	CB → Q	(LH)	0.359	0.582	0.941	0.003	0.005	0.008	D	1.4	Q	144
		(LL)	0.361	0.567	0.902	0.003	0.004	0.006	CB	2.4	QB	145
	CB → QB	(LH)	0.467	0.740	1.187	0.003	0.005	0.008				
		(LL)	0.515	0.830	1.340	0.003	0.004	0.006				
	Set up time	D	0.230		0.460							
	Hold time	D	0.030		0.020							
	Min Pulse	CB	0.610		1.483							
SE661NQ	CB → Q	(LH)	0.335	0.533	0.854	0.006	0.010	0.017	D	1.3	Q	72
		(LL)	0.346	0.541	0.858	0.005	0.008	0.013	CB	2.4		
	Set up time	D	0.230		0.460							
	Hold time	D	0.030		0.020							
	Min Pulse	CB	0.475		1.130							
SE661NQP	CB → Q	(LH)	0.357	0.579	0.936	0.003	0.005	0.008	D	1.4	Q	144
		(LL)	0.361	0.565	0.901	0.003	0.004	0.006	CB	2.4		
	Set up time	D	0.230		0.460							
	Hold time	D	0.030		0.020							
	Min Pulse	CB	0.503		1.220							
SE661NB	CB → QB	(LH)	0.365	0.576	0.924	0.006	0.010	0.017	D	1.3	QB	71
		(LL)	0.404	0.643	1.030	0.005	0.008	0.013	CB	2.4		
	Set up time	D	0.230		0.460							
	Hold time	D	0.030		0.020							
	Min Pulse	CB	0.484		1.146							
SE661NBP	CB → QB	(LH)	0.312	0.488	0.775	0.003	0.005	0.009	D	1.4	QB	142
		(LL)	0.328	0.528	0.849	0.003	0.004	0.007	CB	2.4		
	Set up time	D	0.260		0.560							
	Hold time	D	0.000		0.000							
	Min Pulse	CB	0.484		1.175							

Function	D-F/F (CB) with RB,SB							SSI Family				
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	SE637	13										
x2												
x4			SE637NQT	16	SE637NBT	16						
x8												

Logic Diagram for "Normal"

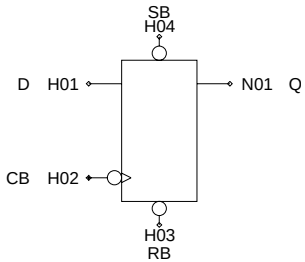


Truth Table for "Normal"

D	C	RB	SB	Q	QB	
0	↘	1	1	0	1	
1	↘	1	1	1	0	
X	↗	1	1	Hold		
X	X	0	1	0	1	
X	X	1	0	1	0	
X	X	0	0	0	0	← Prohibition

X:Irrelevant

Logic Diagram for "Q output"

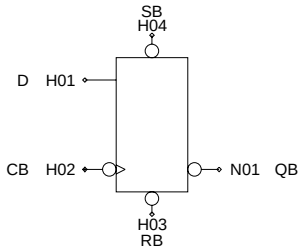


Truth Table for "Q output"

D	CB	RB	SB	Q	QB	
0	↘	1	1	0	1	
1	↘	1	1	1	0	
X	↗	1	1	Hold		
X	X	0	1	0	1	
X	X	1	0	1	0	
X	X	0	0	0	0	← Prohibition

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

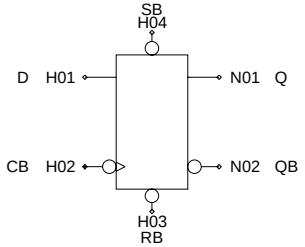
D	CB	RB	SB	Q	QB	
0	↘	1	1	0	1	
1	↘	1	1	1	0	
X	↗	1	1	Hold		
X	X	0	1	0	1	
X	X	1	0	1	0	
X	X	0	0	0	0	← Prohibition

X:Irrelevant

Block type	Switching speed									Input		Output	
	Path		t LD0 (ns)			t 1							
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		Symbol	Fanin	Symbol	Fanout
SE637	CB → Q	(LH)	0.379	0.604	0.982	0.006	0.011	0.017		D	1.3	Q	71
		(LL)	0.366	0.574	0.914	0.005	0.008	0.013		CB	2.4	QB	70
	CB → QB	(LH)	0.497	0.790	1.286	0.006	0.010	0.017		RB	2.6		
		(LL)	0.501	0.804	1.304	0.005	0.008	0.013		SB	2.5		
	RB → Q	(LL)	0.160	0.247	0.374	0.005	0.008	0.013					
	RB → QB	(LH)	0.292	0.553	0.899	0.006	0.011	0.017					
	SB → Q	(LH)	0.307	0.605	0.981	0.006	0.010	0.017					
	SB → QB	(LL)	0.181	0.351	0.539	0.005	0.008	0.013					
	Set up time	D	0.270		0.570								
	Hold time	D	0.020		0.010								
	Release time	RB	0.000		0.000								
	Release time	SB	0.100		0.160								
	Removal time	RB	0.230		0.440								
	Removal time	SB	0.100		0.120								
	Min Pulse	CB	0.581		1.424								
	Min Pulse	RB	0.469		1.214								
	Min Pulse	SB	0.528		1.319								
SE637NQT	CB → Q	(LH)	0.448	0.719	1.171	0.002	0.003	0.004		D	1.3	Q	280
		(LL)	0.437	0.691	1.106	0.001	0.002	0.003		CB	2.4		
	RB → Q	(LL)	0.193	0.300	0.454	0.001	0.002	0.003		RB	3.9		
	SB → Q	(LH)	0.378	0.633	1.036	0.002	0.003	0.004		SB	2.5		
	Set up time	D	0.270		0.580								
	Hold time	D	0.020		0.010								
	Release time	RB	0.000		0.000								
	Release time	SB	0.110		0.180								
	Removal time	RB	0.220		0.410								
	Removal time	SB	0.100		0.110								
	Min Pulse	CB	0.599		1.486								
	Min Pulse	RB	0.504		1.289								
	Min Pulse	SB	0.545		1.356								
SE637NBT	CB → QB	(LH)	0.489	0.777	1.268	0.002	0.003	0.004		D	1.3	QB	278
		(LL)	0.498	0.796	1.281	0.001	0.002	0.003		CB	2.4		
	RB → QB	(LH)	0.283	0.497	0.807	0.002	0.003	0.004		RB	2.7		
	SB → QB	(LL)	0.201	0.347	0.532	0.001	0.002	0.003		SB	3.8		
	Set up time	D	0.270		0.570								
	Hold time	D	0.020		0.000								
	Release time	RB	0.000		0.000								
	Release time	SB	0.100		0.160								
	Removal time	RB	0.220		0.430								
	Removal time	SB	0.100		0.120								
	Min Pulse	CB	0.591		1.431								
	Min Pulse	RB	0.431		1.121								
	Min Pulse	SB	0.411		0.930								

Function	D-F/F (CB) with RB,SB							SSI Family				
Block type	Standard type						Low Gate type					
	Normal		Q output		QB output		Normal		Q output		QB output	
Drivability	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells	Name	cells
x1	SE667	13	SE667NQ	12	SE667NB	12						
x2	SE667NP	16	SE667NQP	14	SE667NBP	14						
x4												
x8												

Logic Diagram for "Normal"

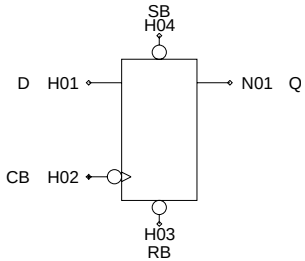


Truth Table for "Normal"

D	CB	RB	SB	Q	QB	
0	↘	1	1	0	1	
1	↘	1	1	1	0	
X	↗	1	1	Hold		
X	X	0	1	0	1	
X	X	1	0	1	0	
X	X	0	0	0	0	← Prohibition

X:Irrelevant

Logic Diagram for "Q output"

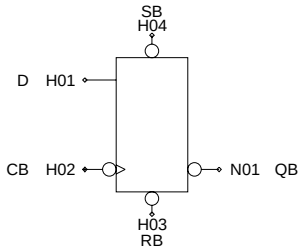


Truth Table for "Q output"

D	CB	RB	SB	Q	QB	
0	↘	1	1	0	1	
1	↘	1	1	1	0	
X	↗	1	1	Hold		
X	X	0	1	0	1	
X	X	1	0	1	0	
X	X	0	0	0	0	← Prohibition

X:Irrelevant

Logic Diagram for "QB output"



Truth Table for "QB output"

D	CB	RB	SB	Q	QB	
0	↘	1	1	0	1	
1	↘	1	1	1	0	
X	↗	1	1	Hold		
X	X	0	1	0	1	
X	X	1	0	1	0	
X	X	0	0	0	0	← Prohibition

X:Irrelevant

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
SE667	CB → Q	(LH)	0.379	0.604	0.982	0.006	0.011	0.017	D	1.3	Q	71
		(LL)	0.366	0.574	0.914	0.005	0.008	0.013	CB	2.4	QB	70
	CB → QB	(LH)	0.497	0.790	1.286	0.006	0.010	0.017	RB	2.6		
		(LL)	0.501	0.804	1.304	0.005	0.008	0.013	SB	2.5		
	RB → Q	(LL)	0.160	0.247	0.374	0.005	0.008	0.013				
	RB → QB	(LH)	0.292	0.553	0.899	0.006	0.011	0.017				
	SB → Q	(LH)	0.307	0.605	0.981	0.006	0.010	0.017				
	SB → QB	(LL)	0.181	0.351	0.539	0.005	0.008	0.013				
	Set up time	D	0.270		0.570							
	Hold time	D	0.020		0.010							
	Release time	RB	0.000		0.000							
	Release time	SB	0.100		0.160							
	Removal time	RB	0.230		0.440							
	Removal time	SB	0.100		0.120							
	Min Pulse	CB	0.581		1.424							
	Min Pulse	RB	0.469		1.214							
	Min Pulse	SB	0.528		1.319							
SE667NP	CB → Q	(LH)	0.396	0.637	1.035	0.003	0.005	0.008	D	1.3	Q	143
		(LL)	0.388	0.611	0.978	0.003	0.004	0.006	CB	2.4	QB	140
	CB → QB	(LH)	0.566	0.902	1.481	0.003	0.005	0.009	RB	3.8		
		(LL)	0.564	0.908	1.473	0.003	0.004	0.006	SB	2.6		
	RB → Q	(LL)	0.149	0.230	0.346	0.003	0.004	0.006				
	RB → QB	(LH)	0.327	0.645	1.056	0.003	0.005	0.009				
	SB → Q	(LH)	0.318	0.714	1.163	0.003	0.005	0.008				
	SB → QB	(LL)	0.224	0.443	0.682	0.003	0.004	0.007				
	Set up time	D	0.270		0.580							
	Hold time	D	0.020		0.010							
	Release time	RB	0.000		0.000							
	Release time	SB	0.100		0.180							
	Removal time	RB	0.210		0.410							
	Removal time	SB	0.100		0.110							
	Min Pulse	CB	0.660		1.629							
	Min Pulse	RB	0.533		1.398							
	Min Pulse	SB	0.639		1.536							
SE667NQ	CB → Q	(LH)	0.378	0.602	0.980	0.006	0.011	0.017	D	1.3	Q	71
		(LL)	0.366	0.575	0.914	0.005	0.008	0.013	CB	2.4		
	RB → Q	(LL)	0.160	0.247	0.373	0.005	0.008	0.013	RB	2.6		
	SB → Q	(LH)	0.308	0.518	0.843	0.006	0.011	0.017	SB	2.5		
	Set up time	D	0.270		0.570							
	Hold time	D	0.020		0.000							
	Release time	RB	0.000		0.000							
	Release time	SB	0.100		0.170							
	Removal time	RB	0.230		0.440							
	Removal time	SB	0.100		0.120							
	Min Pulse	CB	0.524		1.280							
	Min Pulse	RB	0.406		1.063							
	Min Pulse	SB	0.458		1.145							
SE667NQP	CB → Q	(LH)	0.396	0.636	1.034	0.003	0.005	0.008	D	1.3	Q	143
		(LL)	0.387	0.612	0.981	0.003	0.004	0.006	CB	2.4		
	RB → Q	(LL)	0.149	0.231	0.347	0.003	0.004	0.006	RB	3.8		
	SB → Q	(LH)	0.324	0.548	0.896	0.003	0.005	0.008	SB	2.6		
	Set up time	D	0.270		0.580							
	Hold time	D	0.020		0.010							
	Release time	RB	0.000		0.000							
	Release time	SB	0.100		0.180							
	Removal time	RB	0.220		0.410							

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
	Removal time	SB	0.100		0.110							
	Min Pulse	CB	0.545		1.342							
	Min Pulse	RB	0.415		1.093							
	Min Pulse	SB	0.488		1.214							
SE667NB	CB → QB	(LH)	0.435	0.692	1.130	0.006	0.011	0.017	D	1.3	QB	70
		(LL)	0.442	0.707	1.141	0.005	0.008	0.013	CB	2.4		
	RB → QB	(LH)	0.232	0.464	0.761	0.006	0.011	0.017	RB	2.6		
	SB → QB	(LL)	0.179	0.347	0.534	0.005	0.008	0.013	SB	2.5		
	Set up time	D	0.270		0.570							
	Hold time	D	0.020		0.000							
	Release time	RB	0.000		0.000							
	Release time	SB	0.100		0.160							
	Removal time	RB	0.230		0.440							
	Removal time	SB	0.100		0.120							
	Min Pulse	CB	0.522		1.259							
	Min Pulse	RB	0.335		0.998							
	Min Pulse	SB	0.376		0.909							
SE667NBP	CB → QB	(LH)	0.445	0.705	1.147	0.003	0.005	0.009	D	1.3	QB	141
		(LL)	0.454	0.725	1.173	0.003	0.004	0.006	CB	2.4		
	RB → QB	(LH)	0.239	0.425	0.684	0.003	0.005	0.009	RB	2.6		
	SB → QB	(LL)	0.160	0.280	0.428	0.003	0.004	0.006	SB	3.8		
	Set up time	D	0.270		0.570							
	Hold time	D	0.020		0.000							
	Release time	RB	0.000		0.000							
	Release time	SB	0.100		0.160							
	Removal time	RB	0.220		0.430							
	Removal time	SB	0.100		0.120							
	Min Pulse	CB	0.535		1.295							
	Min Pulse	RB	0.374		0.970							
	Min Pulse	SB	0.297		0.768							

[MEMO]

[MEMO]

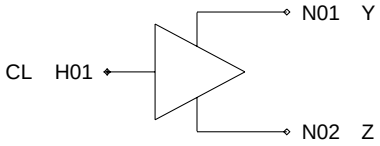
[MEMO]

3.4 Scan Controller

[MEMO]

Function	Clock Distributor										SSI Family	
Block type	Standard type											
	Normal		High speed									
Drivability	Name	cells	Name	cells								
x1	SCD1	8										
x2												
x4												
x8												

Logic Diagram



Truth Table

CL	Y	Z
1	1	1
0	0	0

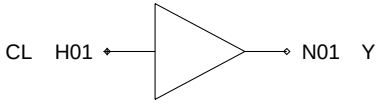
Y:Must be connected to the clock of Negative edge triggered F/F or the gate of Low enable Latch

Z:Must be connected to the clock of Positice edge triggered F/F or the gate of High enable Latch

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
SCD1	CL → Y	(HH)	0.180	0.264	0.403	0.006	0.011	0.017	CL	2.4	Y	21
		(LL)	0.192	0.309	0.494	0.005	0.008	0.013			Z	22
	CL → Z	(HH)	0.178	0.260	0.397	0.006	0.011	0.017				
		(LL)	0.190	0.306	0.488	0.005	0.008	0.013				

Function	Clock Distributor with Test (Positive Clock)					SSI Family	
Block type	Standard type						
	Normal		High speed				
Drivability	Name	cells	Name	cells			
x1	SCDC	2					
x2							
x4							
x8							

Logic Diagram



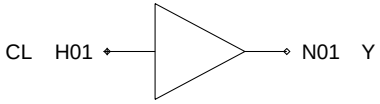
Truth Table

CL	Y
1	1
0	0

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
SCDC	CL → Y	(HH)	0.113	0.166	0.240	0.006	0.010	0.017	CL	1.3	Y	22
		(LL)	0.187	0.280	0.427	0.005	0.008	0.013				

Function	Clock Distributor with Test (Negative Clock)										SSI Family	
Block type	Standard type											
	Normal		High speed									
Drivability	Name	cells	Name	cells								
x1	SCDD	2										
x2												
x4												
x8												

Logic Diagram



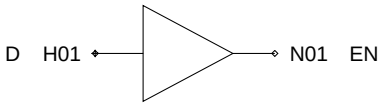
Truth Table

CL	Y
1	1
0	0

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
SCDD	CL → Y	(HH)	0.155	0.218	0.322	0.006	0.011	0.017	CL	1.4	Y	22
		(LL)	0.116	0.183	0.272	0.005	0.008	0.013				

Function	I/F Control (AMC) with EN										SSI Family	
Block type	Standard type											
	Normal		High speed									
Drivability	Name	cells	Name	cells								
x1	SFEH	3										
x2												
x4												
x8												

Logic Diagram



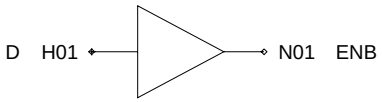
Truth Table

D	EN
1	1
0	0

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
SFEH	D → EN	(HH)	0.155	0.218	0.322	0.006	0.011	0.017	D	1.4	EN	71
		(LL)	0.116	0.183	0.272	0.005	0.008	0.013				

Function	I/F Control (AMC) with ENB										SSI Family	
Block type	Standard type											
	Normal		High speed									
Drivability	Name	cells	Name	cells								
x1	SFEL	2										
x2												
x4												
x8												

Logic Diagram



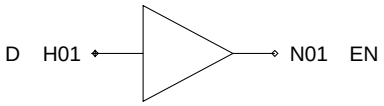
Truth Table

D	ENB
1	1
0	0

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
SFEL	D → ENB	(HH)	0.113	0.166	0.240	0.006	0.010	0.017	D	1.3	ENB	71
		(LL)	0.187	0.280	0.427	0.005	0.008	0.013				

Function	I/F Control (SMC) with EN										SSI Family	
Block type	Standard type											
	Normal		High speed									
Drivability	Name	cells	Name	cells								
x1	SOEH	4										
x2	SOEH2	7										
x4												
x8												

Logic Diagram



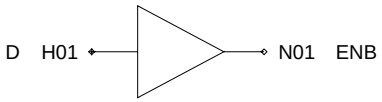
Truth Table

D	EN
1	1
0	0

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
SOEH	D → EN	(HH)	0.209	0.294	0.445	0.003	0.005	0.009	D	1.4	EN	142
		(LL)	0.165	0.253	0.384	0.003	0.004	0.006				
SOEH2	D → EN	(HH)	0.216	0.306	0.467	0.002	0.003	0.004	D	2.4	EN	282
		(LL)	0.172	0.263	0.401	0.001	0.002	0.003				

Function	I/F Control (SMC) with ENB										SSI Family	
Block type	Standard type											
	Normal		High speed									
Drivability	Name	cells	Name	cells								
x1	SOEL	3										
x2	SOEL2	6										
x4												
x8												

Logic Diagram



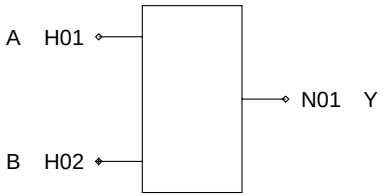
Truth Table

D	ENB
1	1
0	0

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
SOEL	D → ENB	(HH)	0.155	0.222	0.316	0.003	0.005	0.008	D	1.4	ENB	143
		(LL)	0.264	0.406	0.631	0.003	0.004	0.007				
SOEL2	D → ENB	(HH)	0.162	0.234	0.331	0.002	0.003	0.004	D	2.5	ENB	284
		(LL)	0.275	0.427	0.666	0.001	0.002	0.003				

Function	Mega Macro Skip					SSI Family										
Block type	Standard type															
	Normal		High speed													
Drivability	Name	cells	Name	cells												
x1	SMS1	4														
x2																
x4																
x8																

Logic Diagram



Truth Table

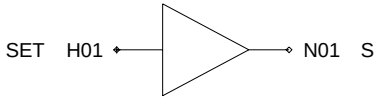
A	Y
1	1
0	0

Note:H02 is a pin of scan

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
SMS1	A → Y	(HH)	0.176	0.258	0.393	0.006	0.011	0.017	A	1.3	Y	71
		(LL)	0.189	0.305	0.489	0.005	0.008	0.013	B	1.2		

Function	Set/Reset Control					SSI Family						
Block type	Standard type											
	Normal		High speed									
Drivability	Name	cells	Name	cells								
x1	SRH1	2										
x2												
x4												
x8												

Logic Diagram



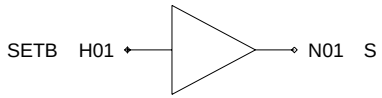
Truth Table

SET	S
1	1
0	0

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
SRH1	SET → S	(HH)	0.155	0.218	0.322	0.006	0.011	0.017	SET	1.4	S	71
		(LL)	0.116	0.183	0.272	0.005	0.008	0.013				

Function	Set-B/Reset-B Control					SSI Family	
Block type	Standard type						
	Normal		High speed				
Drivability	Name	cells	Name	cells			
x1	SRL1	2					
x2							
x4							
x8							

Logic Diagram



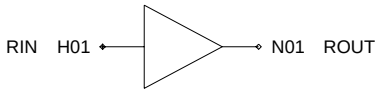
Truth Table

SETB	S
1	1
0	0

Block type	Switching speed							Input		Output	
	Path		t LD0 (ns)			t 1					
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
SRL1	SETB → S	(HH)	0.113	0.166	0.240	0.006	0.010	0.017	SETB	1.3	S	71
		(LL)	0.187	0.280	0.427	0.005	0.008	0.013				

Function	Loop Cut										SSI Family	
Block type	Standard type											
	Normal		High speed									
Drivability	Name	cells	Name	cells								
x1	SRPD	12										
x2												
x4												
x8												

Logic Diagram



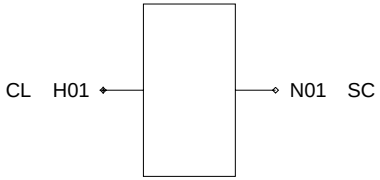
Truth Table

RIN	ROUT
1	1
0	0

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
SRPD	RIN → ROUT	(HH)	0.240	0.348	0.537	0.006	0.011	0.017	RIN	1.3	ROUT	71
		(LL)	0.268	0.431	0.697	0.005	0.008	0.013				

Function	Clock Generator					SSI Family	
Block type	Standard type						
	Normal		High speed				
Drivability	Name	cells	Name	cells			
x1	SCKG	16					
x2							
x4							
x8							

Logic Diagram



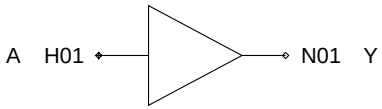
Truth Table

CL	SC
1	1
0	0

Block type	Switching speed							Input		Output	
	Path		t LD0 (ns)			t 1					
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
SCKG									CL	2.5	SC	70

Function	Common Input										SSI Family	
Block type	Standard type											
	Normal		High speed									
Drivability	Name	cells	Name	cells								
x1	SCI1	2										
x2												
x4												
x8												

Logic Diagram



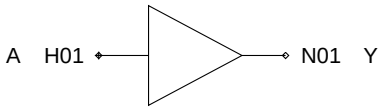
Truth Table

A	Y
1	1
0	0

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
SCI1	A → Y	(HH)	0.115	0.162	0.232	0.006	0.010	0.017	A	1.4	Y	72
		(LL)	0.119	0.182	0.267	0.005	0.008	0.013				

Function	Common Output										SSI Family	
Block type	Standard type											
	Normal		High speed									
Drivability	Name	cells	Name	cells								
x1	SCO1	5										
x2												
x4												
x8												

Logic Diagram



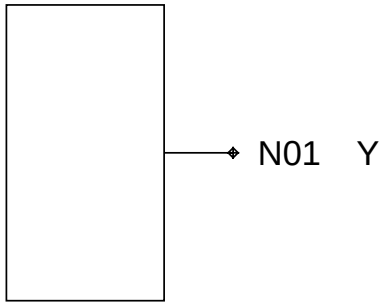
Truth Table

A	Y
1	1
0	0

Block type	Switching speed								Input		Output	
	Path		t_{LD0} (ns)			t_1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
SCO1	A → Y	(HH)	0.218	0.322	0.500	0.003	0.005	0.009	A	1.3	Y	141
		(LL)	0.241	0.392	0.639	0.003	0.004	0.007				

Function	GND										SSI Family	
Block type	Standard type											
	Normal		High speed									
Drivability	Name	cells	Name	cells								
x1	SGND	2										
x2												
x4												
x8												

Logic Diagram



Truth Table

Y
0

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
SGND											Y	72

[MEMO]

[MEMO]

Chapter 4

Boundary Scan Block (Interface)

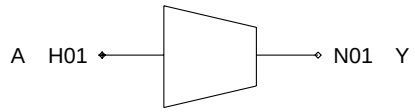
4.1 3.3V Interface

[MEMO]

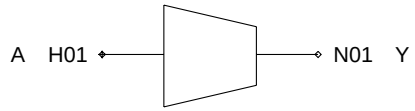
Function	Input Buffer					3.3V
Block type						
Function	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
Normal	FI01BI	FID1BI	FIU1BI	FIW1BI	1	7
Schmitt	FIS1BI	FDS1BI	FUS1BI	FWS1BI	1	11
Clock	FIB1BI	FDB1BI	FUB1BI	FWB1BI	1	56

Logic Diagram

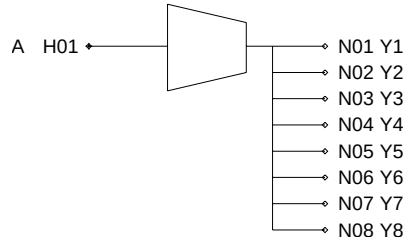
"Normal"



"Schmitt"



"Clock"



Truth Table

A	Yn
1	1
0	0

(n=1 to 8)

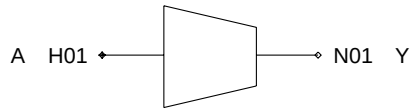
Block type	Input		Output	
	Symbol	Fan-In	Symbol	Fan-Out
FI01BI to FIW1BI	A	-	Y	358
FIS1BI to FWS1BI	A	-	Y	229
FIB1BI to FWB1BI	A	-	Y0	229
	:	:	Y1	229
			:	:
			Y6	229
			Y7	229

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
FI01BI	A → Y	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
FID1BI	A → Y	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
FIU1BI	A → Y	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
FIW1BI	A → Y	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
FIS1BI	A → Y	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
FDS1BI	A → Y	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
FUS1BI	A → Y	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
FWS1BI	A → Y	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
FIB1BI	A → Yn	(HH)	0.108	0.156	0.216	0.000	0.000	0.000			
		(LL)	0.170	0.250	0.376	0.000	0.001	0.001			
	(n = 0 to 7)										
FDB1BI	A → Yn	(HH)	0.108	0.156	0.216	0.000	0.000	0.000			
		(LL)	0.170	0.250	0.376	0.000	0.001	0.001			
	(n = 0 to 7)										
FUB1BI	A → Yn	(HH)	0.108	0.156	0.216	0.000	0.000	0.000			
		(LL)	0.170	0.250	0.376	0.000	0.001	0.001			
	(n = 0 to 7)										
FWB1BI	A → Yn	(HH)	0.108	0.156	0.216	0.000	0.000	0.000			
		(LL)	0.170	0.250	0.376	0.000	0.001	0.001			
	(n = 0 to 7)										

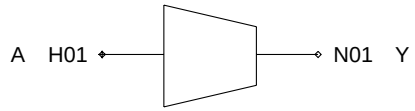
Function	Input Buffer with Failsafe				3.3V	
Block type						
Function	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
Normal	FIA1BI	FDA1BI			1	7
Schmitt	FIE1BI	FDE1BI			1	11
Clock	FIH1BI	FDH1BI			1	56

Logic Diagram

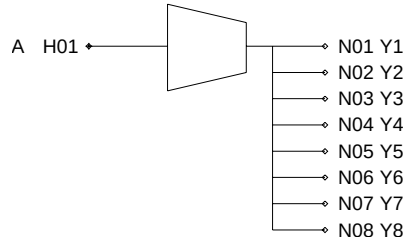
"Normal"



"Schmitt"



"Clock"



Truth Table

A	Yn
1	1
0	0

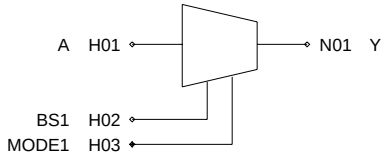
(n=1 to 8)

Block type	Input		Output	
	Symbol	Fan-In	Symbol	Fan-Out
FIA1BI to FDA1BI	A	-	Y	358
FIE1BI to FDE1BI	A	-	Y	229
FIH1BI to FDH1BI	A	-	Y0	229
	:	:	Y1	229
			:	:
			Y6	229
			Y7	229

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
FIA1BI	A → Y	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
FDA1BI	A → Y	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
FIE1BI	A → Y	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
FDE1BI	A → Y	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
FIH1BI	A → Yn	(HH)	0.108	0.156	0.216	0.000	0.000	0.000			
		(LL)	0.170	0.250	0.376	0.000	0.001	0.001			
	(n = 0 to 7)										
FDH1BI	A → Yn	(HH)	0.108	0.156	0.216	0.000	0.000	0.000			
		(LL)	0.170	0.250	0.376	0.000	0.001	0.001			
	(n = 0 to 7)										

Function	Output Buffer				3.3V	
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA	FO09B2				1	13
6mA	FO04B2				1	13
9mA	FO01B2				1	13
12mA	FO02B2				1	13
18mA	FO03B2				1	25
24mA	FO06B2				1	25

Logic Diagram



Truth Table

A	BS1	MODE1	Y
A	X	0	A
X	B	1	B

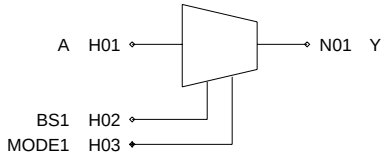
X:Irrelevant

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
FO09B2	A	2.4	Y	-
	BS1	2.4		
	MODE1	1.3		
FO04B2	A	2.4	Y	-
	BS1	2.4		
	MODE1	1.3		
FO01B2 to FO02B2	A	2.4	Y	-
	BS1	2.4		
	MODE1	1.3		
FO03B2 to FO06B2	A	2.4	Y	-
	BS1	2.4		
	MODE1	1.3		

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
FO09B2	A → Y	(HH)	0.936	1.478	2.372				0.072	0.114	0.181	
		(LL)	1.006	1.500	2.260				0.087	0.125	0.179	
	BS1 → Y	(HH)	0.938	1.480	2.376				0.072	0.114	0.181	
		(LL)	1.014	1.500	2.265				0.087	0.125	0.179	
	MODE1 → Y	(HH)	1.004	1.587	2.548				0.072	0.114	0.181	
		(HL)	1.074	1.587	2.374				0.087	0.125	0.179	
		(LH)	0.986	1.567	2.519				0.072	0.114	0.181	
		(LL)	1.072	1.600	2.409				0.087	0.125	0.179	
FO04B2	A → Y	(HH)	0.793	1.262	2.049				0.037	0.059	0.093	
		(LL)	0.835	1.293	2.014				0.044	0.063	0.090	
	BS1 → Y	(HH)	0.795	1.266	2.053				0.037	0.059	0.093	
		(LL)	0.843	1.296	2.017				0.044	0.063	0.090	
	MODE1 → Y	(HH)	0.861	1.371	2.216				0.037	0.059	0.093	
		(HL)	0.903	1.382	2.134				0.044	0.063	0.090	
		(LH)	0.843	1.351	2.189				0.037	0.059	0.093	
		(LL)	0.898	1.393	2.170				0.044	0.063	0.090	
FO01B2	A → Y	(HH)	0.728	1.157	1.867				0.026	0.041	0.064	
		(LL)	0.749	1.174	1.844				0.031	0.043	0.061	
	BS1 → Y	(HH)	0.730	1.161	1.873				0.026	0.041	0.064	
		(LL)	0.755	1.177	1.847				0.030	0.043	0.061	
	MODE1 → Y	(HH)	0.796	1.266	2.039				0.026	0.041	0.064	
		(HL)	0.815	1.262	1.965				0.030	0.043	0.061	
		(LH)	0.779	1.246	2.011				0.026	0.041	0.064	
		(LL)	0.813	1.274	2.000				0.031	0.043	0.061	
FO02B2	A → Y	(HH)	0.696	1.110	1.792				0.019	0.030	0.048	
		(LL)	0.715	1.124	1.781				0.023	0.032	0.046	
	BS1 → Y	(HH)	0.699	1.113	1.798				0.019	0.030	0.048	
		(LL)	0.719	1.127	1.784				0.023	0.032	0.046	
	MODE1 → Y	(HH)	0.764	1.218	1.962				0.019	0.030	0.048	
		(HL)	0.781	1.213	1.901				0.023	0.032	0.046	
		(LH)	0.747	1.198	1.935				0.019	0.030	0.048	
		(LL)	0.779	1.224	1.937				0.023	0.032	0.046	
FO03B2	A → Y	(HH)	0.693	1.102	1.795				0.013	0.020	0.032	
		(LL)	0.606	0.978	1.572				0.016	0.022	0.031	
	BS1 → Y	(HH)	0.695	1.105	1.799				0.013	0.020	0.032	
		(LL)	0.608	0.981	1.577				0.016	0.022	0.031	
	MODE1 → Y	(HH)	0.757	1.207	1.958				0.013	0.020	0.032	
		(HL)	0.671	1.075	1.712				0.016	0.022	0.031	
		(LH)	0.745	1.196	1.948				0.013	0.020	0.032	
		(LL)	0.667	1.074	1.727				0.016	0.022	0.031	
FO06B2	A → Y	(HH)	0.690	1.100	1.796				0.010	0.015	0.024	
		(LL)	0.593	0.959	1.555				0.012	0.017	0.024	
	BS1 → Y	(HH)	0.692	1.102	1.798				0.010	0.015	0.024	
		(LL)	0.596	0.963	1.558				0.012	0.017	0.024	
	MODE1 → Y	(HH)	0.754	1.204	1.959				0.010	0.015	0.024	
		(HL)	0.658	1.056	1.692				0.012	0.017	0.024	
		(LH)	0.742	1.193	1.948				0.010	0.016	0.024	
		(LL)	0.653	1.056	1.707				0.012	0.017	0.024	

Function	Low-noise Output Buffer				3.3V	
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA						
6mA	FE04B2				1	15
9mA	FE01B2				1	15
12mA	FE02B2				1	15
18mA	FE03B2				1	15
24mA	FE06B2				1	15

Logic Diagram



Truth Table

A	BS1	MODE1	Y
A	X	0	A
X	B	1	B

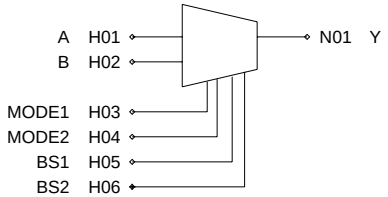
X:Irrelevant

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
FE04B2	A	2.4	Y	-
	BS1	2.4		
	MODE1	1.3		
FE01B2 to FE02B2	A	2.4	Y	-
	BS1	2.4		
	MODE1	1.3		
FE03B2 to FE06B2	A	2.4	Y	-
	BS1	2.4		
	MODE1	1.3		

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
FE04B2	A → Y	(HH)	1.420	2.323	3.960				0.038	0.060	0.095
		(LL)	1.971	3.183	5.056				0.047	0.067	0.097
	BS1 → Y	(HH)	1.422	2.326	3.968				0.038	0.060	0.095
		(LL)	1.974	3.165	5.069				0.047	0.067	0.096
	MODE1 → Y	(HH)	1.486	2.432	4.131				0.038	0.060	0.095
		(HL)	2.021	3.271	5.185				0.047	0.067	0.096
		(LH)	1.469	2.409	4.103				0.038	0.060	0.095
		(LL)	2.027	3.283	5.211				0.047	0.067	0.097
FE01B2	A → Y	(HH)	1.373	2.262	3.875				0.027	0.043	0.067
		(LL)	1.823	2.983	4.816				0.035	0.049	0.070
	BS1 → Y	(HH)	1.376	2.264	3.880				0.027	0.043	0.067
		(LL)	1.836	2.979	4.815				0.034	0.049	0.070
	MODE1 → Y	(HH)	1.441	2.370	4.044				0.027	0.043	0.068
		(HL)	1.887	3.070	4.939				0.035	0.049	0.070
		(LH)	1.423	2.349	4.011				0.027	0.043	0.068
		(LL)	1.889	3.083	4.974				0.035	0.049	0.070
FE02B2	A → Y	(HH)	1.352	2.244	3.856				0.021	0.033	0.053
		(LL)	1.762	2.889	4.718				0.028	0.040	0.058
	BS1 → Y	(HH)	1.353	2.246	3.859				0.021	0.033	0.053
		(LL)	1.768	2.910	4.723				0.028	0.040	0.057
	MODE1 → Y	(HH)	1.419	2.352	4.026				0.021	0.033	0.053
		(HL)	1.825	2.981	4.808				0.028	0.040	0.058
		(LH)	1.401	2.331	3.998				0.021	0.033	0.053
		(LL)	1.821	3.003	4.875				0.028	0.040	0.058
FE03B2	A → Y	(HH)	1.377	2.313	4.002				0.016	0.025	0.041
		(LL)	1.742	2.907	4.771				0.023	0.032	0.047
	BS1 → Y	(HH)	1.380	2.317	4.002				0.016	0.025	0.041
		(LL)	1.745	2.904	4.774				0.023	0.032	0.047
	MODE1 → Y	(HH)	1.446	2.422	4.170				0.016	0.025	0.042
		(HL)	1.796	2.999	4.887				0.023	0.032	0.047
		(LH)	1.428	2.402	4.139				0.016	0.025	0.041
		(LL)	1.794	3.018	4.925				0.023	0.033	0.047
FE06B2	A → Y	(HH)	1.379	2.332	4.042				0.014	0.022	0.036
		(LL)	1.688	2.838	4.660				0.020	0.028	0.041
	BS1 → Y	(HH)	1.382	2.334	4.044				0.014	0.022	0.036
		(LL)	1.675	2.832	4.665				0.020	0.028	0.041
	MODE1 → Y	(HH)	1.447	2.441	4.213				0.014	0.022	0.036
		(HL)	1.749	2.919	4.766				0.019	0.028	0.041
		(LH)	1.429	2.420	4.182				0.014	0.022	0.036
		(LL)	1.747	2.936	4.812				0.020	0.028	0.041

Function	3-State Buffer					3.3V
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA	B00TB3	B0DTB3	B0UTB3	B0WTB3	1	29
6mA	B00EB3	B0DEB3	B0UEB3	B0WEB3	1	29
9mA	B008B3	B0D8B3	B0U8B3	B0W8B3	1	29
12mA	B007B3	B0D7B3	B0U7B3	B0W7B3	1	29
18mA	B009B3	B0D9B3	B0U9B3	B0W9B3	1	32
24mA	B00HB3	B0DHB3	B0UHB3	B0WHB3	1	32

Logic Diagram



Truth Table

A	B	BS1	BS2	MODE1	MODE2	Y	
A	1	X	X	0	0	A	
A	0	X	X	0	0	Z	
X	X	A	1	1	0	A	
X	X	A	0	1	0	Z	
X	X	X	X	0	1	Z	
X	X	X	X	1	1	Z	← Prohibition

X:Irrelevant

Z:High Impedance

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
B00TB3 to B0WTB3	A	2.4	Y	-
	B	2.4		
	MODE1	2.5		
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		
B00EB3 to B0WEB3	A	2.4	Y	-
	B	2.4		
	MODE1	2.5		
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		
B008B3 to B0W7B3	A	2.4	Y	-
	B	2.4		
	MODE1	2.5		
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		
B009B3 to B0WHB3	A	2.4	Y	-
	B	2.4		
	MODE1	2.5		
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
B00TB3	A → Y	(HH)	0.996	1.577	2.563				0.072	0.114	0.181	
		(LL)	1.069	1.618	2.471				0.088	0.125	0.179	
	B → Y	(HZ)	0.348	0.530	0.847							
		(LZ)	0.481	0.769	1.238							
		(ZH)	0.986	1.576	2.561				0.072	0.114	0.181	
		(ZL)	1.259	1.899	2.896				0.087	0.125	0.179	
	MODE1 → Y	(HH)	1.063	1.685	2.732				0.072	0.114	0.181	
		(HL)	1.139	1.705	2.588				0.088	0.125	0.179	
		(LH)	1.045	1.665	2.703				0.072	0.114	0.181	
		(LL)	1.138	1.718	2.625				0.088	0.125	0.179	
		(HZ)	0.411	0.631	1.004							
		(LZ)	0.545	0.870	1.397							
		(ZH)	1.036	1.691	2.729				0.072	0.114	0.181	
		(ZL)	1.307	2.008	3.065				0.087	0.124	0.179	
	MODE2 → Y	(HZ)	0.280	0.382	0.558							
		(LZ)	0.411	0.623	0.953							
		(ZH)	0.896	1.441	2.338				0.072	0.114	0.181	
		(ZL)	1.166	1.760	2.675				0.087	0.125	0.179	
	BS1 → Y	(HH)	0.998	1.588	2.568				0.072	0.114	0.181	
		(LL)	1.082	1.629	2.468				0.087	0.125	0.179	
	BS2 → Y	(HZ)	0.350	0.534	0.851							
		(LZ)	0.484	0.771	1.240							
		(ZH)	0.987	1.585	2.565				0.072	0.114	0.181	
		(ZL)	1.258	1.902	2.901				0.087	0.125	0.179	
B0DTB3	A → Y	(HH)	0.996	1.577	2.563				0.072	0.114	0.181	
		(LL)	1.069	1.618	2.471				0.088	0.125	0.179	
	B → Y	(HZ)	0.348	0.530	0.847							
		(LZ)	0.481	0.769	1.238							
		(ZH)	0.986	1.576	2.561				0.072	0.114	0.181	
		(ZL)	1.259	1.899	2.896				0.087	0.125	0.179	
	MODE1 → Y	(HH)	1.063	1.685	2.732				0.072	0.114	0.181	
		(HL)	1.139	1.705	2.588				0.088	0.125	0.179	
		(LH)	1.045	1.665	2.703				0.072	0.114	0.181	
		(LL)	1.138	1.718	2.625				0.088	0.125	0.179	
		(HZ)	0.411	0.631	1.004							
		(LZ)	0.545	0.870	1.397							
		(ZH)	1.036	1.691	2.729				0.072	0.114	0.181	
		(ZL)	1.307	2.008	3.065				0.087	0.124	0.179	
	MODE2 → Y	(HZ)	0.280	0.382	0.558							
		(LZ)	0.411	0.623	0.953							
		(ZH)	0.896	1.441	2.338				0.072	0.114	0.181	
		(ZL)	1.166	1.760	2.675				0.087	0.125	0.179	
	BS1 → Y	(HH)	0.998	1.588	2.568				0.072	0.114	0.181	
		(LL)	1.082	1.629	2.468				0.087	0.125	0.179	
	BS2 → Y	(HZ)	0.350	0.534	0.851							
		(LZ)	0.484	0.771	1.240							
		(ZH)	0.987	1.585	2.565				0.072	0.114	0.181	
		(ZL)	1.258	1.902	2.901				0.087	0.125	0.179	
B0UTB3	A → Y	(HH)	0.996	1.577	2.563				0.072	0.114	0.181	
		(LL)	1.069	1.618	2.471				0.088	0.125	0.179	
	B → Y	(HZ)	0.348	0.530	0.847							
		(LZ)	0.481	0.769	1.238							
		(ZH)	0.986	1.576	2.561				0.072	0.114	0.181	
		(ZL)	1.259	1.899	2.896				0.087	0.125	0.179	
	MODE1 → Y	(HH)	1.063	1.685	2.732				0.072	0.114	0.181	
		(HL)	1.139	1.705	2.588				0.088	0.125	0.179	

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
		(LH)	1.045	1.665	2.703				0.072	0.114	0.181	
		(LL)	1.138	1.718	2.625				0.088	0.125	0.179	
		(HZ)	0.411	0.631	1.004							
		(LZ)	0.545	0.870	1.397							
		(ZH)	1.036	1.691	2.729				0.072	0.114	0.181	
		(ZL)	1.307	2.008	3.065				0.087	0.124	0.179	
	MODE2 → Y	(HZ)	0.280	0.382	0.558							
		(LZ)	0.411	0.623	0.953							
		(ZH)	0.896	1.441	2.338				0.072	0.114	0.181	
		(ZL)	1.166	1.760	2.675				0.087	0.125	0.179	
	BS1 → Y	(HH)	0.998	1.588	2.568				0.072	0.114	0.181	
		(LL)	1.082	1.629	2.468				0.087	0.125	0.179	
	BS2 → Y	(HZ)	0.350	0.534	0.851							
		(LZ)	0.484	0.771	1.240							
		(ZH)	0.987	1.585	2.565				0.072	0.114	0.181	
		(ZL)	1.258	1.902	2.901				0.087	0.125	0.179	
B0WTB3	A → Y	(HH)	0.996	1.577	2.563				0.072	0.114	0.181	
		(LL)	1.069	1.618	2.471				0.088	0.125	0.179	
	B → Y	(HZ)	0.348	0.530	0.847							
		(LZ)	0.481	0.769	1.238							
		(ZH)	0.986	1.576	2.561				0.072	0.114	0.181	
		(ZL)	1.259	1.899	2.896				0.087	0.125	0.179	
	MODE1 → Y	(HH)	1.063	1.685	2.732				0.072	0.114	0.181	
		(HL)	1.139	1.705	2.588				0.088	0.125	0.179	
		(LH)	1.045	1.665	2.703				0.072	0.114	0.181	
		(LL)	1.138	1.718	2.625				0.088	0.125	0.179	
		(HZ)	0.411	0.631	1.004							
		(LZ)	0.545	0.870	1.397							
		(ZH)	1.036	1.691	2.729				0.072	0.114	0.181	
		(ZL)	1.307	2.008	3.065				0.087	0.124	0.179	
	MODE2 → Y	(HZ)	0.280	0.382	0.558							
		(LZ)	0.411	0.623	0.953							
		(ZH)	0.896	1.441	2.338				0.072	0.114	0.181	
		(ZL)	1.166	1.760	2.675				0.087	0.125	0.179	
	BS1 → Y	(HH)	0.998	1.588	2.568				0.072	0.114	0.181	
		(LL)	1.082	1.629	2.468				0.087	0.125	0.179	
	BS2 → Y	(HZ)	0.350	0.534	0.851							
		(LZ)	0.484	0.771	1.240							
		(ZH)	0.987	1.585	2.565				0.072	0.114	0.181	
		(ZL)	1.258	1.902	2.901				0.087	0.125	0.179	
B00EB3	A → Y	(HH)	0.881	1.423	2.339				0.037	0.059	0.093	
		(LL)	0.945	1.503	2.399				0.045	0.063	0.090	
	B → Y	(HZ)	0.622	0.900	1.405							
		(LZ)	0.633	0.987	1.585							
		(ZH)	0.854	1.382	2.257				0.037	0.059	0.093	
		(ZL)	1.067	1.677	2.642				0.044	0.063	0.090	
	MODE1 → Y	(HH)	0.950	1.533	2.510				0.037	0.059	0.093	
		(HL)	1.009	1.591	2.519				0.045	0.063	0.090	
		(LH)	0.932	1.512	2.482				0.037	0.059	0.093	
		(LL)	1.012	1.602	2.556				0.045	0.063	0.090	
		(HZ)	0.691	1.000	1.562							
		(LZ)	0.697	1.089	1.744							
		(ZH)	0.905	1.490	2.425				0.037	0.059	0.093	
		(ZL)	1.112	1.786	2.810				0.045	0.063	0.090	
	MODE2 → Y	(HZ)	0.557	0.751	1.113							
		(LZ)	0.561	0.842	1.302							

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
		(ZH)	0.765	1.240	2.034				0.037	0.059	0.093	
		(ZL)	0.970	1.535	2.420				0.045	0.063	0.090	
	BS1 → Y	(HH)	0.883	1.427	2.343				0.037	0.059	0.093	
		(LL)	0.949	1.505	2.404				0.044	0.063	0.090	
	BS2 → Y	(HZ)	0.625	0.903	1.412							
		(LZ)	0.635	0.991	1.589							
		(ZH)	0.857	1.384	2.262				0.037	0.059	0.093	
		(ZL)	1.068	1.679	2.645				0.045	0.063	0.090	
B0DEB3	A → Y	(HH)	0.881	1.423	2.339				0.037	0.059	0.093	
		(LL)	0.945	1.503	2.399				0.045	0.063	0.090	
	B → Y	(HZ)	0.622	0.900	1.405							
		(LZ)	0.633	0.987	1.585							
		(ZH)	0.854	1.382	2.257				0.037	0.059	0.093	
		(ZL)	1.067	1.677	2.642				0.044	0.063	0.090	
	MODE1 → Y	(HH)	0.950	1.533	2.510				0.037	0.059	0.093	
		(HL)	1.009	1.591	2.519				0.045	0.063	0.090	
		(LH)	0.932	1.512	2.482				0.037	0.059	0.093	
		(LL)	1.012	1.602	2.556				0.045	0.063	0.090	
		(HZ)	0.691	1.000	1.562							
		(LZ)	0.697	1.089	1.744							
		(ZH)	0.905	1.490	2.425				0.037	0.059	0.093	
		(ZL)	1.112	1.786	2.810				0.045	0.063	0.090	
	MODE2 → Y	(HZ)	0.557	0.751	1.113							
		(LZ)	0.561	0.842	1.302							
		(ZH)	0.765	1.240	2.034				0.037	0.059	0.093	
		(ZL)	0.970	1.535	2.420				0.045	0.063	0.090	
	BS1 → Y	(HH)	0.883	1.427	2.343				0.037	0.059	0.093	
		(LL)	0.949	1.505	2.404				0.044	0.063	0.090	
	BS2 → Y	(HZ)	0.625	0.903	1.412							
		(LZ)	0.635	0.991	1.589							
		(ZH)	0.857	1.384	2.262				0.037	0.059	0.093	
		(ZL)	1.068	1.679	2.645				0.045	0.063	0.090	
B0UEB3	A → Y	(HH)	0.881	1.423	2.339				0.037	0.059	0.093	
		(LL)	0.945	1.503	2.399				0.045	0.063	0.090	
	B → Y	(HZ)	0.622	0.900	1.405							
		(LZ)	0.633	0.987	1.585							
		(ZH)	0.854	1.382	2.257				0.037	0.059	0.093	
		(ZL)	1.067	1.677	2.642				0.044	0.063	0.090	
	MODE1 → Y	(HH)	0.950	1.533	2.510				0.037	0.059	0.093	
		(HL)	1.009	1.591	2.519				0.045	0.063	0.090	
		(LH)	0.932	1.512	2.482				0.037	0.059	0.093	
		(LL)	1.012	1.602	2.556				0.045	0.063	0.090	
		(HZ)	0.691	1.000	1.562							
		(LZ)	0.697	1.089	1.744							
		(ZH)	0.905	1.490	2.425				0.037	0.059	0.093	
		(ZL)	1.112	1.786	2.810				0.045	0.063	0.090	
	MODE2 → Y	(HZ)	0.557	0.751	1.113							
		(LZ)	0.561	0.842	1.302							
		(ZH)	0.765	1.240	2.034				0.037	0.059	0.093	
		(ZL)	0.970	1.535	2.420				0.045	0.063	0.090	
	BS1 → Y	(HH)	0.883	1.427	2.343				0.037	0.059	0.093	
		(LL)	0.949	1.505	2.404				0.044	0.063	0.090	
	BS2 → Y	(HZ)	0.625	0.903	1.412							
		(LZ)	0.635	0.991	1.589							
		(ZH)	0.857	1.384	2.262				0.037	0.059	0.093	
		(ZL)	1.068	1.679	2.645				0.045	0.063	0.090	

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
B0WEB3	A → Y	(HH)	0.881	1.423	2.339				0.037	0.059	0.093	
		(LL)	0.945	1.503	2.399				0.045	0.063	0.090	
	B → Y	(HZ)	0.622	0.900	1.405							
		(LZ)	0.633	0.987	1.585							
		(ZH)	0.854	1.382	2.257				0.037	0.059	0.093	
		(ZL)	1.067	1.677	2.642				0.044	0.063	0.090	
	MODE1 → Y	(HH)	0.950	1.533	2.510				0.037	0.059	0.093	
		(HL)	1.009	1.591	2.519				0.045	0.063	0.090	
		(LH)	0.932	1.512	2.482				0.037	0.059	0.093	
		(LL)	1.012	1.602	2.556				0.045	0.063	0.090	
		(HZ)	0.691	1.000	1.562							
		(LZ)	0.697	1.089	1.744							
		(ZH)	0.905	1.490	2.425				0.037	0.059	0.093	
		(ZL)	1.112	1.786	2.810				0.045	0.063	0.090	
	MODE2 → Y	(HZ)	0.557	0.751	1.113							
		(LZ)	0.561	0.842	1.302							
		(ZH)	0.765	1.240	2.034				0.037	0.059	0.093	
		(ZL)	0.970	1.535	2.420				0.045	0.063	0.090	
	BS1 → Y	(HH)	0.883	1.427	2.343				0.037	0.059	0.093	
		(LL)	0.949	1.505	2.404				0.044	0.063	0.090	
	BS2 → Y	(HZ)	0.625	0.903	1.412							
		(LZ)	0.635	0.991	1.589							
		(ZH)	0.857	1.384	2.262				0.037	0.059	0.093	
		(ZL)	1.068	1.679	2.645				0.045	0.063	0.090	
B008B3	A → Y	(HH)	0.820	1.323	2.175				0.026	0.041	0.064	
		(LL)	0.849	1.374	2.223				0.031	0.043	0.061	
	B → Y	(HZ)	0.670	0.962	1.517							
		(LZ)	0.647	1.011	1.619							
		(ZH)	0.789	1.276	2.085				0.026	0.041	0.064	
		(ZL)	0.959	1.531	2.438				0.031	0.043	0.061	
	MODE1 → Y	(HH)	0.888	1.433	2.345				0.026	0.041	0.064	
		(HL)	0.913	1.462	2.342				0.031	0.043	0.061	
		(LH)	0.870	1.412	2.319				0.026	0.041	0.064	
		(LL)	0.912	1.473	2.380				0.031	0.043	0.061	
		(HZ)	0.740	1.062	1.671							
		(LZ)	0.710	1.112	1.778							
		(ZH)	0.840	1.384	2.252				0.026	0.041	0.064	
		(ZL)	1.011	1.638	2.606				0.031	0.043	0.061	
	MODE2 → Y	(HZ)	0.606	0.813	1.220							
		(LZ)	0.575	0.864	1.336							
		(ZH)	0.700	1.135	1.862				0.026	0.041	0.064	
		(ZL)	0.868	1.390	2.215				0.031	0.043	0.061	
	BS1 → Y	(HH)	0.822	1.328	2.179				0.026	0.041	0.064	
		(LL)	0.852	1.378	2.226				0.031	0.043	0.061	
	BS2 → Y	(HZ)	0.672	0.974	1.524							
		(LZ)	0.649	1.014	1.622							
		(ZH)	0.791	1.278	2.087				0.026	0.041	0.064	
		(ZL)	0.961	1.534	2.440				0.031	0.043	0.061	
B0D8B3	A → Y	(HH)	0.820	1.323	2.175				0.026	0.041	0.064	
		(LL)	0.849	1.374	2.223				0.031	0.043	0.061	
	B → Y	(HZ)	0.670	0.962	1.517							
		(LZ)	0.647	1.011	1.619							
		(ZH)	0.789	1.276	2.085				0.026	0.041	0.064	
		(ZL)	0.959	1.531	2.438				0.031	0.043	0.061	
	MODE1 → Y	(HH)	0.888	1.433	2.345				0.026	0.041	0.064	
		(HL)	0.913	1.462	2.342				0.031	0.043	0.061	

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
		(LH)	0.870	1.412	2.319				0.026	0.041	0.064	
		(LL)	0.912	1.473	2.380				0.031	0.043	0.061	
		(HZ)	0.740	1.062	1.671							
		(LZ)	0.710	1.112	1.778							
		(ZH)	0.840	1.384	2.252				0.026	0.041	0.064	
		(ZL)	1.011	1.638	2.606				0.031	0.043	0.061	
	MODE2 → Y	(HZ)	0.606	0.813	1.220							
		(LZ)	0.575	0.864	1.336							
		(ZH)	0.700	1.135	1.862				0.026	0.041	0.064	
		(ZL)	0.868	1.390	2.215				0.031	0.043	0.061	
	BS1 → Y	(HH)	0.822	1.328	2.179				0.026	0.041	0.064	
		(LL)	0.852	1.378	2.226				0.031	0.043	0.061	
	BS2 → Y	(HZ)	0.672	0.974	1.524							
		(LZ)	0.649	1.014	1.622							
		(ZH)	0.791	1.278	2.087				0.026	0.041	0.064	
		(ZL)	0.961	1.534	2.440				0.031	0.043	0.061	
B0U8B3	A → Y	(HH)	0.820	1.323	2.175				0.026	0.041	0.064	
		(LL)	0.849	1.374	2.223				0.031	0.043	0.061	
	B → Y	(HZ)	0.670	0.962	1.517							
		(LZ)	0.647	1.011	1.619							
		(ZH)	0.789	1.276	2.085				0.026	0.041	0.064	
		(ZL)	0.959	1.531	2.438				0.031	0.043	0.061	
	MODE1 → Y	(HH)	0.888	1.433	2.345				0.026	0.041	0.064	
		(HL)	0.913	1.462	2.342				0.031	0.043	0.061	
		(LH)	0.870	1.412	2.319				0.026	0.041	0.064	
		(LL)	0.912	1.473	2.380				0.031	0.043	0.061	
		(HZ)	0.740	1.062	1.671							
		(LZ)	0.710	1.112	1.778							
		(ZH)	0.840	1.384	2.252				0.026	0.041	0.064	
		(ZL)	1.011	1.638	2.606				0.031	0.043	0.061	
	MODE2 → Y	(HZ)	0.606	0.813	1.220							
		(LZ)	0.575	0.864	1.336							
		(ZH)	0.700	1.135	1.862				0.026	0.041	0.064	
		(ZL)	0.868	1.390	2.215				0.031	0.043	0.061	
	BS1 → Y	(HH)	0.822	1.328	2.179				0.026	0.041	0.064	
		(LL)	0.852	1.378	2.226				0.031	0.043	0.061	
	BS2 → Y	(HZ)	0.672	0.974	1.524							
		(LZ)	0.649	1.014	1.622							
		(ZH)	0.791	1.278	2.087				0.026	0.041	0.064	
		(ZL)	0.961	1.534	2.440				0.031	0.043	0.061	
B0W8B3	A → Y	(HH)	0.820	1.323	2.175				0.026	0.041	0.064	
		(LL)	0.849	1.374	2.223				0.031	0.043	0.061	
	B → Y	(HZ)	0.670	0.962	1.517							
		(LZ)	0.647	1.011	1.619							
		(ZH)	0.789	1.276	2.085				0.026	0.041	0.064	
		(ZL)	0.959	1.531	2.438				0.031	0.043	0.061	
	MODE1 → Y	(HH)	0.888	1.433	2.345				0.026	0.041	0.064	
		(HL)	0.913	1.462	2.342				0.031	0.043	0.061	
		(LH)	0.870	1.412	2.319				0.026	0.041	0.064	
		(LL)	0.912	1.473	2.380				0.031	0.043	0.061	
		(HZ)	0.740	1.062	1.671							
		(LZ)	0.710	1.112	1.778							
		(ZH)	0.840	1.384	2.252				0.026	0.041	0.064	
		(ZL)	1.011	1.638	2.606				0.031	0.043	0.061	
	MODE2 → Y	(HZ)	0.606	0.813	1.220							
		(LZ)	0.575	0.864	1.336							

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(ZH)	0.700	1.135	1.862				0.026	0.041	0.064
		(ZL)	0.868	1.390	2.215				0.031	0.043	0.061
	BS1 → Y	(HH)	0.822	1.328	2.179				0.026	0.041	0.064
		(LL)	0.852	1.378	2.226				0.031	0.043	0.061
	BS2 → Y	(HZ)	0.672	0.974	1.524						
		(LZ)	0.649	1.014	1.622						
		(ZH)	0.791	1.278	2.087				0.026	0.041	0.064
		(ZL)	0.961	1.534	2.440				0.031	0.043	0.061
B007B3	A → Y	(HH)	0.790	1.284	2.115				0.020	0.031	0.048
		(LL)	0.807	1.320	2.154				0.023	0.033	0.047
	B → Y	(HZ)	0.726	1.032	1.620						
		(LZ)	0.663	1.034	1.658						
		(ZH)	0.758	1.228	2.011				0.020	0.031	0.048
		(ZL)	0.907	1.461	2.340				0.023	0.033	0.047
	MODE1 → Y	(HH)	0.858	1.393	2.283				0.020	0.031	0.048
		(HL)	0.874	1.409	2.274				0.023	0.033	0.047
		(LH)	0.841	1.372	2.258				0.020	0.031	0.048
		(LL)	0.872	1.423	2.309				0.023	0.033	0.047
		(HZ)	0.789	1.132	1.779						
		(LZ)	0.727	1.135	1.818						
		(ZH)	0.809	1.338	2.181				0.020	0.031	0.048
		(ZL)	0.957	1.570	2.508				0.023	0.033	0.047
	MODE2 → Y	(HZ)	0.655	0.892	1.333						
		(LZ)	0.593	0.888	1.374						
		(ZH)	0.668	1.088	1.789				0.020	0.030	0.048
		(ZL)	0.818	1.320	2.117				0.023	0.033	0.047
	BS1 → Y	(HH)	0.792	1.286	2.119				0.020	0.031	0.048
		(LL)	0.810	1.322	2.157				0.023	0.033	0.047
	BS2 → Y	(HZ)	0.725	1.038	1.632						
		(LZ)	0.665	1.038	1.661						
		(ZH)	0.760	1.232	2.017				0.020	0.030	0.048
		(ZL)	0.908	1.464	2.345				0.023	0.033	0.047
B0D7B3	A → Y	(HH)	0.790	1.284	2.115				0.020	0.031	0.048
		(LL)	0.807	1.320	2.154				0.023	0.033	0.047
	B → Y	(HZ)	0.726	1.032	1.620						
		(LZ)	0.663	1.034	1.658						
		(ZH)	0.758	1.228	2.011				0.020	0.031	0.048
		(ZL)	0.907	1.461	2.340				0.023	0.033	0.047
	MODE1 → Y	(HH)	0.858	1.393	2.283				0.020	0.031	0.048
		(HL)	0.874	1.409	2.274				0.023	0.033	0.047
		(LH)	0.841	1.372	2.258				0.020	0.031	0.048
		(LL)	0.872	1.423	2.309				0.023	0.033	0.047
		(HZ)	0.789	1.132	1.779						
		(LZ)	0.727	1.135	1.818						
		(ZH)	0.809	1.338	2.181				0.020	0.031	0.048
		(ZL)	0.957	1.570	2.508				0.023	0.033	0.047
	MODE2 → Y	(HZ)	0.655	0.892	1.333						
		(LZ)	0.593	0.888	1.374						
		(ZH)	0.668	1.088	1.789				0.020	0.030	0.048
		(ZL)	0.818	1.320	2.117				0.023	0.033	0.047
	BS1 → Y	(HH)	0.792	1.286	2.119				0.020	0.031	0.048
		(LL)	0.810	1.322	2.157				0.023	0.033	0.047
	BS2 → Y	(HZ)	0.725	1.038	1.632						
		(LZ)	0.665	1.038	1.661						
		(ZH)	0.760	1.232	2.017				0.020	0.030	0.048
		(ZL)	0.908	1.464	2.345				0.023	0.033	0.047

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
B0U7B3	A → Y	(HH)	0.790	1.284	2.115				0.020	0.031	0.048
		(LL)	0.807	1.320	2.154				0.023	0.033	0.047
	B → Y	(HZ)	0.726	1.032	1.620						
		(LZ)	0.663	1.034	1.658						
		(ZH)	0.758	1.228	2.011				0.020	0.031	0.048
		(ZL)	0.907	1.461	2.340				0.023	0.033	0.047
	MODE1 → Y	(HH)	0.858	1.393	2.283				0.020	0.031	0.048
		(HL)	0.874	1.409	2.274				0.023	0.033	0.047
		(LH)	0.841	1.372	2.258				0.020	0.031	0.048
		(LL)	0.872	1.423	2.309				0.023	0.033	0.047
		(HZ)	0.789	1.132	1.779						
		(LZ)	0.727	1.135	1.818						
		(ZH)	0.809	1.338	2.181				0.020	0.031	0.048
		(ZL)	0.957	1.570	2.508				0.023	0.033	0.047
	MODE2 → Y	(HZ)	0.655	0.892	1.333						
		(LZ)	0.593	0.888	1.374						
		(ZH)	0.668	1.088	1.789				0.020	0.030	0.048
		(ZL)	0.818	1.320	2.117				0.023	0.033	0.047
	BS1 → Y	(HH)	0.792	1.286	2.119				0.020	0.031	0.048
		(LL)	0.810	1.322	2.157				0.023	0.033	0.047
	BS2 → Y	(HZ)	0.725	1.038	1.632						
		(LZ)	0.665	1.038	1.661						
		(ZH)	0.760	1.232	2.017				0.020	0.030	0.048
		(ZL)	0.908	1.464	2.345				0.023	0.033	0.047
B0W7B3	A → Y	(HH)	0.790	1.284	2.115				0.020	0.031	0.048
		(LL)	0.807	1.320	2.154				0.023	0.033	0.047
	B → Y	(HZ)	0.726	1.032	1.620						
		(LZ)	0.663	1.034	1.658						
		(ZH)	0.758	1.228	2.011				0.020	0.031	0.048
		(ZL)	0.907	1.461	2.340				0.023	0.033	0.047
	MODE1 → Y	(HH)	0.858	1.393	2.283				0.020	0.031	0.048
		(HL)	0.874	1.409	2.274				0.023	0.033	0.047
		(LH)	0.841	1.372	2.258				0.020	0.031	0.048
		(LL)	0.872	1.423	2.309				0.023	0.033	0.047
		(HZ)	0.789	1.132	1.779						
		(LZ)	0.727	1.135	1.818						
		(ZH)	0.809	1.338	2.181				0.020	0.031	0.048
		(ZL)	0.957	1.570	2.508				0.023	0.033	0.047
	MODE2 → Y	(HZ)	0.655	0.892	1.333						
		(LZ)	0.593	0.888	1.374						
		(ZH)	0.668	1.088	1.789				0.020	0.030	0.048
		(ZL)	0.818	1.320	2.117				0.023	0.033	0.047
	BS1 → Y	(HH)	0.792	1.286	2.119				0.020	0.031	0.048
		(LL)	0.810	1.322	2.157				0.023	0.033	0.047
	BS2 → Y	(HZ)	0.725	1.038	1.632						
		(LZ)	0.665	1.038	1.661						
		(ZH)	0.760	1.232	2.017				0.020	0.030	0.048
		(ZL)	0.908	1.464	2.345				0.023	0.033	0.047
B009B3	A → Y	(HH)	0.710	1.161	1.923				0.013	0.021	0.033
		(LL)	0.740	1.235	2.044				0.016	0.023	0.033
	B → Y	(HZ)	0.846	1.206	1.880						
		(LZ)	0.704	1.096	1.758						
		(ZH)	0.744	1.214	1.991				0.013	0.021	0.033
		(ZL)	0.860	1.401	2.261				0.016	0.023	0.032
	MODE1 → Y	(HH)	0.775	1.268	2.090				0.013	0.021	0.033
		(HL)	0.805	1.328	2.177				0.016	0.023	0.033

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(LH)	0.762	1.253	2.074				0.013	0.021	0.033
		(LL)	0.801	1.333	2.201				0.016	0.023	0.033
		(HZ)	0.909	1.305	2.033						
		(LZ)	0.768	1.197	1.916						
		(ZH)	0.795	1.323	2.160				0.013	0.021	0.033
		(ZL)	0.913	1.507	2.429				0.016	0.023	0.032
	MODE2 → Y	(HZ)	0.765	1.057	1.588						
		(LZ)	0.633	0.950	1.474						
		(ZH)	0.654	1.073	1.768				0.013	0.021	0.033
		(ZL)	0.771	1.259	2.040				0.016	0.023	0.032
	BS1 → Y	(HH)	0.711	1.164	1.927				0.013	0.021	0.033
		(LL)	0.741	1.237	2.049				0.016	0.023	0.033
	BS2 → Y	(HZ)	0.847	1.212	1.882						
		(LZ)	0.707	1.099	1.761						
		(ZH)	0.745	1.217	1.995				0.013	0.021	0.033
		(ZL)	0.862	1.401	2.266				0.016	0.023	0.032
B0D9B3	A → Y	(HH)	0.710	1.161	1.923				0.013	0.021	0.033
		(LL)	0.740	1.235	2.044				0.016	0.023	0.033
	B → Y	(HZ)	0.846	1.206	1.880						
		(LZ)	0.704	1.096	1.758						
		(ZH)	0.744	1.214	1.991				0.013	0.021	0.033
		(ZL)	0.860	1.401	2.261				0.016	0.023	0.032
	MODE1 → Y	(HH)	0.775	1.268	2.090				0.013	0.021	0.033
		(HL)	0.805	1.328	2.177				0.016	0.023	0.033
		(LH)	0.762	1.253	2.074				0.013	0.021	0.033
		(LL)	0.801	1.333	2.201				0.016	0.023	0.033
		(HZ)	0.909	1.305	2.033						
		(LZ)	0.768	1.197	1.916						
		(ZH)	0.795	1.323	2.160				0.013	0.021	0.033
		(ZL)	0.913	1.507	2.429				0.016	0.023	0.032
	MODE2 → Y	(HZ)	0.765	1.057	1.588						
		(LZ)	0.633	0.950	1.474						
		(ZH)	0.654	1.073	1.768				0.013	0.021	0.033
		(ZL)	0.771	1.259	2.040				0.016	0.023	0.032
	BS1 → Y	(HH)	0.711	1.164	1.927				0.013	0.021	0.033
		(LL)	0.741	1.237	2.049				0.016	0.023	0.033
	BS2 → Y	(HZ)	0.847	1.212	1.882						
		(LZ)	0.707	1.099	1.761						
		(ZH)	0.745	1.217	1.995				0.013	0.021	0.033
		(ZL)	0.862	1.401	2.266				0.016	0.023	0.032
B0U9B3	A → Y	(HH)	0.710	1.161	1.923				0.013	0.021	0.033
		(LL)	0.740	1.235	2.044				0.016	0.023	0.033
	B → Y	(HZ)	0.846	1.206	1.880						
		(LZ)	0.704	1.096	1.758						
		(ZH)	0.744	1.214	1.991				0.013	0.021	0.033
		(ZL)	0.860	1.401	2.261				0.016	0.023	0.032
	MODE1 → Y	(HH)	0.775	1.268	2.090				0.013	0.021	0.033
		(HL)	0.805	1.328	2.177				0.016	0.023	0.033
		(LH)	0.762	1.253	2.074				0.013	0.021	0.033
		(LL)	0.801	1.333	2.201				0.016	0.023	0.033
		(HZ)	0.909	1.305	2.033						
		(LZ)	0.768	1.197	1.916						
		(ZH)	0.795	1.323	2.160				0.013	0.021	0.033
		(ZL)	0.913	1.507	2.429				0.016	0.023	0.032
	MODE2 → Y	(HZ)	0.765	1.057	1.588						
		(LZ)	0.633	0.950	1.474						

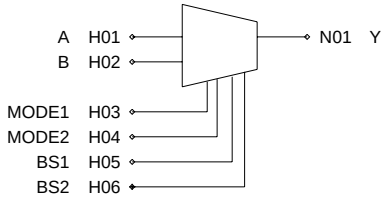
Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(ZH)	0.654	1.073	1.768				0.013	0.021	0.033
		(ZL)	0.771	1.259	2.040				0.016	0.023	0.032
	BS1 → Y	(HH)	0.711	1.164	1.927				0.013	0.021	0.033
		(LL)	0.741	1.237	2.049				0.016	0.023	0.033
	BS2 → Y	(HZ)	0.847	1.212	1.882						
		(LZ)	0.707	1.099	1.761						
		(ZH)	0.745	1.217	1.995				0.013	0.021	0.033
		(ZL)	0.862	1.401	2.266				0.016	0.023	0.032
B0W9B3	A → Y	(HH)	0.710	1.161	1.923				0.013	0.021	0.033
		(LL)	0.740	1.235	2.044				0.016	0.023	0.033
	B → Y	(HZ)	0.846	1.206	1.880						
		(LZ)	0.704	1.096	1.758						
		(ZH)	0.744	1.214	1.991				0.013	0.021	0.033
		(ZL)	0.860	1.401	2.261				0.016	0.023	0.032
	MODE1 → Y	(HH)	0.775	1.268	2.090				0.013	0.021	0.033
		(HL)	0.805	1.328	2.177				0.016	0.023	0.033
		(LH)	0.762	1.253	2.074				0.013	0.021	0.033
		(LL)	0.801	1.333	2.201				0.016	0.023	0.033
		(HZ)	0.909	1.305	2.033						
		(LZ)	0.768	1.197	1.916						
		(ZH)	0.795	1.323	2.160				0.013	0.021	0.033
		(ZL)	0.913	1.507	2.429				0.016	0.023	0.032
	MODE2 → Y	(HZ)	0.765	1.057	1.588						
		(LZ)	0.633	0.950	1.474						
		(ZH)	0.654	1.073	1.768				0.013	0.021	0.033
		(ZL)	0.771	1.259	2.040				0.016	0.023	0.032
	BS1 → Y	(HH)	0.711	1.164	1.927				0.013	0.021	0.033
		(LL)	0.741	1.237	2.049				0.016	0.023	0.033
	BS2 → Y	(HZ)	0.847	1.212	1.882						
		(LZ)	0.707	1.099	1.761						
		(ZH)	0.745	1.217	1.995				0.013	0.021	0.033
		(ZL)	0.862	1.401	2.266				0.016	0.023	0.032
B00HB3	A → Y	(HH)	0.707	1.163	1.932				0.010	0.016	0.025
		(LL)	0.721	1.208	2.018				0.013	0.018	0.026
	B → Y	(HZ)	0.934	1.336	2.084						
		(LZ)	0.731	1.132	1.814						
		(ZH)	0.737	1.207	1.985				0.010	0.016	0.025
		(ZL)	0.829	1.359	2.207				0.013	0.018	0.026
	MODE1 → Y	(HH)	0.773	1.269	2.098				0.010	0.016	0.025
		(HL)	0.787	1.304	2.154				0.013	0.018	0.026
		(LH)	0.759	1.254	2.081				0.010	0.016	0.025
		(LL)	0.783	1.309	2.175				0.013	0.018	0.026
		(HZ)	0.990	1.430	2.236						
		(LZ)	0.794	1.232	1.976						
		(ZH)	0.789	1.316	2.154				0.010	0.016	0.025
		(ZL)	0.881	1.466	2.375				0.013	0.018	0.026
	MODE2 → Y	(HZ)	0.866	1.179	1.783						
		(LZ)	0.660	0.986	1.531						
		(ZH)	0.648	1.065	1.762				0.010	0.016	0.025
		(ZL)	0.740	1.217	1.984				0.013	0.018	0.026
	BS1 → Y	(HH)	0.709	1.165	1.935				0.010	0.016	0.025
		(LL)	0.723	1.211	2.023				0.013	0.018	0.026
	BS2 → Y	(HZ)	0.936	1.336	2.084						
		(LZ)	0.733	1.135	1.821						
		(ZH)	0.739	1.209	1.989				0.010	0.016	0.025
		(ZL)	0.831	1.361	2.211				0.013	0.018	0.026

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
B0DHB3	A → Y	(HH)	0.707	1.163	1.932				0.010	0.016	0.025
		(LL)	0.721	1.208	2.018				0.013	0.018	0.026
	B → Y	(HZ)	0.934	1.336	2.084						
		(LZ)	0.731	1.132	1.814						
		(ZH)	0.737	1.207	1.985				0.010	0.016	0.025
		(ZL)	0.829	1.359	2.207				0.013	0.018	0.026
	MODE1 → Y	(HH)	0.773	1.269	2.098				0.010	0.016	0.025
		(HL)	0.787	1.304	2.154				0.013	0.018	0.026
		(LH)	0.759	1.254	2.081				0.010	0.016	0.025
		(LL)	0.783	1.309	2.175				0.013	0.018	0.026
		(HZ)	0.990	1.430	2.236						
		(LZ)	0.794	1.232	1.976						
		(ZH)	0.789	1.316	2.154				0.010	0.016	0.025
		(ZL)	0.881	1.466	2.375				0.013	0.018	0.026
	MODE2 → Y	(HZ)	0.866	1.179	1.783						
		(LZ)	0.660	0.986	1.531						
		(ZH)	0.648	1.065	1.762				0.010	0.016	0.025
		(ZL)	0.740	1.217	1.984				0.013	0.018	0.026
	BS1 → Y	(HH)	0.709	1.165	1.935				0.010	0.016	0.025
		(LL)	0.723	1.211	2.023				0.013	0.018	0.026
	BS2 → Y	(HZ)	0.936	1.336	2.084						
		(LZ)	0.733	1.135	1.821						
		(ZH)	0.739	1.209	1.989				0.010	0.016	0.025
		(ZL)	0.831	1.361	2.211				0.013	0.018	0.026
B0UHB3	A → Y	(HH)	0.707	1.163	1.932				0.010	0.016	0.025
		(LL)	0.721	1.208	2.018				0.013	0.018	0.026
	B → Y	(HZ)	0.934	1.336	2.084						
		(LZ)	0.731	1.132	1.814						
		(ZH)	0.737	1.207	1.985				0.010	0.016	0.025
		(ZL)	0.829	1.359	2.207				0.013	0.018	0.026
	MODE1 → Y	(HH)	0.773	1.269	2.098				0.010	0.016	0.025
		(HL)	0.787	1.304	2.154				0.013	0.018	0.026
		(LH)	0.759	1.254	2.081				0.010	0.016	0.025
		(LL)	0.783	1.309	2.175				0.013	0.018	0.026
		(HZ)	0.990	1.430	2.236						
		(LZ)	0.794	1.232	1.976						
		(ZH)	0.789	1.316	2.154				0.010	0.016	0.025
		(ZL)	0.881	1.466	2.375				0.013	0.018	0.026
	MODE2 → Y	(HZ)	0.866	1.179	1.783						
		(LZ)	0.660	0.986	1.531						
		(ZH)	0.648	1.065	1.762				0.010	0.016	0.025
		(ZL)	0.740	1.217	1.984				0.013	0.018	0.026
	BS1 → Y	(HH)	0.709	1.165	1.935				0.010	0.016	0.025
		(LL)	0.723	1.211	2.023				0.013	0.018	0.026
	BS2 → Y	(HZ)	0.936	1.336	2.084						
		(LZ)	0.733	1.135	1.821						
		(ZH)	0.739	1.209	1.989				0.010	0.016	0.025
		(ZL)	0.831	1.361	2.211				0.013	0.018	0.026
B0WHB3	A → Y	(HH)	0.707	1.163	1.932				0.010	0.016	0.025
		(LL)	0.721	1.208	2.018				0.013	0.018	0.026
	B → Y	(HZ)	0.934	1.336	2.084						
		(LZ)	0.731	1.132	1.814						
		(ZH)	0.737	1.207	1.985				0.010	0.016	0.025
		(ZL)	0.829	1.359	2.207				0.013	0.018	0.026
	MODE1 → Y	(HH)	0.773	1.269	2.098				0.010	0.016	0.025
		(HL)	0.787	1.304	2.154				0.013	0.018	0.026

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(LH)	0.759	1.254	2.081				0.010	0.016	0.025
		(LL)	0.783	1.309	2.175				0.013	0.018	0.026
		(HZ)	0.990	1.430	2.236						
		(LZ)	0.794	1.232	1.976						
		(ZH)	0.789	1.316	2.154				0.010	0.016	0.025
		(ZL)	0.881	1.466	2.375				0.013	0.018	0.026
	MODE2 → Y	(HZ)	0.866	1.179	1.783						
		(LZ)	0.660	0.986	1.531						
		(ZH)	0.648	1.065	1.762				0.010	0.016	0.025
		(ZL)	0.740	1.217	1.984				0.013	0.018	0.026
	BS1 → Y	(HH)	0.709	1.165	1.935				0.010	0.016	0.025
		(LL)	0.723	1.211	2.023				0.013	0.018	0.026
	BS2 → Y	(HZ)	0.936	1.336	2.084						
		(LZ)	0.733	1.135	1.821						
		(ZH)	0.739	1.209	1.989				0.010	0.016	0.025
		(ZL)	0.831	1.361	2.211				0.013	0.018	0.026

Function	Low-noise 3-State Buffer				3.3V	
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA						
6mA	BE0EB3	BEDEB3	BEUEB3	BEWEB3	1	22
9mA	BE08B3	BED8B3	BEU8B3	BEW8B3	1	22
12mA	BE07B3	BED7B3	BEU7B3	BEW7B3	1	22
18mA	BE09B3	BED9B3	BEU9B3	BEW9B3	1	22
24mA	BE0HB3	BEDHB3	BEUHB3	BEWHB3	1	22

Logic Diagram



Truth Table

A	B	BS1	BS2	MODE1	MODE2	Y	
A	1	X	X	0	0	A	
A	0	X	X	0	0	Z	
X	X	A	1	1	0	A	
X	X	A	0	1	0	Z	
X	X	X	X	0	1	Z	
X	X	X	X	1	1	Z	← Prohibition

X:Irrelevant

Z:High Impedance

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
BE0EB3 to BEWEB3	A	2.4	Y	-
	B	2.4		
	MODE1	2.5		
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		
BE08B3 to BEW7B3	A	2.4	Y	-
	B	2.4		
	MODE1	2.5		
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		
BE09B3 to BEWHB3	A	2.4	Y	-
	B	2.4		
	MODE1	2.5		
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
BE0EB3	A → Y	(HH)	1.518	2.516	4.372				0.039	0.060	0.097	
		(LL)	1.909	3.079	4.913				0.047	0.067	0.096	
	B → Y	(HZ)	1.620	2.216	3.399							
		(LZ)	1.517	2.256	3.595							
		(ZH)	1.420	2.394	4.204				0.038	0.060	0.097	
		(ZL)	1.980	3.194	5.063				0.047	0.067	0.097	
	MODE1 → Y	(HH)	1.586	2.623	4.534				0.039	0.060	0.097	
		(HL)	1.958	3.156	5.030				0.048	0.067	0.096	
		(LH)	1.568	2.605	4.511				0.039	0.060	0.096	
		(LL)	1.960	3.156	5.067				0.047	0.067	0.096	
		(HZ)	1.685	2.319	3.536							
		(LZ)	1.582	2.357	3.751							
		(ZH)	1.470	2.502	4.372				0.038	0.060	0.097	
		(ZL)	2.030	3.304	5.234				0.047	0.067	0.097	
	MODE2 → Y	(HZ)	1.560	2.077	3.124							
		(LZ)	1.443	2.113	3.323							
		(ZH)	1.333	2.256	3.981				0.038	0.060	0.097	
		(ZL)	1.896	3.050	4.846				0.047	0.067	0.097	
	BS1 → Y	(HH)	1.520	2.522	4.375				0.039	0.060	0.097	
		(LL)	1.899	3.072	4.912				0.047	0.067	0.096	
	BS2 → Y	(HZ)	1.628	2.218	3.403							
		(LZ)	1.521	2.259	3.602							
		(ZH)	1.423	2.395	4.203				0.038	0.060	0.096	
		(ZL)	1.985	3.198	5.070				0.047	0.067	0.097	
BEDEB3	A → Y	(HH)	1.518	2.516	4.372				0.039	0.060	0.097	
		(LL)	1.909	3.079	4.913				0.047	0.067	0.096	
	B → Y	(HZ)	1.620	2.216	3.399							
		(LZ)	1.517	2.256	3.595							
		(ZH)	1.420	2.394	4.204				0.038	0.060	0.097	
		(ZL)	1.980	3.194	5.063				0.047	0.067	0.097	
	MODE1 → Y	(HH)	1.586	2.623	4.534				0.039	0.060	0.097	
		(HL)	1.958	3.156	5.030				0.048	0.067	0.096	
		(LH)	1.568	2.605	4.511				0.039	0.060	0.096	
		(LL)	1.960	3.156	5.067				0.047	0.067	0.096	
		(HZ)	1.685	2.319	3.536							
		(LZ)	1.582	2.357	3.751							
		(ZH)	1.470	2.502	4.372				0.038	0.060	0.097	
		(ZL)	2.030	3.304	5.234				0.047	0.067	0.097	
	MODE2 → Y	(HZ)	1.560	2.077	3.124							
		(LZ)	1.443	2.113	3.323							
		(ZH)	1.333	2.256	3.981				0.038	0.060	0.097	
		(ZL)	1.896	3.050	4.846				0.047	0.067	0.097	
	BS1 → Y	(HH)	1.520	2.522	4.375				0.039	0.060	0.097	
		(LL)	1.899	3.072	4.912				0.047	0.067	0.096	
	BS2 → Y	(HZ)	1.628	2.218	3.403							
		(LZ)	1.521	2.259	3.602							
		(ZH)	1.423	2.395	4.203				0.038	0.060	0.096	
		(ZL)	1.985	3.198	5.070				0.047	0.067	0.097	
BEUEB3	A → Y	(HH)	1.518	2.516	4.372				0.039	0.060	0.097	
		(LL)	1.909	3.079	4.913				0.047	0.067	0.096	
	B → Y	(HZ)	1.620	2.216	3.399							
		(LZ)	1.517	2.256	3.595							
		(ZH)	1.420	2.394	4.204				0.038	0.060	0.097	
		(ZL)	1.980	3.194	5.063				0.047	0.067	0.097	
	MODE1 → Y	(HH)	1.586	2.623	4.534				0.039	0.060	0.097	
		(HL)	1.958	3.156	5.030				0.048	0.067	0.096	

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(LH)	1.568	2.605	4.511				0.039	0.060	0.096
		(LL)	1.960	3.156	5.067				0.047	0.067	0.096
		(HZ)	1.685	2.319	3.536						
		(LZ)	1.582	2.357	3.751						
		(ZH)	1.470	2.502	4.372				0.038	0.060	0.097
		(ZL)	2.030	3.304	5.234				0.047	0.067	0.097
	MODE2 → Y	(HZ)	1.560	2.077	3.124						
		(LZ)	1.443	2.113	3.323						
		(ZH)	1.333	2.256	3.981				0.038	0.060	0.097
		(ZL)	1.896	3.050	4.846				0.047	0.067	0.097
	BS1 → Y	(HH)	1.520	2.522	4.375				0.039	0.060	0.097
		(LL)	1.899	3.072	4.912				0.047	0.067	0.096
	BS2 → Y	(HZ)	1.628	2.218	3.403						
		(LZ)	1.521	2.259	3.602						
		(ZH)	1.423	2.395	4.203				0.038	0.060	0.096
		(ZL)	1.985	3.198	5.070				0.047	0.067	0.097
BEWEB3	A → Y	(HH)	1.518	2.516	4.372				0.039	0.060	0.097
		(LL)	1.909	3.079	4.913				0.047	0.067	0.096
	B → Y	(HZ)	1.620	2.216	3.399						
		(LZ)	1.517	2.256	3.595						
		(ZH)	1.420	2.394	4.204				0.038	0.060	0.097
		(ZL)	1.980	3.194	5.063				0.047	0.067	0.097
	MODE1 → Y	(HH)	1.586	2.623	4.534				0.039	0.060	0.097
		(HL)	1.958	3.156	5.030				0.048	0.067	0.096
		(LH)	1.568	2.605	4.511				0.039	0.060	0.096
		(LL)	1.960	3.156	5.067				0.047	0.067	0.096
		(HZ)	1.685	2.319	3.536						
		(LZ)	1.582	2.357	3.751						
		(ZH)	1.470	2.502	4.372				0.038	0.060	0.097
		(ZL)	2.030	3.304	5.234				0.047	0.067	0.097
	MODE2 → Y	(HZ)	1.560	2.077	3.124						
		(LZ)	1.443	2.113	3.323						
		(ZH)	1.333	2.256	3.981				0.038	0.060	0.097
		(ZL)	1.896	3.050	4.846				0.047	0.067	0.097
	BS1 → Y	(HH)	1.520	2.522	4.375				0.039	0.060	0.097
		(LL)	1.899	3.072	4.912				0.047	0.067	0.096
	BS2 → Y	(HZ)	1.628	2.218	3.403						
		(LZ)	1.521	2.259	3.602						
		(ZH)	1.423	2.395	4.203				0.038	0.060	0.096
		(ZL)	1.985	3.198	5.070				0.047	0.067	0.097
BE08B3	A → Y	(HH)	1.468	2.457	4.278				0.028	0.044	0.070
		(LL)	1.770	2.896	4.663				0.035	0.049	0.070
	B → Y	(HZ)	1.817	2.480	3.781						
		(LZ)	1.609	2.393	3.825						
		(ZH)	1.372	2.330	4.116				0.028	0.044	0.070
		(ZL)	1.833	2.994	4.779				0.035	0.049	0.071
	MODE1 → Y	(HH)	1.536	2.563	4.453				0.028	0.044	0.070
		(HL)	1.827	2.960	4.790				0.035	0.049	0.070
		(LH)	1.519	2.545	4.423				0.028	0.044	0.070
		(LL)	1.829	2.988	4.819				0.035	0.049	0.070
		(HZ)	1.877	2.581	3.940						
		(LZ)	1.672	2.496	3.979						
		(ZH)	1.422	2.439	4.282				0.028	0.044	0.070
		(ZL)	1.895	3.086	4.961				0.034	0.049	0.071
	MODE2 → Y	(HZ)	1.725	2.336	3.513						
		(LZ)	1.536	2.253	3.551						

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(ZH)	1.285	2.195	3.888				0.028	0.044	0.070
		(ZL)	1.761	2.842	4.572				0.034	0.049	0.070
	BS1 → Y	(HH)	1.470	2.458	4.282				0.028	0.044	0.070
		(LL)	1.773	2.889	4.670				0.035	0.049	0.070
	BS2 → Y	(HZ)	1.803	2.483	3.796						
		(LZ)	1.612	2.397	3.830						
		(ZH)	1.375	2.335	4.118				0.028	0.044	0.070
		(ZL)	1.837	2.981	4.783				0.035	0.049	0.071
BED8B3	A → Y	(HH)	1.468	2.457	4.278				0.028	0.044	0.070
		(LL)	1.770	2.896	4.663				0.035	0.049	0.070
	B → Y	(HZ)	1.817	2.480	3.781						
		(LZ)	1.609	2.393	3.825						
		(ZH)	1.372	2.330	4.116				0.028	0.044	0.070
		(ZL)	1.833	2.994	4.779				0.035	0.049	0.071
	MODE1 → Y	(HH)	1.536	2.563	4.453				0.028	0.044	0.070
		(HL)	1.827	2.960	4.790				0.035	0.049	0.070
		(LH)	1.519	2.545	4.423				0.028	0.044	0.070
		(LL)	1.829	2.988	4.819				0.035	0.049	0.070
		(HZ)	1.877	2.581	3.940						
		(LZ)	1.672	2.496	3.979						
		(ZH)	1.422	2.439	4.282				0.028	0.044	0.070
		(ZL)	1.895	3.086	4.961				0.034	0.049	0.071
	MODE2 → Y	(HZ)	1.725	2.336	3.513						
		(LZ)	1.536	2.253	3.551						
		(ZH)	1.285	2.195	3.888				0.028	0.044	0.070
		(ZL)	1.761	2.842	4.572				0.034	0.049	0.070
	BS1 → Y	(HH)	1.470	2.458	4.282				0.028	0.044	0.070
		(LL)	1.773	2.889	4.670				0.035	0.049	0.070
	BS2 → Y	(HZ)	1.803	2.483	3.796						
		(LZ)	1.612	2.397	3.830						
		(ZH)	1.375	2.335	4.118				0.028	0.044	0.070
		(ZL)	1.837	2.981	4.783				0.035	0.049	0.071
BEU8B3	A → Y	(HH)	1.468	2.457	4.278				0.028	0.044	0.070
		(LL)	1.770	2.896	4.663				0.035	0.049	0.070
	B → Y	(HZ)	1.817	2.480	3.781						
		(LZ)	1.609	2.393	3.825						
		(ZH)	1.372	2.330	4.116				0.028	0.044	0.070
		(ZL)	1.833	2.994	4.779				0.035	0.049	0.071
	MODE1 → Y	(HH)	1.536	2.563	4.453				0.028	0.044	0.070
		(HL)	1.827	2.960	4.790				0.035	0.049	0.070
		(LH)	1.519	2.545	4.423				0.028	0.044	0.070
		(LL)	1.829	2.988	4.819				0.035	0.049	0.070
		(HZ)	1.877	2.581	3.940						
		(LZ)	1.672	2.496	3.979						
		(ZH)	1.422	2.439	4.282				0.028	0.044	0.070
		(ZL)	1.895	3.086	4.961				0.034	0.049	0.071
	MODE2 → Y	(HZ)	1.725	2.336	3.513						
		(LZ)	1.536	2.253	3.551						
		(ZH)	1.285	2.195	3.888				0.028	0.044	0.070
		(ZL)	1.761	2.842	4.572				0.034	0.049	0.070
	BS1 → Y	(HH)	1.470	2.458	4.282				0.028	0.044	0.070
		(LL)	1.773	2.889	4.670				0.035	0.049	0.070
	BS2 → Y	(HZ)	1.803	2.483	3.796						
		(LZ)	1.612	2.397	3.830						
		(ZH)	1.375	2.335	4.118				0.028	0.044	0.070
		(ZL)	1.837	2.981	4.783				0.035	0.049	0.071

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
BEW8B3	A → Y	(HH)	1.468	2.457	4.278				0.028	0.044	0.070	
		(LL)	1.770	2.896	4.663				0.035	0.049	0.070	
	B → Y	(HZ)	1.817	2.480	3.781							
		(LZ)	1.609	2.393	3.825							
		(ZH)	1.372	2.330	4.116				0.028	0.044	0.070	
		(ZL)	1.833	2.994	4.779				0.035	0.049	0.071	
	MODE1 → Y	(HH)	1.536	2.563	4.453				0.028	0.044	0.070	
		(HL)	1.827	2.960	4.790				0.035	0.049	0.070	
		(LH)	1.519	2.545	4.423				0.028	0.044	0.070	
		(LL)	1.829	2.988	4.819				0.035	0.049	0.070	
		(HZ)	1.877	2.581	3.940							
		(LZ)	1.672	2.496	3.979							
		(ZH)	1.422	2.439	4.282				0.028	0.044	0.070	
		(ZL)	1.895	3.086	4.961				0.034	0.049	0.071	
	MODE2 → Y	(HZ)	1.725	2.336	3.513							
		(LZ)	1.536	2.253	3.551							
		(ZH)	1.285	2.195	3.888				0.028	0.044	0.070	
		(ZL)	1.761	2.842	4.572				0.034	0.049	0.070	
	BS1 → Y	(HH)	1.470	2.458	4.282				0.028	0.044	0.070	
		(LL)	1.773	2.889	4.670				0.035	0.049	0.070	
	BS2 → Y	(HZ)	1.803	2.483	3.796							
		(LZ)	1.612	2.397	3.830							
		(ZH)	1.375	2.335	4.118				0.028	0.044	0.070	
		(ZL)	1.837	2.981	4.783				0.035	0.049	0.071	
BE07B3	A → Y	(HH)	1.445	2.436	4.266				0.022	0.035	0.057	
		(LL)	1.682	2.804	4.541				0.028	0.040	0.058	
	B → Y	(HZ)	1.977	2.739	4.174							
		(LZ)	1.711	2.548	4.079							
		(ZH)	1.349	2.313	4.099				0.022	0.035	0.056	
		(ZL)	1.774	2.933	4.684				0.028	0.040	0.058	
	MODE1 → Y	(HH)	1.513	2.546	4.433				0.022	0.035	0.057	
		(HL)	1.751	2.893	4.659				0.028	0.040	0.058	
		(LH)	1.495	2.524	4.409				0.022	0.035	0.057	
		(LL)	1.754	2.899	4.695				0.028	0.040	0.058	
		(HZ)	2.045	2.836	4.338							
		(LZ)	1.775	2.650	4.234							
		(ZH)	1.399	2.422	4.268				0.022	0.035	0.057	
		(ZL)	1.828	3.021	4.854				0.028	0.040	0.058	
	MODE2 → Y	(HZ)	1.905	2.591	3.903							
		(LZ)	1.638	2.408	3.804							
		(ZH)	1.263	2.176	3.879				0.022	0.035	0.056	
		(ZL)	1.688	2.798	4.471				0.028	0.040	0.058	
	BS1 → Y	(HH)	1.446	2.439	4.267				0.022	0.035	0.057	
		(LL)	1.687	2.813	4.543				0.028	0.040	0.058	
	BS2 → Y	(HZ)	1.981	2.743	4.198							
		(LZ)	1.714	2.553	4.082							
		(ZH)	1.352	2.314	4.103				0.022	0.035	0.057	
		(ZL)	1.771	2.936	4.691				0.028	0.040	0.058	
BED7B3	A → Y	(HH)	1.445	2.436	4.266				0.022	0.035	0.057	
		(LL)	1.682	2.804	4.541				0.028	0.040	0.058	
	B → Y	(HZ)	1.977	2.739	4.174							
		(LZ)	1.711	2.548	4.079							
		(ZH)	1.349	2.313	4.099				0.022	0.035	0.056	
		(ZL)	1.774	2.933	4.684				0.028	0.040	0.058	
	MODE1 → Y	(HH)	1.513	2.546	4.433				0.022	0.035	0.057	
		(HL)	1.751	2.893	4.659				0.028	0.040	0.058	

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
		(LH)	1.495	2.524	4.409				0.022	0.035	0.057	
		(LL)	1.754	2.899	4.695				0.028	0.040	0.058	
		(HZ)	2.045	2.836	4.338							
		(LZ)	1.775	2.650	4.234							
		(ZH)	1.399	2.422	4.268				0.022	0.035	0.057	
		(ZL)	1.828	3.021	4.854				0.028	0.040	0.058	
	MODE2 → Y	(HZ)	1.905	2.591	3.903							
		(LZ)	1.638	2.408	3.804							
		(ZH)	1.263	2.176	3.879				0.022	0.035	0.056	
		(ZL)	1.688	2.798	4.471				0.028	0.040	0.058	
	BS1 → Y	(HH)	1.446	2.439	4.267				0.022	0.035	0.057	
		(LL)	1.687	2.813	4.543				0.028	0.040	0.058	
	BS2 → Y	(HZ)	1.981	2.743	4.198							
		(LZ)	1.714	2.553	4.082							
		(ZH)	1.352	2.314	4.103				0.022	0.035	0.057	
		(ZL)	1.771	2.936	4.691				0.028	0.040	0.058	
BEU7B3	A → Y	(HH)	1.445	2.436	4.266				0.022	0.035	0.057	
		(LL)	1.682	2.804	4.541				0.028	0.040	0.058	
	B → Y	(HZ)	1.977	2.739	4.174							
		(LZ)	1.711	2.548	4.079							
		(ZH)	1.349	2.313	4.099				0.022	0.035	0.056	
		(ZL)	1.774	2.933	4.684				0.028	0.040	0.058	
	MODE1 → Y	(HH)	1.513	2.546	4.433				0.022	0.035	0.057	
		(HL)	1.751	2.893	4.659				0.028	0.040	0.058	
		(LH)	1.495	2.524	4.409				0.022	0.035	0.057	
		(LL)	1.754	2.899	4.695				0.028	0.040	0.058	
		(HZ)	2.045	2.836	4.338							
		(LZ)	1.775	2.650	4.234							
		(ZH)	1.399	2.422	4.268				0.022	0.035	0.057	
		(ZL)	1.828	3.021	4.854				0.028	0.040	0.058	
	MODE2 → Y	(HZ)	1.905	2.591	3.903							
		(LZ)	1.638	2.408	3.804							
		(ZH)	1.263	2.176	3.879				0.022	0.035	0.056	
		(ZL)	1.688	2.798	4.471				0.028	0.040	0.058	
	BS1 → Y	(HH)	1.446	2.439	4.267				0.022	0.035	0.057	
		(LL)	1.687	2.813	4.543				0.028	0.040	0.058	
	BS2 → Y	(HZ)	1.981	2.743	4.198							
		(LZ)	1.714	2.553	4.082							
		(ZH)	1.352	2.314	4.103				0.022	0.035	0.057	
		(ZL)	1.771	2.936	4.691				0.028	0.040	0.058	
BEW7B3	A → Y	(HH)	1.445	2.436	4.266				0.022	0.035	0.057	
		(LL)	1.682	2.804	4.541				0.028	0.040	0.058	
	B → Y	(HZ)	1.977	2.739	4.174							
		(LZ)	1.711	2.548	4.079							
		(ZH)	1.349	2.313	4.099				0.022	0.035	0.056	
		(ZL)	1.774	2.933	4.684				0.028	0.040	0.058	
	MODE1 → Y	(HH)	1.513	2.546	4.433				0.022	0.035	0.057	
		(HL)	1.751	2.893	4.659				0.028	0.040	0.058	
		(LH)	1.495	2.524	4.409				0.022	0.035	0.057	
		(LL)	1.754	2.899	4.695				0.028	0.040	0.058	
		(HZ)	2.045	2.836	4.338							
		(LZ)	1.775	2.650	4.234							
		(ZH)	1.399	2.422	4.268				0.022	0.035	0.057	
		(ZL)	1.828	3.021	4.854				0.028	0.040	0.058	
	MODE2 → Y	(HZ)	1.905	2.591	3.903							
		(LZ)	1.638	2.408	3.804							

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(ZH)	1.263	2.176	3.879				0.022	0.035	0.056
		(ZL)	1.688	2.798	4.471				0.028	0.040	0.058
	BS1 → Y	(HH)	1.446	2.439	4.267				0.022	0.035	0.057
		(LL)	1.687	2.813	4.543				0.028	0.040	0.058
	BS2 → Y	(HZ)	1.981	2.743	4.198						
		(LZ)	1.714	2.553	4.082						
		(ZH)	1.352	2.314	4.103				0.022	0.035	0.057
		(ZL)	1.771	2.936	4.691				0.028	0.040	0.058
BE09B3	A → Y	(HH)	1.475	2.528	4.459				0.018	0.028	0.045
		(LL)	1.683	2.813	4.609				0.023	0.032	0.047
	B → Y	(HZ)	2.424	3.334	5.122						
		(LZ)	1.970	2.936	4.720						
		(ZH)	1.387	2.405	4.288				0.018	0.027	0.045
		(ZL)	1.755	2.916	4.758				0.023	0.032	0.047
	MODE1 → Y	(HH)	1.547	2.636	4.626				0.018	0.028	0.045
		(HL)	1.735	2.906	4.732				0.023	0.032	0.047
		(LH)	1.527	2.618	4.600				0.018	0.028	0.045
		(LL)	1.744	2.914	4.747				0.023	0.032	0.047
		(HZ)	2.488	3.432	5.291						
		(LZ)	2.034	3.039	4.871						
		(ZH)	1.436	2.513	4.452				0.018	0.027	0.045
		(ZL)	1.794	3.031	4.937				0.023	0.032	0.047
	MODE2 → Y	(HZ)	2.357	3.188	4.863						
		(LZ)	1.898	2.797	4.439						
		(ZH)	1.299	2.269	4.070				0.018	0.027	0.045
		(ZL)	1.660	2.786	4.544				0.023	0.032	0.047
	BS1 → Y	(HH)	1.477	2.529	4.459				0.018	0.028	0.046
		(LL)	1.683	2.811	4.613				0.023	0.032	0.047
	BS2 → Y	(HZ)	2.425	3.339	5.119						
		(LZ)	1.974	2.945	4.720						
		(ZH)	1.389	2.407	4.289				0.018	0.027	0.045
		(ZL)	1.750	2.917	4.766				0.023	0.033	0.047
BED9B3	A → Y	(HH)	1.475	2.528	4.459				0.018	0.028	0.045
		(LL)	1.683	2.813	4.609				0.023	0.032	0.047
	B → Y	(HZ)	2.424	3.334	5.122						
		(LZ)	1.970	2.936	4.720						
		(ZH)	1.387	2.405	4.288				0.018	0.027	0.045
		(ZL)	1.755	2.916	4.758				0.023	0.032	0.047
	MODE1 → Y	(HH)	1.547	2.636	4.626				0.018	0.028	0.045
		(HL)	1.735	2.906	4.732				0.023	0.032	0.047
		(LH)	1.527	2.618	4.600				0.018	0.028	0.045
		(LL)	1.744	2.914	4.747				0.023	0.032	0.047
		(HZ)	2.488	3.432	5.291						
		(LZ)	2.034	3.039	4.871						
		(ZH)	1.436	2.513	4.452				0.018	0.027	0.045
		(ZL)	1.794	3.031	4.937				0.023	0.032	0.047
	MODE2 → Y	(HZ)	2.357	3.188	4.863						
		(LZ)	1.898	2.797	4.439						
		(ZH)	1.299	2.269	4.070				0.018	0.027	0.045
		(ZL)	1.660	2.786	4.544				0.023	0.032	0.047
	BS1 → Y	(HH)	1.477	2.529	4.459				0.018	0.028	0.046
		(LL)	1.683	2.811	4.613				0.023	0.032	0.047
	BS2 → Y	(HZ)	2.425	3.339	5.119						
		(LZ)	1.974	2.945	4.720						
		(ZH)	1.389	2.407	4.289				0.018	0.027	0.045
		(ZL)	1.750	2.917	4.766				0.023	0.033	0.047

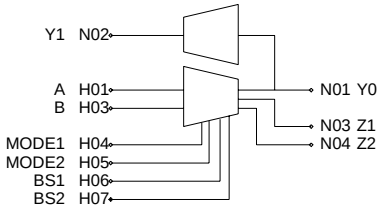
Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BEU9B3	A → Y	(HH)	1.475	2.528	4.459				0.018	0.028	0.045
		(LL)	1.683	2.813	4.609				0.023	0.032	0.047
	B → Y	(HZ)	2.424	3.334	5.122						
		(LZ)	1.970	2.936	4.720						
		(ZH)	1.387	2.405	4.288				0.018	0.027	0.045
		(ZL)	1.755	2.916	4.758				0.023	0.032	0.047
	MODE1 → Y	(HH)	1.547	2.636	4.626				0.018	0.028	0.045
		(HL)	1.735	2.906	4.732				0.023	0.032	0.047
		(LH)	1.527	2.618	4.600				0.018	0.028	0.045
		(LL)	1.744	2.914	4.747				0.023	0.032	0.047
		(HZ)	2.488	3.432	5.291						
		(LZ)	2.034	3.039	4.871						
		(ZH)	1.436	2.513	4.452				0.018	0.027	0.045
		(ZL)	1.794	3.031	4.937				0.023	0.032	0.047
	MODE2 → Y	(HZ)	2.357	3.188	4.863						
		(LZ)	1.898	2.797	4.439						
		(ZH)	1.299	2.269	4.070				0.018	0.027	0.045
		(ZL)	1.660	2.786	4.544				0.023	0.032	0.047
	BS1 → Y	(HH)	1.477	2.529	4.459				0.018	0.028	0.046
		(LL)	1.683	2.811	4.613				0.023	0.032	0.047
	BS2 → Y	(HZ)	2.425	3.339	5.119						
		(LZ)	1.974	2.945	4.720						
		(ZH)	1.389	2.407	4.289				0.018	0.027	0.045
		(ZL)	1.750	2.917	4.766				0.023	0.033	0.047
BEW9B3	A → Y	(HH)	1.475	2.528	4.459				0.018	0.028	0.045
		(LL)	1.683	2.813	4.609				0.023	0.032	0.047
	B → Y	(HZ)	2.424	3.334	5.122						
		(LZ)	1.970	2.936	4.720						
		(ZH)	1.387	2.405	4.288				0.018	0.027	0.045
		(ZL)	1.755	2.916	4.758				0.023	0.032	0.047
	MODE1 → Y	(HH)	1.547	2.636	4.626				0.018	0.028	0.045
		(HL)	1.735	2.906	4.732				0.023	0.032	0.047
		(LH)	1.527	2.618	4.600				0.018	0.028	0.045
		(LL)	1.744	2.914	4.747				0.023	0.032	0.047
		(HZ)	2.488	3.432	5.291						
		(LZ)	2.034	3.039	4.871						
		(ZH)	1.436	2.513	4.452				0.018	0.027	0.045
		(ZL)	1.794	3.031	4.937				0.023	0.032	0.047
	MODE2 → Y	(HZ)	2.357	3.188	4.863						
		(LZ)	1.898	2.797	4.439						
		(ZH)	1.299	2.269	4.070				0.018	0.027	0.045
		(ZL)	1.660	2.786	4.544				0.023	0.032	0.047
	BS1 → Y	(HH)	1.477	2.529	4.459				0.018	0.028	0.046
		(LL)	1.683	2.811	4.613				0.023	0.032	0.047
	BS2 → Y	(HZ)	2.425	3.339	5.119						
		(LZ)	1.974	2.945	4.720						
		(ZH)	1.389	2.407	4.289				0.018	0.027	0.045
		(ZL)	1.750	2.917	4.766				0.023	0.033	0.047
BE0HB3	A → Y	(HH)	1.478	2.552	4.510				0.015	0.024	0.040
		(LL)	1.615	2.740	4.501				0.019	0.028	0.041
	B → Y	(HZ)	2.726	3.773	5.819						
		(LZ)	2.112	3.154	5.070						
		(ZH)	1.388	2.425	4.348				0.015	0.024	0.040
		(ZL)	1.703	2.839	4.676				0.020	0.028	0.041
	MODE1 → Y	(HH)	1.552	2.662	4.680				0.015	0.024	0.040
		(HL)	1.675	2.826	4.615				0.020	0.028	0.041

Block type	Switching speed									
	Path	t_{LD0} (ns)			t_1			T		
	IN → OUT	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
	(LH)	1.534	2.638	4.653				0.015	0.024	0.040
	(LL)	1.682	2.854	4.658				0.020	0.028	0.041
	(HZ)	2.767	3.860	5.966						
	(LZ)	2.176	3.257	5.225						
	(ZH)	1.438	2.534	4.512				0.015	0.024	0.040
	(ZL)	1.757	2.958	4.839				0.019	0.028	0.041
	MODE2 → Y (HZ)	2.631	3.612	5.539						
	(LZ)	2.039	3.017	4.796						
	(ZH)	1.302	2.288	4.125				0.015	0.024	0.040
	(ZL)	1.607	2.721	4.434				0.020	0.028	0.041
	BS1 → Y (HH)	1.486	2.553	4.515				0.015	0.024	0.040
	(LL)	1.622	2.745	4.502				0.020	0.028	0.041
	BS2 → Y (HZ)	2.715	3.754	5.828						
	(LZ)	2.115	3.161	5.078						
	(ZH)	1.391	2.428	4.350				0.015	0.024	0.040
	(ZL)	1.701	2.842	4.680				0.020	0.028	0.041
BEDHB3	A → Y (HH)	1.478	2.552	4.510				0.015	0.024	0.040
	(LL)	1.615	2.740	4.501				0.019	0.028	0.041
	B → Y (HZ)	2.726	3.773	5.819						
	(LZ)	2.112	3.154	5.070						
	(ZH)	1.388	2.425	4.348				0.015	0.024	0.040
	(ZL)	1.703	2.839	4.676				0.020	0.028	0.041
	MODE1 → Y (HH)	1.552	2.662	4.680				0.015	0.024	0.040
	(HL)	1.675	2.826	4.615				0.020	0.028	0.041
	(LH)	1.534	2.638	4.653				0.015	0.024	0.040
	(LL)	1.682	2.854	4.658				0.020	0.028	0.041
	(HZ)	2.767	3.860	5.966						
	(LZ)	2.176	3.257	5.225						
	(ZH)	1.438	2.534	4.512				0.015	0.024	0.040
	(ZL)	1.757	2.958	4.839				0.019	0.028	0.041
	MODE2 → Y (HZ)	2.631	3.612	5.539						
	(LZ)	2.039	3.017	4.796						
	(ZH)	1.302	2.288	4.125				0.015	0.024	0.040
	(ZL)	1.607	2.721	4.434				0.020	0.028	0.041
	BS1 → Y (HH)	1.486	2.553	4.515				0.015	0.024	0.040
	(LL)	1.622	2.745	4.502				0.020	0.028	0.041
	BS2 → Y (HZ)	2.715	3.754	5.828						
	(LZ)	2.115	3.161	5.078						
	(ZH)	1.391	2.428	4.350				0.015	0.024	0.040
	(ZL)	1.701	2.842	4.680				0.020	0.028	0.041
BEUHB3	A → Y (HH)	1.478	2.552	4.510				0.015	0.024	0.040
	(LL)	1.615	2.740	4.501				0.019	0.028	0.041
	B → Y (HZ)	2.726	3.773	5.819						
	(LZ)	2.112	3.154	5.070						
	(ZH)	1.388	2.425	4.348				0.015	0.024	0.040
	(ZL)	1.703	2.839	4.676				0.020	0.028	0.041
	MODE1 → Y (HH)	1.552	2.662	4.680				0.015	0.024	0.040
	(HL)	1.675	2.826	4.615				0.020	0.028	0.041
	(LH)	1.534	2.638	4.653				0.015	0.024	0.040
	(LL)	1.682	2.854	4.658				0.020	0.028	0.041
	(HZ)	2.767	3.860	5.966						
	(LZ)	2.176	3.257	5.225						
	(ZH)	1.438	2.534	4.512				0.015	0.024	0.040
	(ZL)	1.757	2.958	4.839				0.019	0.028	0.041
	MODE2 → Y (HZ)	2.631	3.612	5.539						
	(LZ)	2.039	3.017	4.796						

Block type	Switching speed									
	Path	t_{LD0} (ns)			t_1			T		
	IN → OUT	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
	(ZH)	1.302	2.288	4.125				0.015	0.024	0.040
	(ZL)	1.607	2.721	4.434				0.020	0.028	0.041
	BS1 → Y (HH)	1.486	2.553	4.515				0.015	0.024	0.040
	(LL)	1.622	2.745	4.502				0.020	0.028	0.041
	BS2 → Y (HZ)	2.715	3.754	5.828						
	(LZ)	2.115	3.161	5.078						
	(ZH)	1.391	2.428	4.350				0.015	0.024	0.040
	(ZL)	1.701	2.842	4.680				0.020	0.028	0.041
BEWHB3	A → Y (HH)	1.478	2.552	4.510				0.015	0.024	0.040
	(LL)	1.615	2.740	4.501				0.019	0.028	0.041
	B → Y (HZ)	2.726	3.773	5.819						
	(LZ)	2.112	3.154	5.070						
	(ZH)	1.388	2.425	4.348				0.015	0.024	0.040
	(ZL)	1.703	2.839	4.676				0.020	0.028	0.041
	MODE1 → Y (HH)	1.552	2.662	4.680				0.015	0.024	0.040
	(HL)	1.675	2.826	4.615				0.020	0.028	0.041
	(LH)	1.534	2.638	4.653				0.015	0.024	0.040
	(LL)	1.682	2.854	4.658				0.020	0.028	0.041
	(HZ)	2.767	3.860	5.966						
	(LZ)	2.176	3.257	5.225						
	(ZH)	1.438	2.534	4.512				0.015	0.024	0.040
	(ZL)	1.757	2.958	4.839				0.019	0.028	0.041
	MODE2 → Y (HZ)	2.631	3.612	5.539						
	(LZ)	2.039	3.017	4.796						
	(ZH)	1.302	2.288	4.125				0.015	0.024	0.040
	(ZL)	1.607	2.721	4.434				0.020	0.028	0.041
	BS1 → Y (HH)	1.486	2.553	4.515				0.015	0.024	0.040
	(LL)	1.622	2.745	4.502				0.020	0.028	0.041
	BS2 → Y (HZ)	2.715	3.754	5.828						
	(LZ)	2.115	3.161	5.078						
	(ZH)	1.391	2.428	4.350				0.015	0.024	0.040
	(ZL)	1.701	2.842	4.680				0.020	0.028	0.041

Function	I/O Buffer					3.3V
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA	B00UBB	B0DUBB	B0UUBB	B0WUBB	1	38
6mA	B00CBB	B0DCBB	B0UCBB	B0WCBB	1	38
9mA	B003BB	B0D3BB	B0U3BB	B0W3BB	1	38
12mA	B001BB	B0D1BB	B0U1BB	B0W1BB	1	38
18mA	B005BB	B0D5BB	B0U5BB	B0W5BB	1	41
24mA	B00FBB	B0DFBB	B0UFBB	B0WFBB	1	41

Logic Diagram



Truth Table

A	B	BS1	BS2	*1	*2	Y0	Z1	Z2	
A	1	X	X	0	0	A	A	1	
A	0	X	X	0	0	Z	A	0	
X	X	A	1	1	0	A	A	1	
X	X	A	0	1	0	Z	A	0	
A	B	X	X	0	1	Z	A	B	
X	X	A	B	1	1	Z	A	B	← Prohibition

*1:MODE1 , *2:MODE2

X:Irrelevant

Z:High Impedance

Y0	Y1
0	0
1	1

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
B00UBB to B0WUBB	A	2.4	Y1	358
	B	2.4	Z1	36
	MODE1	2.5	Z2	35
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		
B00CBB to B0WCBB	A	2.4	Y1	358
	B	2.4	Z1	36
	MODE1	2.5	Z2	35
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		
B003BB to B0W1BB	A	2.4	Y1	358
	B	2.4	Z1	36
	MODE1	2.5	Z2	35
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		
B005BB to B0WFBB	A	2.4	Y1	358
	B	2.4	Z1	35
	MODE1	2.5	Z2	35
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
B00UBB	A → Y0	(HH)	0.996	1.577	2.563				0.072	0.114	0.181	
		(LL)	1.069	1.618	2.471				0.088	0.125	0.179	
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034				
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025				
	B → Y0	(HZ)	0.348	0.530	0.847							
		(LZ)	0.481	0.769	1.238							
		(ZH)	0.986	1.576	2.561				0.072	0.114	0.181	
		(ZL)	1.259	1.899	2.896				0.087	0.125	0.179	
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034				
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025				
	MODE1 → Y0	(HH)	1.063	1.685	2.732				0.072	0.114	0.181	
		(HL)	1.139	1.705	2.588				0.088	0.125	0.179	
		(LH)	1.045	1.665	2.703				0.072	0.114	0.181	
		(LL)	1.138	1.718	2.625				0.088	0.125	0.179	
		(HZ)	0.411	0.631	1.004							
		(LZ)	0.545	0.870	1.397							
		(ZH)	1.036	1.691	2.729				0.072	0.114	0.181	
		(ZL)	1.307	2.008	3.065				0.087	0.124	0.179	
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034				
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025				
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034				
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025				
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034				
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025				
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034				
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025				
	MODE2 → Y0	(HZ)	0.280	0.382	0.558							
		(LZ)	0.411	0.623	0.953							
		(ZH)	0.896	1.441	2.338				0.072	0.114	0.181	
		(ZL)	1.166	1.760	2.675				0.087	0.125	0.179	
	BS1 → Y0	(HH)	0.998	1.588	2.568				0.072	0.114	0.181	
		(LL)	1.082	1.629	2.468				0.087	0.125	0.179	
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034				
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025				
	BS2 → Y0	(HZ)	0.350	0.534	0.851							
		(LZ)	0.484	0.771	1.240							
		(ZH)	0.987	1.585	2.565				0.072	0.114	0.181	
		(ZL)	1.258	1.902	2.901				0.087	0.125	0.179	
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034				
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025				
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003				
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003				
B0DUBB	A → Y0	(HH)	0.996	1.577	2.563				0.072	0.114	0.181	
		(LL)	1.069	1.618	2.471				0.088	0.125	0.179	
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034				
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025				
	B → Y0	(HZ)	0.348	0.530	0.847							
		(LZ)	0.481	0.769	1.238							
		(ZH)	0.986	1.576	2.561				0.072	0.114	0.181	
		(ZL)	1.259	1.899	2.896				0.087	0.125	0.179	
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034				
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025				
	MODE1 → Y0	(HH)	1.063	1.685	2.732				0.072	0.114	0.181	
		(HL)	1.139	1.705	2.588				0.088	0.125	0.179	
		(LH)	1.045	1.665	2.703				0.072	0.114	0.181	
		(LL)	1.138	1.718	2.625				0.088	0.125	0.179	

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(HZ)	0.411	0.631	1.004						
		(LZ)	0.545	0.870	1.397						
		(ZH)	1.036	1.691	2.729				0.072	0.114	0.181
		(ZL)	1.307	2.008	3.065				0.087	0.124	0.179
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.280	0.382	0.558						
		(LZ)	0.411	0.623	0.953						
		(ZH)	0.896	1.441	2.338				0.072	0.114	0.181
		(ZL)	1.166	1.760	2.675				0.087	0.125	0.179
	BS1 → Y0	(HH)	0.998	1.588	2.568				0.072	0.114	0.181
		(LL)	1.082	1.629	2.468				0.087	0.125	0.179
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.350	0.534	0.851						
		(LZ)	0.484	0.771	1.240						
		(ZH)	0.987	1.585	2.565				0.072	0.114	0.181
		(ZL)	1.258	1.902	2.901				0.087	0.125	0.179
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
B0UUBB	A → Y0	(HH)	0.996	1.577	2.563				0.072	0.114	0.181
		(LL)	1.069	1.618	2.471				0.088	0.125	0.179
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	0.348	0.530	0.847						
		(LZ)	0.481	0.769	1.238						
		(ZH)	0.986	1.576	2.561				0.072	0.114	0.181
		(ZL)	1.259	1.899	2.896				0.087	0.125	0.179
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.063	1.685	2.732				0.072	0.114	0.181
		(HL)	1.139	1.705	2.588				0.088	0.125	0.179
		(LH)	1.045	1.665	2.703				0.072	0.114	0.181
		(LL)	1.138	1.718	2.625				0.088	0.125	0.179
		(HZ)	0.411	0.631	1.004						
		(LZ)	0.545	0.870	1.397						
		(ZH)	1.036	1.691	2.729				0.072	0.114	0.181
		(ZL)	1.307	2.008	3.065				0.087	0.124	0.179
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.280	0.382	0.558						
		(LZ)	0.411	0.623	0.953						

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(ZH)	0.896	1.441	2.338				0.072	0.114	0.181
		(ZL)	1.166	1.760	2.675				0.087	0.125	0.179
	BS1 → Y0	(HH)	0.998	1.588	2.568				0.072	0.114	0.181
		(LL)	1.082	1.629	2.468				0.087	0.125	0.179
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.350	0.534	0.851						
		(LZ)	0.484	0.771	1.240						
		(ZH)	0.987	1.585	2.565				0.072	0.114	0.181
		(ZL)	1.258	1.902	2.901				0.087	0.125	0.179
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
B0WUBB	A → Y0	(HH)	0.996	1.577	2.563				0.072	0.114	0.181
		(LL)	1.069	1.618	2.471				0.088	0.125	0.179
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	0.348	0.530	0.847						
		(LZ)	0.481	0.769	1.238						
		(ZH)	0.986	1.576	2.561				0.072	0.114	0.181
		(ZL)	1.259	1.899	2.896				0.087	0.125	0.179
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.063	1.685	2.732				0.072	0.114	0.181
		(HL)	1.139	1.705	2.588				0.088	0.125	0.179
		(LH)	1.045	1.665	2.703				0.072	0.114	0.181
		(LL)	1.138	1.718	2.625				0.088	0.125	0.179
		(HZ)	0.411	0.631	1.004						
		(LZ)	0.545	0.870	1.397						
		(ZH)	1.036	1.691	2.729				0.072	0.114	0.181
		(ZL)	1.307	2.008	3.065				0.087	0.124	0.179
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.280	0.382	0.558						
		(LZ)	0.411	0.623	0.953						
		(ZH)	0.896	1.441	2.338				0.072	0.114	0.181
		(ZL)	1.166	1.760	2.675				0.087	0.125	0.179
	BS1 → Y0	(HH)	0.998	1.588	2.568				0.072	0.114	0.181
		(LL)	1.082	1.629	2.468				0.087	0.125	0.179
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.350	0.534	0.851						
		(LZ)	0.484	0.771	1.240						
		(ZH)	0.987	1.585	2.565				0.072	0.114	0.181
		(ZL)	1.258	1.902	2.901				0.087	0.125	0.179
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
B00CBB	A → Y0	(HH)	0.881	1.423	2.339				0.037	0.059	0.093
		(LL)	0.945	1.503	2.399				0.045	0.063	0.090
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	0.622	0.900	1.405						
		(LZ)	0.633	0.987	1.585						
		(ZH)	0.854	1.382	2.257				0.037	0.059	0.093
		(ZL)	1.067	1.677	2.642				0.044	0.063	0.090
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.950	1.533	2.510				0.037	0.059	0.093
		(HL)	1.009	1.591	2.519				0.045	0.063	0.090
		(LH)	0.932	1.512	2.482				0.037	0.059	0.093
		(LL)	1.012	1.602	2.556				0.045	0.063	0.090
		(HZ)	0.691	1.000	1.562						
		(LZ)	0.697	1.089	1.744						
		(ZH)	0.905	1.490	2.425				0.037	0.059	0.093
		(ZL)	1.112	1.786	2.810				0.045	0.063	0.090
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.557	0.751	1.113						
		(LZ)	0.561	0.842	1.302						
		(ZH)	0.765	1.240	2.034				0.037	0.059	0.093
		(ZL)	0.970	1.535	2.420				0.045	0.063	0.090
	BS1 → Y0	(HH)	0.883	1.427	2.343				0.037	0.059	0.093
		(LL)	0.949	1.505	2.404				0.044	0.063	0.090
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.625	0.903	1.412						
		(LZ)	0.635	0.991	1.589						
		(ZH)	0.857	1.384	2.262				0.037	0.059	0.093
		(ZL)	1.068	1.679	2.645				0.045	0.063	0.090
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
B0DCBB	A → Y0	(HH)	0.881	1.423	2.339				0.037	0.059	0.093
		(LL)	0.945	1.503	2.399				0.045	0.063	0.090
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	0.622	0.900	1.405						
		(LZ)	0.633	0.987	1.585						
		(ZH)	0.854	1.382	2.257				0.037	0.059	0.093
		(ZL)	1.067	1.677	2.642				0.044	0.063	0.090
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.950	1.533	2.510				0.037	0.059	0.093
		(HL)	1.009	1.591	2.519				0.045	0.063	0.090
		(LH)	0.932	1.512	2.482				0.037	0.059	0.093
		(LL)	1.012	1.602	2.556				0.045	0.063	0.090

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(HZ)	0.691	1.000	1.562						
		(LZ)	0.697	1.089	1.744						
		(ZH)	0.905	1.490	2.425				0.037	0.059	0.093
		(ZL)	1.112	1.786	2.810				0.045	0.063	0.090
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.557	0.751	1.113						
		(LZ)	0.561	0.842	1.302						
		(ZH)	0.765	1.240	2.034				0.037	0.059	0.093
		(ZL)	0.970	1.535	2.420				0.045	0.063	0.090
	BS1 → Y0	(HH)	0.883	1.427	2.343				0.037	0.059	0.093
		(LL)	0.949	1.505	2.404				0.044	0.063	0.090
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.625	0.903	1.412						
		(LZ)	0.635	0.991	1.589						
		(ZH)	0.857	1.384	2.262				0.037	0.059	0.093
		(ZL)	1.068	1.679	2.645				0.045	0.063	0.090
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
B0UCBB	A → Y0	(HH)	0.881	1.423	2.339				0.037	0.059	0.093
		(LL)	0.945	1.503	2.399				0.045	0.063	0.090
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	0.622	0.900	1.405						
		(LZ)	0.633	0.987	1.585						
		(ZH)	0.854	1.382	2.257				0.037	0.059	0.093
		(ZL)	1.067	1.677	2.642				0.044	0.063	0.090
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.950	1.533	2.510				0.037	0.059	0.093
		(HL)	1.009	1.591	2.519				0.045	0.063	0.090
		(LH)	0.932	1.512	2.482				0.037	0.059	0.093
		(LL)	1.012	1.602	2.556				0.045	0.063	0.090
		(HZ)	0.691	1.000	1.562						
		(LZ)	0.697	1.089	1.744						
		(ZH)	0.905	1.490	2.425				0.037	0.059	0.093
		(ZL)	1.112	1.786	2.810				0.045	0.063	0.090
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.557	0.751	1.113						
		(LZ)	0.561	0.842	1.302						

Block type	Path		Switching speed: t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(ZH)	0.765	1.240	2.034				0.037	0.059	0.093
		(ZL)	0.970	1.535	2.420				0.045	0.063	0.090
	BS1 → Y0	(HH)	0.883	1.427	2.343				0.037	0.059	0.093
		(LL)	0.949	1.505	2.404				0.044	0.063	0.090
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.625	0.903	1.412						
		(LZ)	0.635	0.991	1.589						
		(ZH)	0.857	1.384	2.262				0.037	0.059	0.093
		(ZL)	1.068	1.679	2.645				0.045	0.063	0.090
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
B0WCBB	A → Y0	(HH)	0.881	1.423	2.339				0.037	0.059	0.093
		(LL)	0.945	1.503	2.399				0.045	0.063	0.090
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	0.622	0.900	1.405						
		(LZ)	0.633	0.987	1.585						
		(ZH)	0.854	1.382	2.257				0.037	0.059	0.093
		(ZL)	1.067	1.677	2.642				0.044	0.063	0.090
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.950	1.533	2.510				0.037	0.059	0.093
		(HL)	1.009	1.591	2.519				0.045	0.063	0.090
		(LH)	0.932	1.512	2.482				0.037	0.059	0.093
		(LL)	1.012	1.602	2.556				0.045	0.063	0.090
		(HZ)	0.691	1.000	1.562						
		(LZ)	0.697	1.089	1.744						
		(ZH)	0.905	1.490	2.425				0.037	0.059	0.093
		(ZL)	1.112	1.786	2.810				0.045	0.063	0.090
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.557	0.751	1.113						
		(LZ)	0.561	0.842	1.302						
		(ZH)	0.765	1.240	2.034				0.037	0.059	0.093
		(ZL)	0.970	1.535	2.420				0.045	0.063	0.090
	BS1 → Y0	(HH)	0.883	1.427	2.343				0.037	0.059	0.093
		(LL)	0.949	1.505	2.404				0.044	0.063	0.090
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.625	0.903	1.412						
		(LZ)	0.635	0.991	1.589						
		(ZH)	0.857	1.384	2.262				0.037	0.059	0.093
		(ZL)	1.068	1.679	2.645				0.045	0.063	0.090
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			

Block type	Path		Switching speed: t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
B003BB	A → Y0	(HH)	0.820	1.323	2.175				0.026	0.041	0.064
		(LL)	0.849	1.374	2.223				0.031	0.043	0.061
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	0.670	0.962	1.517						
		(LZ)	0.647	1.011	1.619						
		(ZH)	0.789	1.276	2.085				0.026	0.041	0.064
		(ZL)	0.959	1.531	2.438				0.031	0.043	0.061
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.888	1.433	2.345				0.026	0.041	0.064
		(HL)	0.913	1.462	2.342				0.031	0.043	0.061
		(LH)	0.870	1.412	2.319				0.026	0.041	0.064
		(LL)	0.912	1.473	2.380				0.031	0.043	0.061
		(HZ)	0.740	1.062	1.671						
		(LZ)	0.710	1.112	1.778						
		(ZH)	0.840	1.384	2.252				0.026	0.041	0.064
		(ZL)	1.011	1.638	2.606				0.031	0.043	0.061
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.606	0.813	1.220						
		(LZ)	0.575	0.864	1.336						
		(ZH)	0.700	1.135	1.862				0.026	0.041	0.064
		(ZL)	0.868	1.390	2.215				0.031	0.043	0.061
	BS1 → Y0	(HH)	0.822	1.328	2.179				0.026	0.041	0.064
		(LL)	0.852	1.378	2.226				0.031	0.043	0.061
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.672	0.974	1.524						
		(LZ)	0.649	1.014	1.622						
		(ZH)	0.791	1.278	2.087				0.026	0.041	0.064
		(ZL)	0.961	1.534	2.440				0.031	0.043	0.061
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
B0D3BB	A → Y0	(HH)	0.820	1.323	2.175				0.026	0.041	0.064
		(LL)	0.849	1.374	2.223				0.031	0.043	0.061
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	0.670	0.962	1.517						
		(LZ)	0.647	1.011	1.619						
		(ZH)	0.789	1.276	2.085				0.026	0.041	0.064
		(ZL)	0.959	1.531	2.438				0.031	0.043	0.061
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.888	1.433	2.345				0.026	0.041	0.064
		(HL)	0.913	1.462	2.342				0.031	0.043	0.061
		(LH)	0.870	1.412	2.319				0.026	0.041	0.064
		(LL)	0.912	1.473	2.380				0.031	0.043	0.061

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(HZ)	0.740	1.062	1.671						
		(LZ)	0.710	1.112	1.778						
		(ZH)	0.840	1.384	2.252				0.026	0.041	0.064
		(ZL)	1.011	1.638	2.606				0.031	0.043	0.061
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.606	0.813	1.220						
		(LZ)	0.575	0.864	1.336						
		(ZH)	0.700	1.135	1.862				0.026	0.041	0.064
		(ZL)	0.868	1.390	2.215				0.031	0.043	0.061
	BS1 → Y0	(HH)	0.822	1.328	2.179				0.026	0.041	0.064
		(LL)	0.852	1.378	2.226				0.031	0.043	0.061
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.672	0.974	1.524						
		(LZ)	0.649	1.014	1.622						
		(ZH)	0.791	1.278	2.087				0.026	0.041	0.064
		(ZL)	0.961	1.534	2.440				0.031	0.043	0.061
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
B0U3BB	A → Y0	(HH)	0.820	1.323	2.175				0.026	0.041	0.064
		(LL)	0.849	1.374	2.223				0.031	0.043	0.061
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	0.670	0.962	1.517						
		(LZ)	0.647	1.011	1.619						
		(ZH)	0.789	1.276	2.085				0.026	0.041	0.064
		(ZL)	0.959	1.531	2.438				0.031	0.043	0.061
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.888	1.433	2.345				0.026	0.041	0.064
		(HL)	0.913	1.462	2.342				0.031	0.043	0.061
		(LH)	0.870	1.412	2.319				0.026	0.041	0.064
		(LL)	0.912	1.473	2.380				0.031	0.043	0.061
		(HZ)	0.740	1.062	1.671						
		(LZ)	0.710	1.112	1.778						
		(ZH)	0.840	1.384	2.252				0.026	0.041	0.064
		(ZL)	1.011	1.638	2.606				0.031	0.043	0.061
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.606	0.813	1.220						
		(LZ)	0.575	0.864	1.336						

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(ZH)	0.700	1.135	1.862				0.026	0.041	0.064
		(ZL)	0.868	1.390	2.215				0.031	0.043	0.061
	BS1 → Y0	(HH)	0.822	1.328	2.179				0.026	0.041	0.064
		(LL)	0.852	1.378	2.226				0.031	0.043	0.061
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.672	0.974	1.524						
		(LZ)	0.649	1.014	1.622						
		(ZH)	0.791	1.278	2.087				0.026	0.041	0.064
		(ZL)	0.961	1.534	2.440				0.031	0.043	0.061
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
B0W3BB	A → Y0	(HH)	0.820	1.323	2.175				0.026	0.041	0.064
		(LL)	0.849	1.374	2.223				0.031	0.043	0.061
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	0.670	0.962	1.517						
		(LZ)	0.647	1.011	1.619						
		(ZH)	0.789	1.276	2.085				0.026	0.041	0.064
		(ZL)	0.959	1.531	2.438				0.031	0.043	0.061
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.888	1.433	2.345				0.026	0.041	0.064
		(HL)	0.913	1.462	2.342				0.031	0.043	0.061
		(LH)	0.870	1.412	2.319				0.026	0.041	0.064
		(LL)	0.912	1.473	2.380				0.031	0.043	0.061
		(HZ)	0.740	1.062	1.671						
		(LZ)	0.710	1.112	1.778						
		(ZH)	0.840	1.384	2.252				0.026	0.041	0.064
		(ZL)	1.011	1.638	2.606				0.031	0.043	0.061
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.606	0.813	1.220						
		(LZ)	0.575	0.864	1.336						
		(ZH)	0.700	1.135	1.862				0.026	0.041	0.064
		(ZL)	0.868	1.390	2.215				0.031	0.043	0.061
	BS1 → Y0	(HH)	0.822	1.328	2.179				0.026	0.041	0.064
		(LL)	0.852	1.378	2.226				0.031	0.043	0.061
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.672	0.974	1.524						
		(LZ)	0.649	1.014	1.622						
		(ZH)	0.791	1.278	2.087				0.026	0.041	0.064
		(ZL)	0.961	1.534	2.440				0.031	0.043	0.061
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
B001BB	A → Y0	(HH)	0.790	1.284	2.115				0.020	0.031	0.048
		(LL)	0.807	1.320	2.154				0.023	0.033	0.047
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	0.726	1.032	1.620						
		(LZ)	0.663	1.034	1.658						
		(ZH)	0.758	1.228	2.011				0.020	0.031	0.048
		(ZL)	0.907	1.461	2.340				0.023	0.033	0.047
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.858	1.393	2.283				0.020	0.031	0.048
		(HL)	0.874	1.409	2.274				0.023	0.033	0.047
		(LH)	0.841	1.372	2.258				0.020	0.031	0.048
		(LL)	0.872	1.423	2.309				0.023	0.033	0.047
		(HZ)	0.789	1.132	1.779						
		(LZ)	0.727	1.135	1.818						
		(ZH)	0.809	1.338	2.181				0.020	0.031	0.048
		(ZL)	0.957	1.570	2.508				0.023	0.033	0.047
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.655	0.892	1.333						
		(LZ)	0.593	0.888	1.374						
		(ZH)	0.668	1.088	1.789				0.020	0.030	0.048
		(ZL)	0.818	1.320	2.117				0.023	0.033	0.047
	BS1 → Y0	(HH)	0.792	1.286	2.119				0.020	0.031	0.048
		(LL)	0.810	1.322	2.157				0.023	0.033	0.047
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.725	1.038	1.632						
		(LZ)	0.665	1.038	1.661						
		(ZH)	0.760	1.232	2.017				0.020	0.030	0.048
		(ZL)	0.908	1.464	2.345				0.023	0.033	0.047
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
B0D1BB	A → Y0	(HH)	0.790	1.284	2.115				0.020	0.031	0.048
		(LL)	0.807	1.320	2.154				0.023	0.033	0.047
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	0.726	1.032	1.620						
		(LZ)	0.663	1.034	1.658						
		(ZH)	0.758	1.228	2.011				0.020	0.031	0.048
		(ZL)	0.907	1.461	2.340				0.023	0.033	0.047
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.858	1.393	2.283				0.020	0.031	0.048
		(HL)	0.874	1.409	2.274				0.023	0.033	0.047
		(LH)	0.841	1.372	2.258				0.020	0.031	0.048
		(LL)	0.872	1.423	2.309				0.023	0.033	0.047

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(HZ)	0.789	1.132	1.779						
		(LZ)	0.727	1.135	1.818						
		(ZH)	0.809	1.338	2.181				0.020	0.031	0.048
		(ZL)	0.957	1.570	2.508				0.023	0.033	0.047
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.655	0.892	1.333						
		(LZ)	0.593	0.888	1.374						
		(ZH)	0.668	1.088	1.789				0.020	0.030	0.048
		(ZL)	0.818	1.320	2.117				0.023	0.033	0.047
	BS1 → Y0	(HH)	0.792	1.286	2.119				0.020	0.031	0.048
		(LL)	0.810	1.322	2.157				0.023	0.033	0.047
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.725	1.038	1.632						
		(LZ)	0.665	1.038	1.661						
		(ZH)	0.760	1.232	2.017				0.020	0.030	0.048
		(ZL)	0.908	1.464	2.345				0.023	0.033	0.047
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
B0U1BB	A → Y0	(HH)	0.790	1.284	2.115				0.020	0.031	0.048
		(LL)	0.807	1.320	2.154				0.023	0.033	0.047
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	0.726	1.032	1.620						
		(LZ)	0.663	1.034	1.658						
		(ZH)	0.758	1.228	2.011				0.020	0.031	0.048
		(ZL)	0.907	1.461	2.340				0.023	0.033	0.047
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.858	1.393	2.283				0.020	0.031	0.048
		(HL)	0.874	1.409	2.274				0.023	0.033	0.047
		(LH)	0.841	1.372	2.258				0.020	0.031	0.048
		(LL)	0.872	1.423	2.309				0.023	0.033	0.047
		(HZ)	0.789	1.132	1.779						
		(LZ)	0.727	1.135	1.818						
		(ZH)	0.809	1.338	2.181				0.020	0.031	0.048
		(ZL)	0.957	1.570	2.508				0.023	0.033	0.047
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.655	0.892	1.333						
		(LZ)	0.593	0.888	1.374						

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(ZH)	0.668	1.088	1.789				0.020	0.030	0.048
		(ZL)	0.818	1.320	2.117				0.023	0.033	0.047
	BS1 → Y0	(HH)	0.792	1.286	2.119				0.020	0.031	0.048
		(LL)	0.810	1.322	2.157				0.023	0.033	0.047
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.725	1.038	1.632						
		(LZ)	0.665	1.038	1.661						
		(ZH)	0.760	1.232	2.017				0.020	0.030	0.048
		(ZL)	0.908	1.464	2.345				0.023	0.033	0.047
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
B0W1BB	A → Y0	(HH)	0.790	1.284	2.115				0.020	0.031	0.048
		(LL)	0.807	1.320	2.154				0.023	0.033	0.047
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	0.726	1.032	1.620						
		(LZ)	0.663	1.034	1.658						
		(ZH)	0.758	1.228	2.011				0.020	0.031	0.048
		(ZL)	0.907	1.461	2.340				0.023	0.033	0.047
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.858	1.393	2.283				0.020	0.031	0.048
		(HL)	0.874	1.409	2.274				0.023	0.033	0.047
		(LH)	0.841	1.372	2.258				0.020	0.031	0.048
		(LL)	0.872	1.423	2.309				0.023	0.033	0.047
		(HZ)	0.789	1.132	1.779						
		(LZ)	0.727	1.135	1.818						
		(ZH)	0.809	1.338	2.181				0.020	0.031	0.048
		(ZL)	0.957	1.570	2.508				0.023	0.033	0.047
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.655	0.892	1.333						
		(LZ)	0.593	0.888	1.374						
		(ZH)	0.668	1.088	1.789				0.020	0.030	0.048
		(ZL)	0.818	1.320	2.117				0.023	0.033	0.047
	BS1 → Y0	(HH)	0.792	1.286	2.119				0.020	0.031	0.048
		(LL)	0.810	1.322	2.157				0.023	0.033	0.047
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.725	1.038	1.632						
		(LZ)	0.665	1.038	1.661						
		(ZH)	0.760	1.232	2.017				0.020	0.030	0.048
		(ZL)	0.908	1.464	2.345				0.023	0.033	0.047
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
B005BB	A → Y0	(HH)	0.710	1.161	1.923				0.013	0.021	0.033
		(LL)	0.740	1.235	2.044				0.016	0.023	0.033
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033			
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0	(HZ)	0.846	1.206	1.880						
		(LZ)	0.704	1.096	1.758						
		(ZH)	0.744	1.214	1.991				0.013	0.021	0.033
		(ZL)	0.860	1.401	2.261				0.016	0.023	0.032
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.775	1.268	2.090				0.013	0.021	0.033
		(HL)	0.805	1.328	2.177				0.016	0.023	0.033
		(LH)	0.762	1.253	2.074				0.013	0.021	0.033
		(LL)	0.801	1.333	2.201				0.016	0.023	0.033
		(HZ)	0.909	1.305	2.033						
		(LZ)	0.768	1.197	1.916						
		(ZH)	0.795	1.323	2.160				0.013	0.021	0.033
		(ZL)	0.913	1.507	2.429				0.016	0.023	0.032
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033			
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.765	1.057	1.588						
		(LZ)	0.633	0.950	1.474						
		(ZH)	0.654	1.073	1.768				0.013	0.021	0.033
		(ZL)	0.771	1.259	2.040				0.016	0.023	0.032
	BS1 → Y0	(HH)	0.711	1.164	1.927				0.013	0.021	0.033
		(LL)	0.741	1.237	2.049				0.016	0.023	0.033
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033			
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.847	1.212	1.882						
		(LZ)	0.707	1.099	1.761						
		(ZH)	0.745	1.217	1.995				0.013	0.021	0.033
		(ZL)	0.862	1.401	2.266				0.016	0.023	0.032
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
B0D5BB	A → Y0	(HH)	0.710	1.161	1.923				0.013	0.021	0.033
		(LL)	0.740	1.235	2.044				0.016	0.023	0.033
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033			
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0	(HZ)	0.846	1.206	1.880						
		(LZ)	0.704	1.096	1.758						
		(ZH)	0.744	1.214	1.991				0.013	0.021	0.033
		(ZL)	0.860	1.401	2.261				0.016	0.023	0.032
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.775	1.268	2.090				0.013	0.021	0.033
		(HL)	0.805	1.328	2.177				0.016	0.023	0.033
		(LH)	0.762	1.253	2.074				0.013	0.021	0.033
		(LL)	0.801	1.333	2.201				0.016	0.023	0.033

Block type	Switching speed									
	Path	t_{LD0} (ns)			t_1			T		
	IN → OUT	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
	(HZ)	0.909	1.305	2.033						
	(LZ)	0.768	1.197	1.916						
	(ZH)	0.795	1.323	2.160				0.013	0.021	0.033
	(ZL)	0.913	1.507	2.429				0.016	0.023	0.032
	MODE1 → Z1 (HH)	0.261	0.407	0.643	0.013	0.021	0.033			
	(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
	(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
	(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2 (HH)	0.225	0.348	0.545	0.013	0.021	0.034			
	(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
	(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
	(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0 (HZ)	0.765	1.057	1.588						
	(LZ)	0.633	0.950	1.474						
	(ZH)	0.654	1.073	1.768				0.013	0.021	0.033
	(ZL)	0.771	1.259	2.040				0.016	0.023	0.032
	BS1 → Y0 (HH)	0.711	1.164	1.927				0.013	0.021	0.033
	(LL)	0.741	1.237	2.049				0.016	0.023	0.033
	BS1 → Z1 (HH)	0.198	0.303	0.484	0.013	0.021	0.033			
	(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0 (HZ)	0.847	1.212	1.882						
	(LZ)	0.707	1.099	1.761						
	(ZH)	0.745	1.217	1.995				0.013	0.021	0.033
	(ZL)	0.862	1.401	2.266				0.016	0.023	0.032
	BS2 → Z2 (HH)	0.160	0.244	0.383	0.013	0.021	0.034			
	(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1 (HH)	0.113	0.162	0.227	0.001	0.002	0.003			
	(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
B0U5BB	A → Y0 (HH)	0.710	1.161	1.923				0.013	0.021	0.033
	(LL)	0.740	1.235	2.044				0.016	0.023	0.033
	A → Z1 (HH)	0.196	0.301	0.480	0.013	0.021	0.033			
	(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0 (HZ)	0.846	1.206	1.880						
	(LZ)	0.704	1.096	1.758						
	(ZH)	0.744	1.214	1.991				0.013	0.021	0.033
	(ZL)	0.860	1.401	2.261				0.016	0.023	0.032
	B → Z2 (HH)	0.158	0.241	0.379	0.013	0.021	0.034			
	(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0 (HH)	0.775	1.268	2.090				0.013	0.021	0.033
	(HL)	0.805	1.328	2.177				0.016	0.023	0.033
	(LH)	0.762	1.253	2.074				0.013	0.021	0.033
	(LL)	0.801	1.333	2.201				0.016	0.023	0.033
	(HZ)	0.909	1.305	2.033						
	(LZ)	0.768	1.197	1.916						
	(ZH)	0.795	1.323	2.160				0.013	0.021	0.033
	(ZL)	0.913	1.507	2.429				0.016	0.023	0.032
	MODE1 → Z1 (HH)	0.261	0.407	0.643	0.013	0.021	0.033			
	(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
	(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
	(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2 (HH)	0.225	0.348	0.545	0.013	0.021	0.034			
	(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
	(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
	(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0 (HZ)	0.765	1.057	1.588						
	(LZ)	0.633	0.950	1.474						

Block type	Switching speed									
	Path	t_{LD0} (ns)			t_1			T		
	IN → OUT	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
	(ZH)	0.654	1.073	1.768				0.013	0.021	0.033
	(ZL)	0.771	1.259	2.040				0.016	0.023	0.032
	BS1 → Y0 (HH)	0.711	1.164	1.927				0.013	0.021	0.033
	(LL)	0.741	1.237	2.049				0.016	0.023	0.033
	BS1 → Z1 (HH)	0.198	0.303	0.484	0.013	0.021	0.033			
	(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0 (HZ)	0.847	1.212	1.882						
	(LZ)	0.707	1.099	1.761						
	(ZH)	0.745	1.217	1.995				0.013	0.021	0.033
	(ZL)	0.862	1.401	2.266				0.016	0.023	0.032
	BS2 → Z2 (HH)	0.160	0.244	0.383	0.013	0.021	0.034			
	(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1 (HH)	0.113	0.162	0.227	0.001	0.002	0.003			
	(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
B0W5BB	A → Y0 (HH)	0.710	1.161	1.923				0.013	0.021	0.033
	(LL)	0.740	1.235	2.044				0.016	0.023	0.033
	A → Z1 (HH)	0.196	0.301	0.480	0.013	0.021	0.033			
	(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0 (HZ)	0.846	1.206	1.880						
	(LZ)	0.704	1.096	1.758						
	(ZH)	0.744	1.214	1.991				0.013	0.021	0.033
	(ZL)	0.860	1.401	2.261				0.016	0.023	0.032
	B → Z2 (HH)	0.158	0.241	0.379	0.013	0.021	0.034			
	(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0 (HH)	0.775	1.268	2.090				0.013	0.021	0.033
	(HL)	0.805	1.328	2.177				0.016	0.023	0.033
	(LH)	0.762	1.253	2.074				0.013	0.021	0.033
	(LL)	0.801	1.333	2.201				0.016	0.023	0.033
	(HZ)	0.909	1.305	2.033						
	(LZ)	0.768	1.197	1.916						
	(ZH)	0.795	1.323	2.160				0.013	0.021	0.033
	(ZL)	0.913	1.507	2.429				0.016	0.023	0.032
	MODE1 → Z1 (HH)	0.261	0.407	0.643	0.013	0.021	0.033			
	(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
	(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
	(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2 (HH)	0.225	0.348	0.545	0.013	0.021	0.034			
	(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
	(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
	(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0 (HZ)	0.765	1.057	1.588						
	(LZ)	0.633	0.950	1.474						
	(ZH)	0.654	1.073	1.768				0.013	0.021	0.033
	(ZL)	0.771	1.259	2.040				0.016	0.023	0.032
	BS1 → Y0 (HH)	0.711	1.164	1.927				0.013	0.021	0.033
	(LL)	0.741	1.237	2.049				0.016	0.023	0.033
	BS1 → Z1 (HH)	0.198	0.303	0.484	0.013	0.021	0.033			
	(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0 (HZ)	0.847	1.212	1.882						
	(LZ)	0.707	1.099	1.761						
	(ZH)	0.745	1.217	1.995				0.013	0.021	0.033
	(ZL)	0.862	1.401	2.266				0.016	0.023	0.032
	BS2 → Z2 (HH)	0.160	0.244	0.383	0.013	0.021	0.034			
	(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1 (HH)	0.113	0.162	0.227	0.001	0.002	0.003			
	(LL)	0.160	0.239	0.357	0.001	0.002	0.003			

Block type	Path		Switching speed								
			t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
B00FBB	A → Y0	(HH)	0.707	1.163	1.932				0.010	0.016	0.025
		(LL)	0.721	1.208	2.018				0.013	0.018	0.026
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033			
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0	(HZ)	0.934	1.336	2.084						
		(LZ)	0.731	1.132	1.814						
		(ZH)	0.737	1.207	1.985				0.010	0.016	0.025
		(ZL)	0.829	1.359	2.207				0.013	0.018	0.026
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.773	1.269	2.098				0.010	0.016	0.025
		(HL)	0.787	1.304	2.154				0.013	0.018	0.026
		(LH)	0.759	1.254	2.081				0.010	0.016	0.025
		(LL)	0.783	1.309	2.175				0.013	0.018	0.026
		(HZ)	0.990	1.430	2.236						
		(LZ)	0.794	1.232	1.976						
		(ZH)	0.789	1.316	2.154				0.010	0.016	0.025
		(ZL)	0.881	1.466	2.375				0.013	0.018	0.026
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033			
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.866	1.179	1.783						
		(LZ)	0.660	0.986	1.531						
		(ZH)	0.648	1.065	1.762				0.010	0.016	0.025
		(ZL)	0.740	1.217	1.984				0.013	0.018	0.026
	BS1 → Y0	(HH)	0.709	1.165	1.935				0.010	0.016	0.025
		(LL)	0.723	1.211	2.023				0.013	0.018	0.026
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033			
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.936	1.336	2.084						
		(LZ)	0.733	1.135	1.821						
		(ZH)	0.739	1.209	1.989				0.010	0.016	0.025
		(ZL)	0.831	1.361	2.211				0.013	0.018	0.026
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
B0DFBB	A → Y0	(HH)	0.707	1.163	1.932				0.010	0.016	0.025
		(LL)	0.721	1.208	2.018				0.013	0.018	0.026
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033			
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0	(HZ)	0.934	1.336	2.084						
		(LZ)	0.731	1.132	1.814						
		(ZH)	0.737	1.207	1.985				0.010	0.016	0.025
		(ZL)	0.829	1.359	2.207				0.013	0.018	0.026
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.773	1.269	2.098				0.010	0.016	0.025
		(HL)	0.787	1.304	2.154				0.013	0.018	0.026
		(LH)	0.759	1.254	2.081				0.010	0.016	0.025
		(LL)	0.783	1.309	2.175				0.013	0.018	0.026

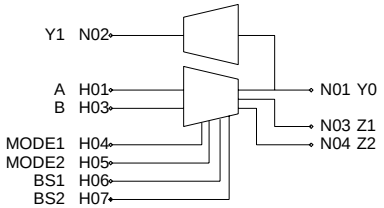
Block type	Path		Switching speed								
			t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(HZ)	0.990	1.430	2.236						
		(LZ)	0.794	1.232	1.976						
		(ZH)	0.789	1.316	2.154				0.010	0.016	0.025
		(ZL)	0.881	1.466	2.375				0.013	0.018	0.026
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033			
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.866	1.179	1.783						
		(LZ)	0.660	0.986	1.531						
		(ZH)	0.648	1.065	1.762				0.010	0.016	0.025
		(ZL)	0.740	1.217	1.984				0.013	0.018	0.026
	BS1 → Y0	(HH)	0.709	1.165	1.935				0.010	0.016	0.025
		(LL)	0.723	1.211	2.023				0.013	0.018	0.026
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033			
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.936	1.336	2.084						
		(LZ)	0.733	1.135	1.821						
		(ZH)	0.739	1.209	1.989				0.010	0.016	0.025
		(ZL)	0.831	1.361	2.211				0.013	0.018	0.026
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
B0UFBB	A → Y0	(HH)	0.707	1.163	1.932				0.010	0.016	0.025
		(LL)	0.721	1.208	2.018				0.013	0.018	0.026
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033			
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0	(HZ)	0.934	1.336	2.084						
		(LZ)	0.731	1.132	1.814						
		(ZH)	0.737	1.207	1.985				0.010	0.016	0.025
		(ZL)	0.829	1.359	2.207				0.013	0.018	0.026
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.773	1.269	2.098				0.010	0.016	0.025
		(HL)	0.787	1.304	2.154				0.013	0.018	0.026
		(LH)	0.759	1.254	2.081				0.010	0.016	0.025
		(LL)	0.783	1.309	2.175				0.013	0.018	0.026
		(HZ)	0.990	1.430	2.236						
		(LZ)	0.794	1.232	1.976						
		(ZH)	0.789	1.316	2.154				0.010	0.016	0.025
		(ZL)	0.881	1.466	2.375				0.013	0.018	0.026
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033			
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.866	1.179	1.783						
		(LZ)	0.660	0.986	1.531						

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(ZH)	0.648	1.065	1.762				0.010	0.016	0.025
		(ZL)	0.740	1.217	1.984				0.013	0.018	0.026
	BS1 → Y0	(HH)	0.709	1.165	1.935				0.010	0.016	0.025
		(LL)	0.723	1.211	2.023				0.013	0.018	0.026
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033			
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.936	1.336	2.084						
		(LZ)	0.733	1.135	1.821						
		(ZH)	0.739	1.209	1.989				0.010	0.016	0.025
		(ZL)	0.831	1.361	2.211				0.013	0.018	0.026
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
B0WFBB	A → Y0	(HH)	0.707	1.163	1.932				0.010	0.016	0.025
		(LL)	0.721	1.208	2.018				0.013	0.018	0.026
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033			
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0	(HZ)	0.934	1.336	2.084						
		(LZ)	0.731	1.132	1.814						
		(ZH)	0.737	1.207	1.985				0.010	0.016	0.025
		(ZL)	0.829	1.359	2.207				0.013	0.018	0.026
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.773	1.269	2.098				0.010	0.016	0.025
		(HL)	0.787	1.304	2.154				0.013	0.018	0.026
		(LH)	0.759	1.254	2.081				0.010	0.016	0.025
		(LL)	0.783	1.309	2.175				0.013	0.018	0.026
		(HZ)	0.990	1.430	2.236						
		(LZ)	0.794	1.232	1.976						
		(ZH)	0.789	1.316	2.154				0.010	0.016	0.025
		(ZL)	0.881	1.466	2.375				0.013	0.018	0.026
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033			
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.866	1.179	1.783						
		(LZ)	0.660	0.986	1.531						
		(ZH)	0.648	1.065	1.762				0.010	0.016	0.025
		(ZL)	0.740	1.217	1.984				0.013	0.018	0.026
	BS1 → Y0	(HH)	0.709	1.165	1.935				0.010	0.016	0.025
		(LL)	0.723	1.211	2.023				0.013	0.018	0.026
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033			
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.936	1.336	2.084						
		(LZ)	0.733	1.135	1.821						
		(ZH)	0.739	1.209	1.989				0.010	0.016	0.025
		(ZL)	0.831	1.361	2.211				0.013	0.018	0.026
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			

[MEMO]

Function	Low-noise I/O Buffer					3.3V
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA						
6mA	BE0CBB	BEDCBB	BEUCBB	BEWCBB	1	31
9mA	BE03BB	BED3BB	BEU3BB	BEW3BB	1	31
12mA	BE01BB	BED1BB	BEU1BB	BEW1BB	1	31
18mA	BE05BB	BED5BB	BEU5BB	BEW5BB	1	31
24mA	BE0FBB	BEDFBB	BEUFBB	BEWFBB	1	31

Logic Diagram



Truth Table

A	B	BS1	BS2	*1	*2	Y0	Z1	Z2	
A	1	X	X	0	0	A	A	1	
A	0	X	X	0	0	Z	A	0	
X	X	A	1	1	0	A	A	1	
X	X	A	0	1	0	Z	A	0	
A	B	X	X	0	1	Z	A	B	
X	X	A	B	1	1	Z	A	B	← Prohibition

*1:MODE1 , *2:MODE2

X:Irrelevant

Z:High Impedance

Y0	Y1
0	0
1	1

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
BE0CBB to BEWCBB	A	2.4	Y1	358
	B	2.4	Z1	36
	MODE1	2.5	Z2	35
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		
BE03BB to BEW1BB	A	2.4	Y1	358
	B	2.4	Z1	36
	MODE1	2.5	Z2	35
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		
BE05BB to BEWFBB	A	2.4	Y1	358
	B	2.4	Z1	36
	MODE1	2.5	Z2	35
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BE0CBB	A → Y0	(HH)	1.518	2.516	4.372				0.039	0.060	0.097
		(LL)	1.909	3.079	4.913				0.047	0.067	0.096
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	1.620	2.216	3.399						
		(LZ)	1.517	2.256	3.595						
		(ZH)	1.420	2.394	4.204				0.038	0.060	0.097
		(ZL)	1.980	3.194	5.063				0.047	0.067	0.097
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.586	2.623	4.534				0.039	0.060	0.097
		(HL)	1.958	3.156	5.030				0.048	0.067	0.096
		(LH)	1.568	2.605	4.511				0.039	0.060	0.096
		(LL)	1.960	3.156	5.067				0.047	0.067	0.096
		(HZ)	1.685	2.319	3.536						
		(LZ)	1.582	2.357	3.751						
		(ZH)	1.470	2.502	4.372				0.038	0.060	0.097
		(ZL)	2.030	3.304	5.234				0.047	0.067	0.097
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.560	2.077	3.124						
		(LZ)	1.443	2.113	3.323						
		(ZH)	1.333	2.256	3.981				0.038	0.060	0.097
		(ZL)	1.896	3.050	4.846				0.047	0.067	0.097
	BS1 → Y0	(HH)	1.520	2.522	4.375				0.039	0.060	0.097
		(LL)	1.899	3.072	4.912				0.047	0.067	0.096
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.628	2.218	3.403						
		(LZ)	1.521	2.259	3.602						
		(ZH)	1.423	2.395	4.203				0.038	0.060	0.096
		(ZL)	1.985	3.198	5.070				0.047	0.067	0.097
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
BEDCBB	A → Y0	(HH)	1.518	2.516	4.372				0.039	0.060	0.097
		(LL)	1.909	3.079	4.913				0.047	0.067	0.096
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	1.620	2.216	3.399						
		(LZ)	1.517	2.256	3.595						
		(ZH)	1.420	2.394	4.204				0.038	0.060	0.097
		(ZL)	1.980	3.194	5.063				0.047	0.067	0.097
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.586	2.623	4.534				0.039	0.060	0.097
		(HL)	1.958	3.156	5.030				0.048	0.067	0.096
		(LH)	1.568	2.605	4.511				0.039	0.060	0.096
		(LL)	1.960	3.156	5.067				0.047	0.067	0.096

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(HZ)	1.685	2.319	3.536						
		(LZ)	1.582	2.357	3.751						
		(ZH)	1.470	2.502	4.372				0.038	0.060	0.097
		(ZL)	2.030	3.304	5.234				0.047	0.067	0.097
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.560	2.077	3.124						
		(LZ)	1.443	2.113	3.323						
		(ZH)	1.333	2.256	3.981				0.038	0.060	0.097
		(ZL)	1.896	3.050	4.846				0.047	0.067	0.097
	BS1 → Y0	(HH)	1.520	2.522	4.375				0.039	0.060	0.097
		(LL)	1.899	3.072	4.912				0.047	0.067	0.096
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.628	2.218	3.403						
		(LZ)	1.521	2.259	3.602						
		(ZH)	1.423	2.395	4.203				0.038	0.060	0.096
		(ZL)	1.985	3.198	5.070				0.047	0.067	0.097
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
BEUCBB	A → Y0	(HH)	1.518	2.516	4.372				0.039	0.060	0.097
		(LL)	1.909	3.079	4.913				0.047	0.067	0.096
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	1.620	2.216	3.399						
		(LZ)	1.517	2.256	3.595						
		(ZH)	1.420	2.394	4.204				0.038	0.060	0.097
		(ZL)	1.980	3.194	5.063				0.047	0.067	0.097
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.586	2.623	4.534				0.039	0.060	0.097
		(HL)	1.958	3.156	5.030				0.048	0.067	0.096
		(LH)	1.568	2.605	4.511				0.039	0.060	0.096
		(LL)	1.960	3.156	5.067				0.047	0.067	0.096
		(HZ)	1.685	2.319	3.536						
		(LZ)	1.582	2.357	3.751						
		(ZH)	1.470	2.502	4.372				0.038	0.060	0.097
		(ZL)	2.030	3.304	5.234				0.047	0.067	0.097
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.560	2.077	3.124						
		(LZ)	1.443	2.113	3.323						

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(ZH)	1.333	2.256	3.981				0.038	0.060	0.097
		(ZL)	1.896	3.050	4.846				0.047	0.067	0.097
	BS1 → Y0	(HH)	1.520	2.522	4.375				0.039	0.060	0.097
		(LL)	1.899	3.072	4.912				0.047	0.067	0.096
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.628	2.218	3.403						
		(LZ)	1.521	2.259	3.602						
		(ZH)	1.423	2.395	4.203				0.038	0.060	0.096
		(ZL)	1.985	3.198	5.070				0.047	0.067	0.097
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
BEWCBB	A → Y0	(HH)	1.518	2.516	4.372				0.039	0.060	0.097
		(LL)	1.909	3.079	4.913				0.047	0.067	0.096
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	1.620	2.216	3.399						
		(LZ)	1.517	2.256	3.595						
		(ZH)	1.420	2.394	4.204				0.038	0.060	0.097
		(ZL)	1.980	3.194	5.063				0.047	0.067	0.097
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.586	2.623	4.534				0.039	0.060	0.097
		(HL)	1.958	3.156	5.030				0.048	0.067	0.096
		(LH)	1.568	2.605	4.511				0.039	0.060	0.096
		(LL)	1.960	3.156	5.067				0.047	0.067	0.096
		(HZ)	1.685	2.319	3.536						
		(LZ)	1.582	2.357	3.751						
		(ZH)	1.470	2.502	4.372				0.038	0.060	0.097
		(ZL)	2.030	3.304	5.234				0.047	0.067	0.097
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.560	2.077	3.124						
		(LZ)	1.443	2.113	3.323						
		(ZH)	1.333	2.256	3.981				0.038	0.060	0.097
		(ZL)	1.896	3.050	4.846				0.047	0.067	0.097
	BS1 → Y0	(HH)	1.520	2.522	4.375				0.039	0.060	0.097
		(LL)	1.899	3.072	4.912				0.047	0.067	0.096
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.628	2.218	3.403						
		(LZ)	1.521	2.259	3.602						
		(ZH)	1.423	2.395	4.203				0.038	0.060	0.096
		(ZL)	1.985	3.198	5.070				0.047	0.067	0.097
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BE03BB	A → Y0	(HH)	1.468	2.457	4.278				0.028	0.044	0.070
		(LL)	1.770	2.896	4.663				0.035	0.049	0.070
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	1.817	2.480	3.781						
		(LZ)	1.609	2.393	3.825						
		(ZH)	1.372	2.330	4.116				0.028	0.044	0.070
		(ZL)	1.833	2.994	4.779				0.035	0.049	0.071
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.536	2.563	4.453				0.028	0.044	0.070
		(HL)	1.827	2.960	4.790				0.035	0.049	0.070
		(LH)	1.519	2.545	4.423				0.028	0.044	0.070
		(LL)	1.829	2.988	4.819				0.035	0.049	0.070
		(HZ)	1.877	2.581	3.940						
		(LZ)	1.672	2.496	3.979						
		(ZH)	1.422	2.439	4.282				0.028	0.044	0.070
		(ZL)	1.895	3.086	4.961				0.034	0.049	0.071
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.725	2.336	3.513						
		(LZ)	1.536	2.253	3.551						
		(ZH)	1.285	2.195	3.888				0.028	0.044	0.070
		(ZL)	1.761	2.842	4.572				0.034	0.049	0.070
	BS1 → Y0	(HH)	1.470	2.458	4.282				0.028	0.044	0.070
		(LL)	1.773	2.889	4.670				0.035	0.049	0.070
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.803	2.483	3.796						
		(LZ)	1.612	2.397	3.830						
		(ZH)	1.375	2.335	4.118				0.028	0.044	0.070
		(ZL)	1.837	2.981	4.783				0.035	0.049	0.071
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
BED3BB	A → Y0	(HH)	1.468	2.457	4.278				0.028	0.044	0.070
		(LL)	1.770	2.896	4.663				0.035	0.049	0.070
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	1.817	2.480	3.781						
		(LZ)	1.609	2.393	3.825						
		(ZH)	1.372	2.330	4.116				0.028	0.044	0.070
		(ZL)	1.833	2.994	4.779				0.035	0.049	0.071
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.536	2.563	4.453				0.028	0.044	0.070
		(HL)	1.827	2.960	4.790				0.035	0.049	0.070
		(LH)	1.519	2.545	4.423				0.028	0.044	0.070
		(LL)	1.829	2.988	4.819				0.035	0.049	0.070

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(HZ)	1.877	2.581	3.940						
		(LZ)	1.672	2.496	3.979						
		(ZH)	1.422	2.439	4.282				0.028	0.044	0.070
		(ZL)	1.895	3.086	4.961				0.034	0.049	0.071
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.725	2.336	3.513						
		(LZ)	1.536	2.253	3.551						
		(ZH)	1.285	2.195	3.888				0.028	0.044	0.070
		(ZL)	1.761	2.842	4.572				0.034	0.049	0.070
	BS1 → Y0	(HH)	1.470	2.458	4.282				0.028	0.044	0.070
		(LL)	1.773	2.889	4.670				0.035	0.049	0.070
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.803	2.483	3.796						
		(LZ)	1.612	2.397	3.830						
		(ZH)	1.375	2.335	4.118				0.028	0.044	0.070
		(ZL)	1.837	2.981	4.783				0.035	0.049	0.071
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
BEU3BB	A → Y0	(HH)	1.468	2.457	4.278				0.028	0.044	0.070
		(LL)	1.770	2.896	4.663				0.035	0.049	0.070
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	1.817	2.480	3.781						
		(LZ)	1.609	2.393	3.825						
		(ZH)	1.372	2.330	4.116				0.028	0.044	0.070
		(ZL)	1.833	2.994	4.779				0.035	0.049	0.071
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.536	2.563	4.453				0.028	0.044	0.070
		(HL)	1.827	2.960	4.790				0.035	0.049	0.070
		(LH)	1.519	2.545	4.423				0.028	0.044	0.070
		(LL)	1.829	2.988	4.819				0.035	0.049	0.070
		(HZ)	1.877	2.581	3.940						
		(LZ)	1.672	2.496	3.979						
		(ZH)	1.422	2.439	4.282				0.028	0.044	0.070
		(ZL)	1.895	3.086	4.961				0.034	0.049	0.071
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.725	2.336	3.513						
		(LZ)	1.536	2.253	3.551						

Block type	Path		Switching speed: t_{LD0} (ns) MIN.	t_{LD0} (ns) TYP.	t_{LD0} (ns) MAX.	t_1 MIN.	t_1 TYP.	t_1 MAX.	T MIN.	T TYP.	T MAX.
	IN → OUT										
		(ZH)	1.285	2.195	3.888				0.028	0.044	0.070
		(ZL)	1.761	2.842	4.572				0.034	0.049	0.070
	BS1 → Y0	(HH)	1.470	2.458	4.282				0.028	0.044	0.070
		(LL)	1.773	2.889	4.670				0.035	0.049	0.070
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.803	2.483	3.796						
		(LZ)	1.612	2.397	3.830						
		(ZH)	1.375	2.335	4.118				0.028	0.044	0.070
		(ZL)	1.837	2.981	4.783				0.035	0.049	0.071
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
BEW3BB	A → Y0	(HH)	1.468	2.457	4.278				0.028	0.044	0.070
		(LL)	1.770	2.896	4.663				0.035	0.049	0.070
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	1.817	2.480	3.781						
		(LZ)	1.609	2.393	3.825						
		(ZH)	1.372	2.330	4.116				0.028	0.044	0.070
		(ZL)	1.833	2.994	4.779				0.035	0.049	0.071
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.536	2.563	4.453				0.028	0.044	0.070
		(HL)	1.827	2.960	4.790				0.035	0.049	0.070
		(LH)	1.519	2.545	4.423				0.028	0.044	0.070
		(LL)	1.829	2.988	4.819				0.035	0.049	0.070
		(HZ)	1.877	2.581	3.940						
		(LZ)	1.672	2.496	3.979						
		(ZH)	1.422	2.439	4.282				0.028	0.044	0.070
		(ZL)	1.895	3.086	4.961				0.034	0.049	0.071
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.725	2.336	3.513						
		(LZ)	1.536	2.253	3.551						
		(ZH)	1.285	2.195	3.888				0.028	0.044	0.070
		(ZL)	1.761	2.842	4.572				0.034	0.049	0.070
	BS1 → Y0	(HH)	1.470	2.458	4.282				0.028	0.044	0.070
		(LL)	1.773	2.889	4.670				0.035	0.049	0.070
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.803	2.483	3.796						
		(LZ)	1.612	2.397	3.830						
		(ZH)	1.375	2.335	4.118				0.028	0.044	0.070
		(ZL)	1.837	2.981	4.783				0.035	0.049	0.071
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			

Block type	Path		Switching speed: t_{LD0} (ns) MIN.	t_{LD0} (ns) TYP.	t_{LD0} (ns) MAX.	t_1 MIN.	t_1 TYP.	t_1 MAX.	T MIN.	T TYP.	T MAX.
	IN → OUT										
BE01BB	A → Y0	(HH)	1.445	2.436	4.266				0.022	0.035	0.057
		(LL)	1.682	2.804	4.541				0.028	0.040	0.058
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	1.977	2.739	4.174						
		(LZ)	1.711	2.548	4.079						
		(ZH)	1.349	2.313	4.099				0.022	0.035	0.056
		(ZL)	1.774	2.933	4.684				0.028	0.040	0.058
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.513	2.546	4.433				0.022	0.035	0.057
		(HL)	1.751	2.893	4.659				0.028	0.040	0.058
		(LH)	1.495	2.524	4.409				0.022	0.035	0.057
		(LL)	1.754	2.899	4.695				0.028	0.040	0.058
		(HZ)	2.045	2.836	4.338						
		(LZ)	1.775	2.650	4.234						
		(ZH)	1.399	2.422	4.268				0.022	0.035	0.057
		(ZL)	1.828	3.021	4.854				0.028	0.040	0.058
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.905	2.591	3.903						
		(LZ)	1.638	2.408	3.804						
		(ZH)	1.263	2.176	3.879				0.022	0.035	0.056
		(ZL)	1.688	2.798	4.471				0.028	0.040	0.058
	BS1 → Y0	(HH)	1.446	2.439	4.267				0.022	0.035	0.057
		(LL)	1.687	2.813	4.543				0.028	0.040	0.058
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.981	2.743	4.198						
		(LZ)	1.714	2.553	4.082						
		(ZH)	1.352	2.314	4.103				0.022	0.035	0.057
		(ZL)	1.771	2.936	4.691				0.028	0.040	0.058
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
BED1BB	A → Y0	(HH)	1.445	2.436	4.266				0.022	0.035	0.057
		(LL)	1.682	2.804	4.541				0.028	0.040	0.058
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	1.977	2.739	4.174						
		(LZ)	1.711	2.548	4.079						
		(ZH)	1.349	2.313	4.099				0.022	0.035	0.056
		(ZL)	1.774	2.933	4.684				0.028	0.040	0.058
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.513	2.546	4.433				0.022	0.035	0.057
		(HL)	1.751	2.893	4.659				0.028	0.040	0.058
		(LH)	1.495	2.524	4.409				0.022	0.035	0.057
		(LL)	1.754	2.899	4.695				0.028	0.040	0.058

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(HZ)	2.045	2.836	4.338						
		(LZ)	1.775	2.650	4.234						
		(ZH)	1.399	2.422	4.268				0.022	0.035	0.057
		(ZL)	1.828	3.021	4.854				0.028	0.040	0.058
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.905	2.591	3.903						
		(LZ)	1.638	2.408	3.804						
		(ZH)	1.263	2.176	3.879				0.022	0.035	0.056
		(ZL)	1.688	2.798	4.471				0.028	0.040	0.058
	BS1 → Y0	(HH)	1.446	2.439	4.267				0.022	0.035	0.057
		(LL)	1.687	2.813	4.543				0.028	0.040	0.058
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.981	2.743	4.198						
		(LZ)	1.714	2.553	4.082						
		(ZH)	1.352	2.314	4.103				0.022	0.035	0.057
		(ZL)	1.771	2.936	4.691				0.028	0.040	0.058
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
BEU1BB	A → Y0	(HH)	1.445	2.436	4.266				0.022	0.035	0.057
		(LL)	1.682	2.804	4.541				0.028	0.040	0.058
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	1.977	2.739	4.174						
		(LZ)	1.711	2.548	4.079						
		(ZH)	1.349	2.313	4.099				0.022	0.035	0.056
		(ZL)	1.774	2.933	4.684				0.028	0.040	0.058
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.513	2.546	4.433				0.022	0.035	0.057
		(HL)	1.751	2.893	4.659				0.028	0.040	0.058
		(LH)	1.495	2.524	4.409				0.022	0.035	0.057
		(LL)	1.754	2.899	4.695				0.028	0.040	0.058
		(HZ)	2.045	2.836	4.338						
		(LZ)	1.775	2.650	4.234						
		(ZH)	1.399	2.422	4.268				0.022	0.035	0.057
		(ZL)	1.828	3.021	4.854				0.028	0.040	0.058
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.905	2.591	3.903						
		(LZ)	1.638	2.408	3.804						

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(ZH)	1.263	2.176	3.879				0.022	0.035	0.056
		(ZL)	1.688	2.798	4.471				0.028	0.040	0.058
	BS1 → Y0	(HH)	1.446	2.439	4.267				0.022	0.035	0.057
		(LL)	1.687	2.813	4.543				0.028	0.040	0.058
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.981	2.743	4.198						
		(LZ)	1.714	2.553	4.082						
		(ZH)	1.352	2.314	4.103				0.022	0.035	0.057
		(ZL)	1.771	2.936	4.691				0.028	0.040	0.058
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
BEW1BB	A → Y0	(HH)	1.445	2.436	4.266				0.022	0.035	0.057
		(LL)	1.682	2.804	4.541				0.028	0.040	0.058
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	1.977	2.739	4.174						
		(LZ)	1.711	2.548	4.079						
		(ZH)	1.349	2.313	4.099				0.022	0.035	0.056
		(ZL)	1.774	2.933	4.684				0.028	0.040	0.058
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.513	2.546	4.433				0.022	0.035	0.057
		(HL)	1.751	2.893	4.659				0.028	0.040	0.058
		(LH)	1.495	2.524	4.409				0.022	0.035	0.057
		(LL)	1.754	2.899	4.695				0.028	0.040	0.058
		(HZ)	2.045	2.836	4.338						
		(LZ)	1.775	2.650	4.234						
		(ZH)	1.399	2.422	4.268				0.022	0.035	0.057
		(ZL)	1.828	3.021	4.854				0.028	0.040	0.058
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.905	2.591	3.903						
		(LZ)	1.638	2.408	3.804						
		(ZH)	1.263	2.176	3.879				0.022	0.035	0.056
		(ZL)	1.688	2.798	4.471				0.028	0.040	0.058
	BS1 → Y0	(HH)	1.446	2.439	4.267				0.022	0.035	0.057
		(LL)	1.687	2.813	4.543				0.028	0.040	0.058
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.981	2.743	4.198						
		(LZ)	1.714	2.553	4.082						
		(ZH)	1.352	2.314	4.103				0.022	0.035	0.057
		(ZL)	1.771	2.936	4.691				0.028	0.040	0.058
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BE05BB	A → Y0	(HH)	1.475	2.528	4.459				0.018	0.028	0.045
		(LL)	1.683	2.813	4.609				0.023	0.032	0.047
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	2.424	3.334	5.122						
		(LZ)	1.970	2.936	4.720						
		(ZH)	1.387	2.405	4.288				0.018	0.027	0.045
		(ZL)	1.755	2.916	4.758				0.023	0.032	0.047
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.547	2.636	4.626				0.018	0.028	0.045
		(HL)	1.735	2.906	4.732				0.023	0.032	0.047
		(LH)	1.527	2.618	4.600				0.018	0.028	0.045
		(LL)	1.744	2.914	4.747				0.023	0.032	0.047
		(HZ)	2.488	3.432	5.291						
		(LZ)	2.034	3.039	4.871						
		(ZH)	1.436	2.513	4.452				0.018	0.027	0.045
		(ZL)	1.794	3.031	4.937				0.023	0.032	0.047
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	2.357	3.188	4.863						
		(LZ)	1.898	2.797	4.439						
		(ZH)	1.299	2.269	4.070				0.018	0.027	0.045
		(ZL)	1.660	2.786	4.544				0.023	0.032	0.047
	BS1 → Y0	(HH)	1.477	2.529	4.459				0.018	0.028	0.046
		(LL)	1.683	2.811	4.613				0.023	0.032	0.047
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	2.425	3.339	5.119						
		(LZ)	1.974	2.945	4.720						
		(ZH)	1.389	2.407	4.289				0.018	0.027	0.045
		(ZL)	1.750	2.917	4.766				0.023	0.033	0.047
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
BED5BB	A → Y0	(HH)	1.475	2.528	4.459				0.018	0.028	0.045
		(LL)	1.683	2.813	4.609				0.023	0.032	0.047
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	2.424	3.334	5.122						
		(LZ)	1.970	2.936	4.720						
		(ZH)	1.387	2.405	4.288				0.018	0.027	0.045
		(ZL)	1.755	2.916	4.758				0.023	0.032	0.047
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.547	2.636	4.626				0.018	0.028	0.045
		(HL)	1.735	2.906	4.732				0.023	0.032	0.047
		(LH)	1.527	2.618	4.600				0.018	0.028	0.045
		(LL)	1.744	2.914	4.747				0.023	0.032	0.047

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(HZ)	2.488	3.432	5.291						
		(LZ)	2.034	3.039	4.871						
		(ZH)	1.436	2.513	4.452				0.018	0.027	0.045
		(ZL)	1.794	3.031	4.937				0.023	0.032	0.047
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	2.357	3.188	4.863						
		(LZ)	1.898	2.797	4.439						
		(ZH)	1.299	2.269	4.070				0.018	0.027	0.045
		(ZL)	1.660	2.786	4.544				0.023	0.032	0.047
	BS1 → Y0	(HH)	1.477	2.529	4.459				0.018	0.028	0.046
		(LL)	1.683	2.811	4.613				0.023	0.032	0.047
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	2.425	3.339	5.119						
		(LZ)	1.974	2.945	4.720						
		(ZH)	1.389	2.407	4.289				0.018	0.027	0.045
		(ZL)	1.750	2.917	4.766				0.023	0.033	0.047
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
BEU5BB	A → Y0	(HH)	1.475	2.528	4.459				0.018	0.028	0.045
		(LL)	1.683	2.813	4.609				0.023	0.032	0.047
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	2.424	3.334	5.122						
		(LZ)	1.970	2.936	4.720						
		(ZH)	1.387	2.405	4.288				0.018	0.027	0.045
		(ZL)	1.755	2.916	4.758				0.023	0.032	0.047
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.547	2.636	4.626				0.018	0.028	0.045
		(HL)	1.735	2.906	4.732				0.023	0.032	0.047
		(LH)	1.527	2.618	4.600				0.018	0.028	0.045
		(LL)	1.744	2.914	4.747				0.023	0.032	0.047
		(HZ)	2.488	3.432	5.291						
		(LZ)	2.034	3.039	4.871						
		(ZH)	1.436	2.513	4.452				0.018	0.027	0.045
		(ZL)	1.794	3.031	4.937				0.023	0.032	0.047
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	2.357	3.188	4.863						
		(LZ)	1.898	2.797	4.439						

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(ZH)	1.299	2.269	4.070				0.018	0.027	0.045
		(ZL)	1.660	2.786	4.544				0.023	0.032	0.047
	BS1 → Y0	(HH)	1.477	2.529	4.459				0.018	0.028	0.046
		(LL)	1.683	2.811	4.613				0.023	0.032	0.047
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	2.425	3.339	5.119						
		(LZ)	1.974	2.945	4.720						
		(ZH)	1.389	2.407	4.289				0.018	0.027	0.045
		(ZL)	1.750	2.917	4.766				0.023	0.033	0.047
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
BEW5BB	A → Y0	(HH)	1.475	2.528	4.459				0.018	0.028	0.045
		(LL)	1.683	2.813	4.609				0.023	0.032	0.047
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	2.424	3.334	5.122						
		(LZ)	1.970	2.936	4.720						
		(ZH)	1.387	2.405	4.288				0.018	0.027	0.045
		(ZL)	1.755	2.916	4.758				0.023	0.032	0.047
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.547	2.636	4.626				0.018	0.028	0.045
		(HL)	1.735	2.906	4.732				0.023	0.032	0.047
		(LH)	1.527	2.618	4.600				0.018	0.028	0.045
		(LL)	1.744	2.914	4.747				0.023	0.032	0.047
		(HZ)	2.488	3.432	5.291						
		(LZ)	2.034	3.039	4.871						
		(ZH)	1.436	2.513	4.452				0.018	0.027	0.045
		(ZL)	1.794	3.031	4.937				0.023	0.032	0.047
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	2.357	3.188	4.863						
		(LZ)	1.898	2.797	4.439						
		(ZH)	1.299	2.269	4.070				0.018	0.027	0.045
		(ZL)	1.660	2.786	4.544				0.023	0.032	0.047
	BS1 → Y0	(HH)	1.477	2.529	4.459				0.018	0.028	0.046
		(LL)	1.683	2.811	4.613				0.023	0.032	0.047
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	2.425	3.339	5.119						
		(LZ)	1.974	2.945	4.720						
		(ZH)	1.389	2.407	4.289				0.018	0.027	0.045
		(ZL)	1.750	2.917	4.766				0.023	0.033	0.047
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			

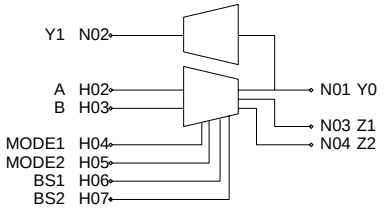
Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BE0FBB	A → Y0	(HH)	1.478	2.552	4.510				0.015	0.024	0.040
		(LL)	1.615	2.740	4.501				0.019	0.028	0.041
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	2.726	3.773	5.819						
		(LZ)	2.112	3.154	5.070						
		(ZH)	1.388	2.425	4.348				0.015	0.024	0.040
		(ZL)	1.703	2.839	4.676				0.020	0.028	0.041
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.552	2.662	4.680				0.015	0.024	0.040
		(HL)	1.675	2.826	4.615				0.020	0.028	0.041
		(LH)	1.534	2.638	4.653				0.015	0.024	0.040
		(LL)	1.682	2.854	4.658				0.020	0.028	0.041
		(HZ)	2.767	3.860	5.966						
		(LZ)	2.176	3.257	5.225						
		(ZH)	1.438	2.534	4.512				0.015	0.024	0.040
		(ZL)	1.757	2.958	4.839				0.019	0.028	0.041
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	2.631	3.612	5.539						
		(LZ)	2.039	3.017	4.796						
		(ZH)	1.302	2.288	4.125				0.015	0.024	0.040
		(ZL)	1.607	2.721	4.434				0.020	0.028	0.041
	BS1 → Y0	(HH)	1.486	2.553	4.515				0.015	0.024	0.040
		(LL)	1.622	2.745	4.502				0.020	0.028	0.041
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	2.715	3.754	5.828						
		(LZ)	2.115	3.161	5.078						
		(ZH)	1.391	2.428	4.350				0.015	0.024	0.040
		(ZL)	1.701	2.842	4.680				0.020	0.028	0.041
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
BEDFBB	A → Y0	(HH)	1.478	2.552	4.510				0.015	0.024	0.040
		(LL)	1.615	2.740	4.501				0.019	0.028	0.041
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	2.726	3.773	5.819						
		(LZ)	2.112	3.154	5.070						
		(ZH)	1.388	2.425	4.348				0.015	0.024	0.040
		(ZL)	1.703	2.839	4.676				0.020	0.028	0.041
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.552	2.662	4.680				0.015	0.024	0.040
		(HL)	1.675	2.826	4.615				0.020	0.028	0.041
		(LH)	1.534	2.638	4.653				0.015	0.024	0.040
		(LL)	1.682	2.854	4.658				0.020	0.028	0.041

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(HZ)	2.767	3.860	5.966						
		(LZ)	2.176	3.257	5.225						
		(ZH)	1.438	2.534	4.512				0.015	0.024	0.040
		(ZL)	1.757	2.958	4.839				0.019	0.028	0.041
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	2.631	3.612	5.539						
		(LZ)	2.039	3.017	4.796						
		(ZH)	1.302	2.288	4.125				0.015	0.024	0.040
		(ZL)	1.607	2.721	4.434				0.020	0.028	0.041
	BS1 → Y0	(HH)	1.486	2.553	4.515				0.015	0.024	0.040
		(LL)	1.622	2.745	4.502				0.020	0.028	0.041
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	2.715	3.754	5.828						
		(LZ)	2.115	3.161	5.078						
		(ZH)	1.391	2.428	4.350				0.015	0.024	0.040
		(ZL)	1.701	2.842	4.680				0.020	0.028	0.041
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
BEUFBB	A → Y0	(HH)	1.478	2.552	4.510				0.015	0.024	0.040
		(LL)	1.615	2.740	4.501				0.019	0.028	0.041
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	2.726	3.773	5.819						
		(LZ)	2.112	3.154	5.070						
		(ZH)	1.388	2.425	4.348				0.015	0.024	0.040
		(ZL)	1.703	2.839	4.676				0.020	0.028	0.041
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.552	2.662	4.680				0.015	0.024	0.040
		(HL)	1.675	2.826	4.615				0.020	0.028	0.041
		(LH)	1.534	2.638	4.653				0.015	0.024	0.040
		(LL)	1.682	2.854	4.658				0.020	0.028	0.041
		(HZ)	2.767	3.860	5.966						
		(LZ)	2.176	3.257	5.225						
		(ZH)	1.438	2.534	4.512				0.015	0.024	0.040
		(ZL)	1.757	2.958	4.839				0.019	0.028	0.041
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	2.631	3.612	5.539						
		(LZ)	2.039	3.017	4.796						

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(ZH)	1.302	2.288	4.125				0.015	0.024	0.040
		(ZL)	1.607	2.721	4.434				0.020	0.028	0.041
	BS1 → Y0	(HH)	1.486	2.553	4.515				0.015	0.024	0.040
		(LL)	1.622	2.745	4.502				0.020	0.028	0.041
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	2.715	3.754	5.828						
		(LZ)	2.115	3.161	5.078						
		(ZH)	1.391	2.428	4.350				0.015	0.024	0.040
		(ZL)	1.701	2.842	4.680				0.020	0.028	0.041
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			
BEWFBB	A → Y0	(HH)	1.478	2.552	4.510				0.015	0.024	0.040
		(LL)	1.615	2.740	4.501				0.019	0.028	0.041
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	2.726	3.773	5.819						
		(LZ)	2.112	3.154	5.070						
		(ZH)	1.388	2.425	4.348				0.015	0.024	0.040
		(ZL)	1.703	2.839	4.676				0.020	0.028	0.041
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.552	2.662	4.680				0.015	0.024	0.040
		(HL)	1.675	2.826	4.615				0.020	0.028	0.041
		(LH)	1.534	2.638	4.653				0.015	0.024	0.040
		(LL)	1.682	2.854	4.658				0.020	0.028	0.041
		(HZ)	2.767	3.860	5.966						
		(LZ)	2.176	3.257	5.225						
		(ZH)	1.438	2.534	4.512				0.015	0.024	0.040
		(ZL)	1.757	2.958	4.839				0.019	0.028	0.041
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	2.631	3.612	5.539						
		(LZ)	2.039	3.017	4.796						
		(ZH)	1.302	2.288	4.125				0.015	0.024	0.040
		(ZL)	1.607	2.721	4.434				0.020	0.028	0.041
	BS1 → Y0	(HH)	1.486	2.553	4.515				0.015	0.024	0.040
		(LL)	1.622	2.745	4.502				0.020	0.028	0.041
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	2.715	3.754	5.828						
		(LZ)	2.115	3.161	5.078						
		(ZH)	1.391	2.428	4.350				0.015	0.024	0.040
		(ZL)	1.701	2.842	4.680				0.020	0.028	0.041
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			

Function	Schmitt I/O Buffer					3.3V
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA	BSIUBB	BSDUBB	BSUUBB	BSWUBB	1	42
6mA	BSICBB	BSDCBB	BSUCBB	BSWCBB	1	42
9mA	BSI3BB	BSD3BB	BSU3BB	BSW3BB	1	42
12mA	BSI1BB	BSD1BB	BSU1BB	BSW1BB	1	42
18mA	BSI5BB	BSD5BB	BSU5BB	BSW5BB	1	45
24mA	BSIFBB	BSDFBB	BSUFBB	BSWFBB	1	45

Logic Diagram



Truth Table

A	B	BS1	BS2	*1	*2	Y0	Z1	Z2	
A	1	X	X	0	0	A	A	1	
A	0	X	X	0	0	Z	A	0	
X	X	A	1	1	0	A	A	1	
X	X	A	0	1	0	Z	A	0	
A	B	X	X	0	1	Z	A	B	
X	X	A	B	1	1	Z	A	B	← Prohibition

*1:MODE1 , *2:MODE2

X:Irrelevant

Z:High Impedance

Y0	Y1
0	0
1	1

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
BSIUBB to BSWUBB	A	2.4	Y1	229
	B	2.4	Z1	36
	MODE1	2.5	Z2	35
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		
BSICBB to BSWCBB	A	2.4	Y1	229
	B	2.4	Z1	36
	MODE1	2.5	Z2	35
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		
BSI3BB to BSW1BB	A	2.4	Y1	229
	B	2.4	Z1	36
	MODE1	2.5	Z2	35
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		
BSI5BB to BSWFBB	A	2.4	Y1	229
	B	2.4	Z1	35
	MODE1	2.5	Z2	35
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
BSIUBB	A → Y0	(HH)	0.996	1.577	2.563				0.072	0.114	0.181	
		(LL)	1.069	1.618	2.471				0.088	0.125	0.179	
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034				
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025				
	B → Y0	(HZ)	0.348	0.530	0.847							
		(LZ)	0.481	0.769	1.238							
		(ZH)	0.986	1.576	2.561				0.072	0.114	0.181	
		(ZL)	1.259	1.899	2.896				0.087	0.125	0.179	
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034				
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025				
	MODE1 → Y0	(HH)	1.063	1.685	2.732				0.072	0.114	0.181	
		(HL)	1.139	1.705	2.588				0.088	0.125	0.179	
		(LH)	1.045	1.665	2.703				0.072	0.114	0.181	
		(LL)	1.138	1.718	2.625				0.088	0.125	0.179	
		(HZ)	0.411	0.631	1.004							
		(LZ)	0.545	0.870	1.397							
		(ZH)	1.036	1.691	2.729				0.072	0.114	0.181	
		(ZL)	1.307	2.008	3.065				0.087	0.124	0.179	
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034				
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025				
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034				
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025				
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034				
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025				
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034				
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025				
	MODE2 → Y0	(HZ)	0.280	0.382	0.558							
		(LZ)	0.411	0.623	0.953							
		(ZH)	0.896	1.441	2.338				0.072	0.114	0.181	
		(ZL)	1.166	1.760	2.675				0.087	0.125	0.179	
	BS1 → Y0	(HH)	0.998	1.588	2.568				0.072	0.114	0.181	
		(LL)	1.082	1.629	2.468				0.087	0.125	0.179	
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034				
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025				
	BS2 → Y0	(HZ)	0.350	0.534	0.851							
		(LZ)	0.484	0.771	1.240							
		(ZH)	0.987	1.585	2.565				0.072	0.114	0.181	
		(ZL)	1.258	1.902	2.901				0.087	0.125	0.179	
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034				
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025				
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004				
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007				
BSDUBB	A → Y0	(HH)	0.996	1.577	2.563				0.072	0.114	0.181	
		(LL)	1.069	1.618	2.471				0.088	0.125	0.179	
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034				
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025				
	B → Y0	(HZ)	0.348	0.530	0.847							
		(LZ)	0.481	0.769	1.238							
		(ZH)	0.986	1.576	2.561				0.072	0.114	0.181	
		(ZL)	1.259	1.899	2.896				0.087	0.125	0.179	
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034				
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025				
	MODE1 → Y0	(HH)	1.063	1.685	2.732				0.072	0.114	0.181	
		(HL)	1.139	1.705	2.588				0.088	0.125	0.179	
		(LH)	1.045	1.665	2.703				0.072	0.114	0.181	
		(LL)	1.138	1.718	2.625				0.088	0.125	0.179	

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(HZ)	0.411	0.631	1.004						
		(LZ)	0.545	0.870	1.397						
		(ZH)	1.036	1.691	2.729				0.072	0.114	0.181
		(ZL)	1.307	2.008	3.065				0.087	0.124	0.179
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.280	0.382	0.558						
		(LZ)	0.411	0.623	0.953						
		(ZH)	0.896	1.441	2.338				0.072	0.114	0.181
		(ZL)	1.166	1.760	2.675				0.087	0.125	0.179
	BS1 → Y0	(HH)	0.998	1.588	2.568				0.072	0.114	0.181
		(LL)	1.082	1.629	2.468				0.087	0.125	0.179
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.350	0.534	0.851						
		(LZ)	0.484	0.771	1.240						
		(ZH)	0.987	1.585	2.565				0.072	0.114	0.181
		(ZL)	1.258	1.902	2.901				0.087	0.125	0.179
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BSUUBB	A → Y0	(HH)	0.996	1.577	2.563				0.072	0.114	0.181
		(LL)	1.069	1.618	2.471				0.088	0.125	0.179
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	0.348	0.530	0.847						
		(LZ)	0.481	0.769	1.238						
		(ZH)	0.986	1.576	2.561				0.072	0.114	0.181
		(ZL)	1.259	1.899	2.896				0.087	0.125	0.179
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.063	1.685	2.732				0.072	0.114	0.181
		(HL)	1.139	1.705	2.588				0.088	0.125	0.179
		(LH)	1.045	1.665	2.703				0.072	0.114	0.181
		(LL)	1.138	1.718	2.625				0.088	0.125	0.179
		(HZ)	0.411	0.631	1.004						
		(LZ)	0.545	0.870	1.397						
		(ZH)	1.036	1.691	2.729				0.072	0.114	0.181
		(ZL)	1.307	2.008	3.065				0.087	0.124	0.179
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.280	0.382	0.558						
		(LZ)	0.411	0.623	0.953						

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(ZH)	0.896	1.441	2.338				0.072	0.114	0.181
		(ZL)	1.166	1.760	2.675				0.087	0.125	0.179
	BS1 → Y0	(HH)	0.998	1.588	2.568				0.072	0.114	0.181
		(LL)	1.082	1.629	2.468				0.087	0.125	0.179
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.350	0.534	0.851						
		(LZ)	0.484	0.771	1.240						
		(ZH)	0.987	1.585	2.565				0.072	0.114	0.181
		(ZL)	1.258	1.902	2.901				0.087	0.125	0.179
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BSWUBB	A → Y0	(HH)	0.996	1.577	2.563				0.072	0.114	0.181
		(LL)	1.069	1.618	2.471				0.088	0.125	0.179
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	0.348	0.530	0.847						
		(LZ)	0.481	0.769	1.238						
		(ZH)	0.986	1.576	2.561				0.072	0.114	0.181
		(ZL)	1.259	1.899	2.896				0.087	0.125	0.179
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.063	1.685	2.732				0.072	0.114	0.181
		(HL)	1.139	1.705	2.588				0.088	0.125	0.179
		(LH)	1.045	1.665	2.703				0.072	0.114	0.181
		(LL)	1.138	1.718	2.625				0.088	0.125	0.179
		(HZ)	0.411	0.631	1.004						
		(LZ)	0.545	0.870	1.397						
		(ZH)	1.036	1.691	2.729				0.072	0.114	0.181
		(ZL)	1.307	2.008	3.065				0.087	0.124	0.179
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.280	0.382	0.558						
		(LZ)	0.411	0.623	0.953						
		(ZH)	0.896	1.441	2.338				0.072	0.114	0.181
		(ZL)	1.166	1.760	2.675				0.087	0.125	0.179
	BS1 → Y0	(HH)	0.998	1.588	2.568				0.072	0.114	0.181
		(LL)	1.082	1.629	2.468				0.087	0.125	0.179
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.350	0.534	0.851						
		(LZ)	0.484	0.771	1.240						
		(ZH)	0.987	1.585	2.565				0.072	0.114	0.181
		(ZL)	1.258	1.902	2.901				0.087	0.125	0.179
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BSICBB	A → Y0	(HH)	0.881	1.423	2.339				0.037	0.059	0.093
		(LL)	0.945	1.503	2.399				0.045	0.063	0.090
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	0.622	0.900	1.405						
		(LZ)	0.633	0.987	1.585						
		(ZH)	0.854	1.382	2.257				0.037	0.059	0.093
		(ZL)	1.067	1.677	2.642				0.044	0.063	0.090
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.950	1.533	2.510				0.037	0.059	0.093
		(HL)	1.009	1.591	2.519				0.045	0.063	0.090
		(LH)	0.932	1.512	2.482				0.037	0.059	0.093
		(LL)	1.012	1.602	2.556				0.045	0.063	0.090
		(HZ)	0.691	1.000	1.562						
		(LZ)	0.697	1.089	1.744						
		(ZH)	0.905	1.490	2.425				0.037	0.059	0.093
		(ZL)	1.112	1.786	2.810				0.045	0.063	0.090
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.557	0.751	1.113						
		(LZ)	0.561	0.842	1.302						
		(ZH)	0.765	1.240	2.034				0.037	0.059	0.093
		(ZL)	0.970	1.535	2.420				0.045	0.063	0.090
	BS1 → Y0	(HH)	0.883	1.427	2.343				0.037	0.059	0.093
		(LL)	0.949	1.505	2.404				0.044	0.063	0.090
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.625	0.903	1.412						
		(LZ)	0.635	0.991	1.589						
		(ZH)	0.857	1.384	2.262				0.037	0.059	0.093
		(ZL)	1.068	1.679	2.645				0.045	0.063	0.090
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BSDCBB	A → Y0	(HH)	0.881	1.423	2.339				0.037	0.059	0.093
		(LL)	0.945	1.503	2.399				0.045	0.063	0.090
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	0.622	0.900	1.405						
		(LZ)	0.633	0.987	1.585						
		(ZH)	0.854	1.382	2.257				0.037	0.059	0.093
		(ZL)	1.067	1.677	2.642				0.044	0.063	0.090
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.950	1.533	2.510				0.037	0.059	0.093
		(HL)	1.009	1.591	2.519				0.045	0.063	0.090
		(LH)	0.932	1.512	2.482				0.037	0.059	0.093
		(LL)	1.012	1.602	2.556				0.045	0.063	0.090

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(HZ)	0.691	1.000	1.562						
		(LZ)	0.697	1.089	1.744						
		(ZH)	0.905	1.490	2.425				0.037	0.059	0.093
		(ZL)	1.112	1.786	2.810				0.045	0.063	0.090
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.557	0.751	1.113						
		(LZ)	0.561	0.842	1.302						
		(ZH)	0.765	1.240	2.034				0.037	0.059	0.093
		(ZL)	0.970	1.535	2.420				0.045	0.063	0.090
	BS1 → Y0	(HH)	0.883	1.427	2.343				0.037	0.059	0.093
		(LL)	0.949	1.505	2.404				0.044	0.063	0.090
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.625	0.903	1.412						
		(LZ)	0.635	0.991	1.589						
		(ZH)	0.857	1.384	2.262				0.037	0.059	0.093
		(ZL)	1.068	1.679	2.645				0.045	0.063	0.090
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BSUCBB	A → Y0	(HH)	0.881	1.423	2.339				0.037	0.059	0.093
		(LL)	0.945	1.503	2.399				0.045	0.063	0.090
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	0.622	0.900	1.405						
		(LZ)	0.633	0.987	1.585						
		(ZH)	0.854	1.382	2.257				0.037	0.059	0.093
		(ZL)	1.067	1.677	2.642				0.044	0.063	0.090
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.950	1.533	2.510				0.037	0.059	0.093
		(HL)	1.009	1.591	2.519				0.045	0.063	0.090
		(LH)	0.932	1.512	2.482				0.037	0.059	0.093
		(LL)	1.012	1.602	2.556				0.045	0.063	0.090
		(HZ)	0.691	1.000	1.562						
		(LZ)	0.697	1.089	1.744						
		(ZH)	0.905	1.490	2.425				0.037	0.059	0.093
		(ZL)	1.112	1.786	2.810				0.045	0.063	0.090
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.557	0.751	1.113						
		(LZ)	0.561	0.842	1.302						

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(ZH)	0.765	1.240	2.034				0.037	0.059	0.093
		(ZL)	0.970	1.535	2.420				0.045	0.063	0.090
	BS1 → Y0	(HH)	0.883	1.427	2.343				0.037	0.059	0.093
		(LL)	0.949	1.505	2.404				0.044	0.063	0.090
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.625	0.903	1.412						
		(LZ)	0.635	0.991	1.589						
		(ZH)	0.857	1.384	2.262				0.037	0.059	0.093
		(ZL)	1.068	1.679	2.645				0.045	0.063	0.090
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BSWCBB	A → Y0	(HH)	0.881	1.423	2.339				0.037	0.059	0.093
		(LL)	0.945	1.503	2.399				0.045	0.063	0.090
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	0.622	0.900	1.405						
		(LZ)	0.633	0.987	1.585						
		(ZH)	0.854	1.382	2.257				0.037	0.059	0.093
		(ZL)	1.067	1.677	2.642				0.044	0.063	0.090
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.950	1.533	2.510				0.037	0.059	0.093
		(HL)	1.009	1.591	2.519				0.045	0.063	0.090
		(LH)	0.932	1.512	2.482				0.037	0.059	0.093
		(LL)	1.012	1.602	2.556				0.045	0.063	0.090
		(HZ)	0.691	1.000	1.562						
		(LZ)	0.697	1.089	1.744						
		(ZH)	0.905	1.490	2.425				0.037	0.059	0.093
		(ZL)	1.112	1.786	2.810				0.045	0.063	0.090
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.557	0.751	1.113						
		(LZ)	0.561	0.842	1.302						
		(ZH)	0.765	1.240	2.034				0.037	0.059	0.093
		(ZL)	0.970	1.535	2.420				0.045	0.063	0.090
	BS1 → Y0	(HH)	0.883	1.427	2.343				0.037	0.059	0.093
		(LL)	0.949	1.505	2.404				0.044	0.063	0.090
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.625	0.903	1.412						
		(LZ)	0.635	0.991	1.589						
		(ZH)	0.857	1.384	2.262				0.037	0.059	0.093
		(ZL)	1.068	1.679	2.645				0.045	0.063	0.090
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BSI3BB	A → Y0	(HH)	0.820	1.323	2.175				0.026	0.041	0.064
		(LL)	0.849	1.374	2.223				0.031	0.043	0.061
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	0.670	0.962	1.517						
		(LZ)	0.647	1.011	1.619						
		(ZH)	0.789	1.276	2.085				0.026	0.041	0.064
		(ZL)	0.959	1.531	2.438				0.031	0.043	0.061
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.888	1.433	2.345				0.026	0.041	0.064
		(HL)	0.913	1.462	2.342				0.031	0.043	0.061
		(LH)	0.870	1.412	2.319				0.026	0.041	0.064
		(LL)	0.912	1.473	2.380				0.031	0.043	0.061
		(HZ)	0.740	1.062	1.671						
		(LZ)	0.710	1.112	1.778						
		(ZH)	0.840	1.384	2.252				0.026	0.041	0.064
		(ZL)	1.011	1.638	2.606				0.031	0.043	0.061
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.606	0.813	1.220						
		(LZ)	0.575	0.864	1.336						
		(ZH)	0.700	1.135	1.862				0.026	0.041	0.064
		(ZL)	0.868	1.390	2.215				0.031	0.043	0.061
	BS1 → Y0	(HH)	0.822	1.328	2.179				0.026	0.041	0.064
		(LL)	0.852	1.378	2.226				0.031	0.043	0.061
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.672	0.974	1.524						
		(LZ)	0.649	1.014	1.622						
		(ZH)	0.791	1.278	2.087				0.026	0.041	0.064
		(ZL)	0.961	1.534	2.440				0.031	0.043	0.061
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BSD3BB	A → Y0	(HH)	0.820	1.323	2.175				0.026	0.041	0.064
		(LL)	0.849	1.374	2.223				0.031	0.043	0.061
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	0.670	0.962	1.517						
		(LZ)	0.647	1.011	1.619						
		(ZH)	0.789	1.276	2.085				0.026	0.041	0.064
		(ZL)	0.959	1.531	2.438				0.031	0.043	0.061
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.888	1.433	2.345				0.026	0.041	0.064
		(HL)	0.913	1.462	2.342				0.031	0.043	0.061
		(LH)	0.870	1.412	2.319				0.026	0.041	0.064
		(LL)	0.912	1.473	2.380				0.031	0.043	0.061

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(HZ)	0.740	1.062	1.671						
		(LZ)	0.710	1.112	1.778						
		(ZH)	0.840	1.384	2.252				0.026	0.041	0.064
		(ZL)	1.011	1.638	2.606				0.031	0.043	0.061
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.606	0.813	1.220						
		(LZ)	0.575	0.864	1.336						
		(ZH)	0.700	1.135	1.862				0.026	0.041	0.064
		(ZL)	0.868	1.390	2.215				0.031	0.043	0.061
	BS1 → Y0	(HH)	0.822	1.328	2.179				0.026	0.041	0.064
		(LL)	0.852	1.378	2.226				0.031	0.043	0.061
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.672	0.974	1.524						
		(LZ)	0.649	1.014	1.622						
		(ZH)	0.791	1.278	2.087				0.026	0.041	0.064
		(ZL)	0.961	1.534	2.440				0.031	0.043	0.061
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BSU3BB	A → Y0	(HH)	0.820	1.323	2.175				0.026	0.041	0.064
		(LL)	0.849	1.374	2.223				0.031	0.043	0.061
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	0.670	0.962	1.517						
		(LZ)	0.647	1.011	1.619						
		(ZH)	0.789	1.276	2.085				0.026	0.041	0.064
		(ZL)	0.959	1.531	2.438				0.031	0.043	0.061
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.888	1.433	2.345				0.026	0.041	0.064
		(HL)	0.913	1.462	2.342				0.031	0.043	0.061
		(LH)	0.870	1.412	2.319				0.026	0.041	0.064
		(LL)	0.912	1.473	2.380				0.031	0.043	0.061
		(HZ)	0.740	1.062	1.671						
		(LZ)	0.710	1.112	1.778						
		(ZH)	0.840	1.384	2.252				0.026	0.041	0.064
		(ZL)	1.011	1.638	2.606				0.031	0.043	0.061
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.606	0.813	1.220						
		(LZ)	0.575	0.864	1.336						

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(ZH)	0.700	1.135	1.862				0.026	0.041	0.064
		(ZL)	0.868	1.390	2.215				0.031	0.043	0.061
	BS1 → Y0	(HH)	0.822	1.328	2.179				0.026	0.041	0.064
		(LL)	0.852	1.378	2.226				0.031	0.043	0.061
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.672	0.974	1.524						
		(LZ)	0.649	1.014	1.622						
		(ZH)	0.791	1.278	2.087				0.026	0.041	0.064
		(ZL)	0.961	1.534	2.440				0.031	0.043	0.061
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BSW3BB	A → Y0	(HH)	0.820	1.323	2.175				0.026	0.041	0.064
		(LL)	0.849	1.374	2.223				0.031	0.043	0.061
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	0.670	0.962	1.517						
		(LZ)	0.647	1.011	1.619						
		(ZH)	0.789	1.276	2.085				0.026	0.041	0.064
		(ZL)	0.959	1.531	2.438				0.031	0.043	0.061
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.888	1.433	2.345				0.026	0.041	0.064
		(HL)	0.913	1.462	2.342				0.031	0.043	0.061
		(LH)	0.870	1.412	2.319				0.026	0.041	0.064
		(LL)	0.912	1.473	2.380				0.031	0.043	0.061
		(HZ)	0.740	1.062	1.671						
		(LZ)	0.710	1.112	1.778						
		(ZH)	0.840	1.384	2.252				0.026	0.041	0.064
		(ZL)	1.011	1.638	2.606				0.031	0.043	0.061
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.606	0.813	1.220						
		(LZ)	0.575	0.864	1.336						
		(ZH)	0.700	1.135	1.862				0.026	0.041	0.064
		(ZL)	0.868	1.390	2.215				0.031	0.043	0.061
	BS1 → Y0	(HH)	0.822	1.328	2.179				0.026	0.041	0.064
		(LL)	0.852	1.378	2.226				0.031	0.043	0.061
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.672	0.974	1.524						
		(LZ)	0.649	1.014	1.622						
		(ZH)	0.791	1.278	2.087				0.026	0.041	0.064
		(ZL)	0.961	1.534	2.440				0.031	0.043	0.061
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BSI1BB	A → Y0	(HH)	0.790	1.284	2.115				0.020	0.031	0.048
		(LL)	0.807	1.320	2.154				0.023	0.033	0.047
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	0.726	1.032	1.620						
		(LZ)	0.663	1.034	1.658						
		(ZH)	0.758	1.228	2.011				0.020	0.031	0.048
		(ZL)	0.907	1.461	2.340				0.023	0.033	0.047
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.858	1.393	2.283				0.020	0.031	0.048
		(HL)	0.874	1.409	2.274				0.023	0.033	0.047
		(LH)	0.841	1.372	2.258				0.020	0.031	0.048
		(LL)	0.872	1.423	2.309				0.023	0.033	0.047
		(HZ)	0.789	1.132	1.779						
		(LZ)	0.727	1.135	1.818						
		(ZH)	0.809	1.338	2.181				0.020	0.031	0.048
		(ZL)	0.957	1.570	2.508				0.023	0.033	0.047
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.655	0.892	1.333						
		(LZ)	0.593	0.888	1.374						
		(ZH)	0.668	1.088	1.789				0.020	0.030	0.048
		(ZL)	0.818	1.320	2.117				0.023	0.033	0.047
	BS1 → Y0	(HH)	0.792	1.286	2.119				0.020	0.031	0.048
		(LL)	0.810	1.322	2.157				0.023	0.033	0.047
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.725	1.038	1.632						
		(LZ)	0.665	1.038	1.661						
		(ZH)	0.760	1.232	2.017				0.020	0.030	0.048
		(ZL)	0.908	1.464	2.345				0.023	0.033	0.047
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BSD1BB	A → Y0	(HH)	0.790	1.284	2.115				0.020	0.031	0.048
		(LL)	0.807	1.320	2.154				0.023	0.033	0.047
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	0.726	1.032	1.620						
		(LZ)	0.663	1.034	1.658						
		(ZH)	0.758	1.228	2.011				0.020	0.031	0.048
		(ZL)	0.907	1.461	2.340				0.023	0.033	0.047
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.858	1.393	2.283				0.020	0.031	0.048
		(HL)	0.874	1.409	2.274				0.023	0.033	0.047
		(LH)	0.841	1.372	2.258				0.020	0.031	0.048
		(LL)	0.872	1.423	2.309				0.023	0.033	0.047

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(HZ)	0.789	1.132	1.779						
		(LZ)	0.727	1.135	1.818						
		(ZH)	0.809	1.338	2.181				0.020	0.031	0.048
		(ZL)	0.957	1.570	2.508				0.023	0.033	0.047
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.655	0.892	1.333						
		(LZ)	0.593	0.888	1.374						
		(ZH)	0.668	1.088	1.789				0.020	0.030	0.048
		(ZL)	0.818	1.320	2.117				0.023	0.033	0.047
	BS1 → Y0	(HH)	0.792	1.286	2.119				0.020	0.031	0.048
		(LL)	0.810	1.322	2.157				0.023	0.033	0.047
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.725	1.038	1.632						
		(LZ)	0.665	1.038	1.661						
		(ZH)	0.760	1.232	2.017				0.020	0.030	0.048
		(ZL)	0.908	1.464	2.345				0.023	0.033	0.047
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BSU1BB	A → Y0	(HH)	0.790	1.284	2.115				0.020	0.031	0.048
		(LL)	0.807	1.320	2.154				0.023	0.033	0.047
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	0.726	1.032	1.620						
		(LZ)	0.663	1.034	1.658						
		(ZH)	0.758	1.228	2.011				0.020	0.031	0.048
		(ZL)	0.907	1.461	2.340				0.023	0.033	0.047
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.858	1.393	2.283				0.020	0.031	0.048
		(HL)	0.874	1.409	2.274				0.023	0.033	0.047
		(LH)	0.841	1.372	2.258				0.020	0.031	0.048
		(LL)	0.872	1.423	2.309				0.023	0.033	0.047
		(HZ)	0.789	1.132	1.779						
		(LZ)	0.727	1.135	1.818						
		(ZH)	0.809	1.338	2.181				0.020	0.031	0.048
		(ZL)	0.957	1.570	2.508				0.023	0.033	0.047
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.655	0.892	1.333						
		(LZ)	0.593	0.888	1.374						

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(ZH)	0.668	1.088	1.789				0.020	0.030	0.048
		(ZL)	0.818	1.320	2.117				0.023	0.033	0.047
	BS1 → Y0	(HH)	0.792	1.286	2.119				0.020	0.031	0.048
		(LL)	0.810	1.322	2.157				0.023	0.033	0.047
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.725	1.038	1.632						
		(LZ)	0.665	1.038	1.661						
		(ZH)	0.760	1.232	2.017				0.020	0.030	0.048
		(ZL)	0.908	1.464	2.345				0.023	0.033	0.047
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BSW1BB	A → Y0	(HH)	0.790	1.284	2.115				0.020	0.031	0.048
		(LL)	0.807	1.320	2.154				0.023	0.033	0.047
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	0.726	1.032	1.620						
		(LZ)	0.663	1.034	1.658						
		(ZH)	0.758	1.228	2.011				0.020	0.031	0.048
		(ZL)	0.907	1.461	2.340				0.023	0.033	0.047
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.858	1.393	2.283				0.020	0.031	0.048
		(HL)	0.874	1.409	2.274				0.023	0.033	0.047
		(LH)	0.841	1.372	2.258				0.020	0.031	0.048
		(LL)	0.872	1.423	2.309				0.023	0.033	0.047
		(HZ)	0.789	1.132	1.779						
		(LZ)	0.727	1.135	1.818						
		(ZH)	0.809	1.338	2.181				0.020	0.031	0.048
		(ZL)	0.957	1.570	2.508				0.023	0.033	0.047
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.655	0.892	1.333						
		(LZ)	0.593	0.888	1.374						
		(ZH)	0.668	1.088	1.789				0.020	0.030	0.048
		(ZL)	0.818	1.320	2.117				0.023	0.033	0.047
	BS1 → Y0	(HH)	0.792	1.286	2.119				0.020	0.031	0.048
		(LL)	0.810	1.322	2.157				0.023	0.033	0.047
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.725	1.038	1.632						
		(LZ)	0.665	1.038	1.661						
		(ZH)	0.760	1.232	2.017				0.020	0.030	0.048
		(ZL)	0.908	1.464	2.345				0.023	0.033	0.047
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BSI5BB	A → Y0	(HH)	0.710	1.161	1.923				0.013	0.021	0.033
		(LL)	0.740	1.235	2.044				0.016	0.023	0.033
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033			
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0	(HZ)	0.846	1.206	1.880						
		(LZ)	0.704	1.096	1.758						
		(ZH)	0.744	1.214	1.991				0.013	0.021	0.033
		(ZL)	0.860	1.401	2.261				0.016	0.023	0.032
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.775	1.268	2.090				0.013	0.021	0.033
		(HL)	0.805	1.328	2.177				0.016	0.023	0.033
		(LH)	0.762	1.253	2.074				0.013	0.021	0.033
		(LL)	0.801	1.333	2.201				0.016	0.023	0.033
		(HZ)	0.909	1.305	2.033						
		(LZ)	0.768	1.197	1.916						
		(ZH)	0.795	1.323	2.160				0.013	0.021	0.033
		(ZL)	0.913	1.507	2.429				0.016	0.023	0.032
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033			
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.765	1.057	1.588						
		(LZ)	0.633	0.950	1.474						
		(ZH)	0.654	1.073	1.768				0.013	0.021	0.033
		(ZL)	0.771	1.259	2.040				0.016	0.023	0.032
	BS1 → Y0	(HH)	0.711	1.164	1.927				0.013	0.021	0.033
		(LL)	0.741	1.237	2.049				0.016	0.023	0.033
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033			
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.847	1.212	1.882						
		(LZ)	0.707	1.099	1.761						
		(ZH)	0.745	1.217	1.995				0.013	0.021	0.033
		(ZL)	0.862	1.401	2.266				0.016	0.023	0.032
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BSD5BB	A → Y0	(HH)	0.710	1.161	1.923				0.013	0.021	0.033
		(LL)	0.740	1.235	2.044				0.016	0.023	0.033
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033			
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0	(HZ)	0.846	1.206	1.880						
		(LZ)	0.704	1.096	1.758						
		(ZH)	0.744	1.214	1.991				0.013	0.021	0.033
		(ZL)	0.860	1.401	2.261				0.016	0.023	0.032
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.775	1.268	2.090				0.013	0.021	0.033
		(HL)	0.805	1.328	2.177				0.016	0.023	0.033
		(LH)	0.762	1.253	2.074				0.013	0.021	0.033
		(LL)	0.801	1.333	2.201				0.016	0.023	0.033

Block type	Switching speed									
	Path	t_{LD0} (ns)			t_1			T		
	IN → OUT	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
	(HZ)	0.909	1.305	2.033						
	(LZ)	0.768	1.197	1.916						
	(ZH)	0.795	1.323	2.160				0.013	0.021	0.033
	(ZL)	0.913	1.507	2.429				0.016	0.023	0.032
	MODE1 → Z1 (HH)	0.261	0.407	0.643	0.013	0.021	0.033			
	(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
	(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
	(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2 (HH)	0.225	0.348	0.545	0.013	0.021	0.034			
	(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
	(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
	(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0 (HZ)	0.765	1.057	1.588						
	(LZ)	0.633	0.950	1.474						
	(ZH)	0.654	1.073	1.768				0.013	0.021	0.033
	(ZL)	0.771	1.259	2.040				0.016	0.023	0.032
	BS1 → Y0 (HH)	0.711	1.164	1.927				0.013	0.021	0.033
	(LL)	0.741	1.237	2.049				0.016	0.023	0.033
	BS1 → Z1 (HH)	0.198	0.303	0.484	0.013	0.021	0.033			
	(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0 (HZ)	0.847	1.212	1.882						
	(LZ)	0.707	1.099	1.761						
	(ZH)	0.745	1.217	1.995				0.013	0.021	0.033
	(ZL)	0.862	1.401	2.266				0.016	0.023	0.032
	BS2 → Z2 (HH)	0.160	0.244	0.383	0.013	0.021	0.034			
	(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1 (HH)	0.450	0.689	1.102	0.002	0.003	0.004			
	(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BSU5BB	A → Y0 (HH)	0.710	1.161	1.923				0.013	0.021	0.033
	(LL)	0.740	1.235	2.044				0.016	0.023	0.033
	A → Z1 (HH)	0.196	0.301	0.480	0.013	0.021	0.033			
	(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0 (HZ)	0.846	1.206	1.880						
	(LZ)	0.704	1.096	1.758						
	(ZH)	0.744	1.214	1.991				0.013	0.021	0.033
	(ZL)	0.860	1.401	2.261				0.016	0.023	0.032
	B → Z2 (HH)	0.158	0.241	0.379	0.013	0.021	0.034			
	(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0 (HH)	0.775	1.268	2.090				0.013	0.021	0.033
	(HL)	0.805	1.328	2.177				0.016	0.023	0.033
	(LH)	0.762	1.253	2.074				0.013	0.021	0.033
	(LL)	0.801	1.333	2.201				0.016	0.023	0.033
	(HZ)	0.909	1.305	2.033						
	(LZ)	0.768	1.197	1.916						
	(ZH)	0.795	1.323	2.160				0.013	0.021	0.033
	(ZL)	0.913	1.507	2.429				0.016	0.023	0.032
	MODE1 → Z1 (HH)	0.261	0.407	0.643	0.013	0.021	0.033			
	(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
	(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
	(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2 (HH)	0.225	0.348	0.545	0.013	0.021	0.034			
	(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
	(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
	(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0 (HZ)	0.765	1.057	1.588						
	(LZ)	0.633	0.950	1.474						

Block type	Switching speed									
	Path	t_{LD0} (ns)			t_1			T		
	IN → OUT	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
	(ZH)	0.654	1.073	1.768				0.013	0.021	0.033
	(ZL)	0.771	1.259	2.040				0.016	0.023	0.032
	BS1 → Y0 (HH)	0.711	1.164	1.927				0.013	0.021	0.033
	(LL)	0.741	1.237	2.049				0.016	0.023	0.033
	BS1 → Z1 (HH)	0.198	0.303	0.484	0.013	0.021	0.033			
	(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0 (HZ)	0.847	1.212	1.882						
	(LZ)	0.707	1.099	1.761						
	(ZH)	0.745	1.217	1.995				0.013	0.021	0.033
	(ZL)	0.862	1.401	2.266				0.016	0.023	0.032
	BS2 → Z2 (HH)	0.160	0.244	0.383	0.013	0.021	0.034			
	(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1 (HH)	0.450	0.689	1.102	0.002	0.003	0.004			
	(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BSW5BB	A → Y0 (HH)	0.710	1.161	1.923				0.013	0.021	0.033
	(LL)	0.740	1.235	2.044				0.016	0.023	0.033
	A → Z1 (HH)	0.196	0.301	0.480	0.013	0.021	0.033			
	(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0 (HZ)	0.846	1.206	1.880						
	(LZ)	0.704	1.096	1.758						
	(ZH)	0.744	1.214	1.991				0.013	0.021	0.033
	(ZL)	0.860	1.401	2.261				0.016	0.023	0.032
	B → Z2 (HH)	0.158	0.241	0.379	0.013	0.021	0.034			
	(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0 (HH)	0.775	1.268	2.090				0.013	0.021	0.033
	(HL)	0.805	1.328	2.177				0.016	0.023	0.033
	(LH)	0.762	1.253	2.074				0.013	0.021	0.033
	(LL)	0.801	1.333	2.201				0.016	0.023	0.033
	(HZ)	0.909	1.305	2.033						
	(LZ)	0.768	1.197	1.916						
	(ZH)	0.795	1.323	2.160				0.013	0.021	0.033
	(ZL)	0.913	1.507	2.429				0.016	0.023	0.032
	MODE1 → Z1 (HH)	0.261	0.407	0.643	0.013	0.021	0.033			
	(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
	(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
	(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2 (HH)	0.225	0.348	0.545	0.013	0.021	0.034			
	(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
	(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
	(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0 (HZ)	0.765	1.057	1.588						
	(LZ)	0.633	0.950	1.474						
	(ZH)	0.654	1.073	1.768				0.013	0.021	0.033
	(ZL)	0.771	1.259	2.040				0.016	0.023	0.032
	BS1 → Y0 (HH)	0.711	1.164	1.927				0.013	0.021	0.033
	(LL)	0.741	1.237	2.049				0.016	0.023	0.033
	BS1 → Z1 (HH)	0.198	0.303	0.484	0.013	0.021	0.033			
	(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0 (HZ)	0.847	1.212	1.882						
	(LZ)	0.707	1.099	1.761						
	(ZH)	0.745	1.217	1.995				0.013	0.021	0.033
	(ZL)	0.862	1.401	2.266				0.016	0.023	0.032
	BS2 → Z2 (HH)	0.160	0.244	0.383	0.013	0.021	0.034			
	(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1 (HH)	0.450	0.689	1.102	0.002	0.003	0.004			
	(LL)	0.481	0.729	1.133	0.003	0.004	0.007			

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
BSIFBB	A → Y0	(HH)	0.707	1.163	1.932				0.010	0.016	0.025	
		(LL)	0.721	1.208	2.018				0.013	0.018	0.026	
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033				
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025				
	B → Y0	(HZ)	0.934	1.336	2.084							
		(LZ)	0.731	1.132	1.814							
		(ZH)	0.737	1.207	1.985				0.010	0.016	0.025	
		(ZL)	0.829	1.359	2.207				0.013	0.018	0.026	
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034				
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025				
	MODE1 → Y0	(HH)	0.773	1.269	2.098				0.010	0.016	0.025	
		(HL)	0.787	1.304	2.154				0.013	0.018	0.026	
		(LH)	0.759	1.254	2.081				0.010	0.016	0.025	
		(LL)	0.783	1.309	2.175				0.013	0.018	0.026	
		(HZ)	0.990	1.430	2.236							
		(LZ)	0.794	1.232	1.976							
		(ZH)	0.789	1.316	2.154				0.010	0.016	0.025	
		(ZL)	0.881	1.466	2.375				0.013	0.018	0.026	
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033				
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025				
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033				
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025				
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034				
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025				
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034				
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025				
	MODE2 → Y0	(HZ)	0.866	1.179	1.783							
		(LZ)	0.660	0.986	1.531							
		(ZH)	0.648	1.065	1.762				0.010	0.016	0.025	
		(ZL)	0.740	1.217	1.984				0.013	0.018	0.026	
	BS1 → Y0	(HH)	0.709	1.165	1.935				0.010	0.016	0.025	
		(LL)	0.723	1.211	2.023				0.013	0.018	0.026	
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033				
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025				
	BS2 → Y0	(HZ)	0.936	1.336	2.084							
		(LZ)	0.733	1.135	1.821							
		(ZH)	0.739	1.209	1.989				0.010	0.016	0.025	
		(ZL)	0.831	1.361	2.211				0.013	0.018	0.026	
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034				
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025				
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004				
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007				
BSDFBB	A → Y0	(HH)	0.707	1.163	1.932				0.010	0.016	0.025	
		(LL)	0.721	1.208	2.018				0.013	0.018	0.026	
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033				
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025				
	B → Y0	(HZ)	0.934	1.336	2.084							
		(LZ)	0.731	1.132	1.814							
		(ZH)	0.737	1.207	1.985				0.010	0.016	0.025	
		(ZL)	0.829	1.359	2.207				0.013	0.018	0.026	
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034				
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025				
	MODE1 → Y0	(HH)	0.773	1.269	2.098				0.010	0.016	0.025	
		(HL)	0.787	1.304	2.154				0.013	0.018	0.026	
		(LH)	0.759	1.254	2.081				0.010	0.016	0.025	
		(LL)	0.783	1.309	2.175				0.013	0.018	0.026	

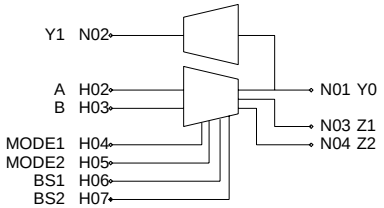
Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
		(HZ)	0.990	1.430	2.236							
		(LZ)	0.794	1.232	1.976							
		(ZH)	0.789	1.316	2.154				0.010	0.016	0.025	
		(ZL)	0.881	1.466	2.375				0.013	0.018	0.026	
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033				
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025				
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033				
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025				
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034				
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025				
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034				
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025				
	MODE2 → Y0	(HZ)	0.866	1.179	1.783							
		(LZ)	0.660	0.986	1.531							
		(ZH)	0.648	1.065	1.762				0.010	0.016	0.025	
		(ZL)	0.740	1.217	1.984				0.013	0.018	0.026	
	BS1 → Y0	(HH)	0.709	1.165	1.935				0.010	0.016	0.025	
		(LL)	0.723	1.211	2.023				0.013	0.018	0.026	
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033				
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025				
	BS2 → Y0	(HZ)	0.936	1.336	2.084							
		(LZ)	0.733	1.135	1.821							
		(ZH)	0.739	1.209	1.989				0.010	0.016	0.025	
		(ZL)	0.831	1.361	2.211				0.013	0.018	0.026	
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034				
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025				
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004				
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007				
BSUFBB	A → Y0	(HH)	0.707	1.163	1.932				0.010	0.016	0.025	
		(LL)	0.721	1.208	2.018				0.013	0.018	0.026	
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033				
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025				
	B → Y0	(HZ)	0.934	1.336	2.084							
		(LZ)	0.731	1.132	1.814							
		(ZH)	0.737	1.207	1.985				0.010	0.016	0.025	
		(ZL)	0.829	1.359	2.207				0.013	0.018	0.026	
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034				
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025				
	MODE1 → Y0	(HH)	0.773	1.269	2.098				0.010	0.016	0.025	
		(HL)	0.787	1.304	2.154				0.013	0.018	0.026	
		(LH)	0.759	1.254	2.081				0.010	0.016	0.025	
		(LL)	0.783	1.309	2.175				0.013	0.018	0.026	
		(HZ)	0.990	1.430	2.236							
		(LZ)	0.794	1.232	1.976							
		(ZH)	0.789	1.316	2.154				0.010	0.016	0.025	
		(ZL)	0.881	1.466	2.375				0.013	0.018	0.026	
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033				
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025				
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033				
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025				
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034				
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025				
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034				
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025				
	MODE2 → Y0	(HZ)	0.866	1.179	1.783							
		(LZ)	0.660	0.986	1.531							

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(ZH)	0.648	1.065	1.762				0.010	0.016	0.025
		(ZL)	0.740	1.217	1.984				0.013	0.018	0.026
	BS1 → Y0	(HH)	0.709	1.165	1.935				0.010	0.016	0.025
		(LL)	0.723	1.211	2.023				0.013	0.018	0.026
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033			
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.936	1.336	2.084						
		(LZ)	0.733	1.135	1.821						
		(ZH)	0.739	1.209	1.989				0.010	0.016	0.025
		(ZL)	0.831	1.361	2.211				0.013	0.018	0.026
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BSWFBB	A → Y0	(HH)	0.707	1.163	1.932				0.010	0.016	0.025
		(LL)	0.721	1.208	2.018				0.013	0.018	0.026
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033			
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0	(HZ)	0.934	1.336	2.084						
		(LZ)	0.731	1.132	1.814						
		(ZH)	0.737	1.207	1.985				0.010	0.016	0.025
		(ZL)	0.829	1.359	2.207				0.013	0.018	0.026
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.773	1.269	2.098				0.010	0.016	0.025
		(HL)	0.787	1.304	2.154				0.013	0.018	0.026
		(LH)	0.759	1.254	2.081				0.010	0.016	0.025
		(LL)	0.783	1.309	2.175				0.013	0.018	0.026
		(HZ)	0.990	1.430	2.236						
		(LZ)	0.794	1.232	1.976						
		(ZH)	0.789	1.316	2.154				0.010	0.016	0.025
		(ZL)	0.881	1.466	2.375				0.013	0.018	0.026
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033			
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.866	1.179	1.783						
		(LZ)	0.660	0.986	1.531						
		(ZH)	0.648	1.065	1.762				0.010	0.016	0.025
		(ZL)	0.740	1.217	1.984				0.013	0.018	0.026
	BS1 → Y0	(HH)	0.709	1.165	1.935				0.010	0.016	0.025
		(LL)	0.723	1.211	2.023				0.013	0.018	0.026
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033			
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.936	1.336	2.084						
		(LZ)	0.733	1.135	1.821						
		(ZH)	0.739	1.209	1.989				0.010	0.016	0.025
		(ZL)	0.831	1.361	2.211				0.013	0.018	0.026
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			

[MEMO]

Function	Low-noise Schmitt I/O Buffer					3.3V
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA						
6mA	BFICBB	BFDCBB	BFUCBB	BFWCBB	1	35
9mA	BFI3BB	BFD3BB	BFU3BB	BFW3BB	1	35
12mA	BFI1BB	BFD1BB	BFU1BB	BFW1BB	1	35
18mA	BFI5BB	BFD5BB	BFU5BB	BFW5BB	1	35
24mA	BFIFBB	BFDFBB	BFUFBB	BFWFBB	1	35

Logic Diagram



Truth Table

A	B	BS1	BS2	*1	*2	Y0	Z1	Z2	
A	1	X	X	0	0	A	A	1	
A	0	X	X	0	0	Z	A	0	
X	X	A	1	1	0	A	A	1	
X	X	A	0	1	0	Z	A	0	
A	B	X	X	0	1	Z	A	B	
X	X	A	B	1	1	Z	A	B	← Prohibition

*1:MODE1 , *2:MODE2

X:Irrelevant

Z:High Impedance

Y0	Y1
0	0
1	1

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
BFICBB to BFWCBB	A	2.4	Y1	229
	B	2.4	Z1	36
	MODE1	2.5	Z2	35
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		
BFI3BB to BFW1BB	A	2.4	Y1	229
	B	2.4	Z1	36
	MODE1	2.5	Z2	35
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		
BFI5BB to BFWFBB	A	2.4	Y1	229
	B	2.4	Z1	36
	MODE1	2.5	Z2	35
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
BFICBB	A → Y0	(HH)	1.518	2.516	4.372				0.039	0.060	0.097	
		(LL)	1.909	3.079	4.913				0.047	0.067	0.096	
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034				
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025				
	B → Y0	(HZ)	1.620	2.216	3.399							
		(LZ)	1.517	2.256	3.595							
		(ZH)	1.420	2.394	4.204				0.038	0.060	0.097	
		(ZL)	1.980	3.194	5.063				0.047	0.067	0.097	
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034				
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025				
	MODE1 → Y0	(HH)	1.586	2.623	4.534				0.039	0.060	0.097	
		(HL)	1.958	3.156	5.030				0.048	0.067	0.096	
		(LH)	1.568	2.605	4.511				0.039	0.060	0.096	
		(LL)	1.960	3.156	5.067				0.047	0.067	0.096	
		(HZ)	1.685	2.319	3.536							
		(LZ)	1.582	2.357	3.751							
		(ZH)	1.470	2.502	4.372				0.038	0.060	0.097	
		(ZL)	2.030	3.304	5.234				0.047	0.067	0.097	
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034				
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025				
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034				
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025				
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034				
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025				
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034				
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025				
	MODE2 → Y0	(HZ)	1.560	2.077	3.124							
		(LZ)	1.443	2.113	3.323							
		(ZH)	1.333	2.256	3.981				0.038	0.060	0.097	
		(ZL)	1.896	3.050	4.846				0.047	0.067	0.097	
	BS1 → Y0	(HH)	1.520	2.522	4.375				0.039	0.060	0.097	
		(LL)	1.899	3.072	4.912				0.047	0.067	0.096	
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034				
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025				
	BS2 → Y0	(HZ)	1.628	2.218	3.403							
		(LZ)	1.521	2.259	3.602							
		(ZH)	1.423	2.395	4.203				0.038	0.060	0.096	
		(ZL)	1.985	3.198	5.070				0.047	0.067	0.097	
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034				
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025				
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004				
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007				
BFDCBB	A → Y0	(HH)	1.518	2.516	4.372				0.039	0.060	0.097	
		(LL)	1.909	3.079	4.913				0.047	0.067	0.096	
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034				
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025				
	B → Y0	(HZ)	1.620	2.216	3.399							
		(LZ)	1.517	2.256	3.595							
		(ZH)	1.420	2.394	4.204				0.038	0.060	0.097	
		(ZL)	1.980	3.194	5.063				0.047	0.067	0.097	
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034				
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025				
	MODE1 → Y0	(HH)	1.586	2.623	4.534				0.039	0.060	0.097	
		(HL)	1.958	3.156	5.030				0.048	0.067	0.096	
		(LH)	1.568	2.605	4.511				0.039	0.060	0.096	
		(LL)	1.960	3.156	5.067				0.047	0.067	0.096	

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(HZ)	1.685	2.319	3.536						
		(LZ)	1.582	2.357	3.751						
		(ZH)	1.470	2.502	4.372				0.038	0.060	0.097
		(ZL)	2.030	3.304	5.234				0.047	0.067	0.097
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.560	2.077	3.124						
		(LZ)	1.443	2.113	3.323						
		(ZH)	1.333	2.256	3.981				0.038	0.060	0.097
		(ZL)	1.896	3.050	4.846				0.047	0.067	0.097
	BS1 → Y0	(HH)	1.520	2.522	4.375				0.039	0.060	0.097
		(LL)	1.899	3.072	4.912				0.047	0.067	0.096
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.628	2.218	3.403						
		(LZ)	1.521	2.259	3.602						
		(ZH)	1.423	2.395	4.203				0.038	0.060	0.096
		(ZL)	1.985	3.198	5.070				0.047	0.067	0.097
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BFUCBB	A → Y0	(HH)	1.518	2.516	4.372				0.039	0.060	0.097
		(LL)	1.909	3.079	4.913				0.047	0.067	0.096
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	1.620	2.216	3.399						
		(LZ)	1.517	2.256	3.595						
		(ZH)	1.420	2.394	4.204				0.038	0.060	0.097
		(ZL)	1.980	3.194	5.063				0.047	0.067	0.097
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.586	2.623	4.534				0.039	0.060	0.097
		(HL)	1.958	3.156	5.030				0.048	0.067	0.096
		(LH)	1.568	2.605	4.511				0.039	0.060	0.096
		(LL)	1.960	3.156	5.067				0.047	0.067	0.096
		(HZ)	1.685	2.319	3.536						
		(LZ)	1.582	2.357	3.751						
		(ZH)	1.470	2.502	4.372				0.038	0.060	0.097
		(ZL)	2.030	3.304	5.234				0.047	0.067	0.097
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.560	2.077	3.124						
		(LZ)	1.443	2.113	3.323						

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(ZH)	1.333	2.256	3.981				0.038	0.060	0.097
		(ZL)	1.896	3.050	4.846				0.047	0.067	0.097
	BS1 → Y0	(HH)	1.520	2.522	4.375				0.039	0.060	0.097
		(LL)	1.899	3.072	4.912				0.047	0.067	0.096
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.628	2.218	3.403						
		(LZ)	1.521	2.259	3.602						
		(ZH)	1.423	2.395	4.203				0.038	0.060	0.096
		(ZL)	1.985	3.198	5.070				0.047	0.067	0.097
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BFWCBB	A → Y0	(HH)	1.518	2.516	4.372				0.039	0.060	0.097
		(LL)	1.909	3.079	4.913				0.047	0.067	0.096
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	1.620	2.216	3.399						
		(LZ)	1.517	2.256	3.595						
		(ZH)	1.420	2.394	4.204				0.038	0.060	0.097
		(ZL)	1.980	3.194	5.063				0.047	0.067	0.097
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.586	2.623	4.534				0.039	0.060	0.097
		(HL)	1.958	3.156	5.030				0.048	0.067	0.096
		(LH)	1.568	2.605	4.511				0.039	0.060	0.096
		(LL)	1.960	3.156	5.067				0.047	0.067	0.096
		(HZ)	1.685	2.319	3.536						
		(LZ)	1.582	2.357	3.751						
		(ZH)	1.470	2.502	4.372				0.038	0.060	0.097
		(ZL)	2.030	3.304	5.234				0.047	0.067	0.097
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.560	2.077	3.124						
		(LZ)	1.443	2.113	3.323						
		(ZH)	1.333	2.256	3.981				0.038	0.060	0.097
		(ZL)	1.896	3.050	4.846				0.047	0.067	0.097
	BS1 → Y0	(HH)	1.520	2.522	4.375				0.039	0.060	0.097
		(LL)	1.899	3.072	4.912				0.047	0.067	0.096
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.628	2.218	3.403						
		(LZ)	1.521	2.259	3.602						
		(ZH)	1.423	2.395	4.203				0.038	0.060	0.096
		(ZL)	1.985	3.198	5.070				0.047	0.067	0.097
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BFI3BB	A → Y0	(HH)	1.468	2.457	4.278				0.028	0.044	0.070
		(LL)	1.770	2.896	4.663				0.035	0.049	0.070
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	1.817	2.480	3.781						
		(LZ)	1.609	2.393	3.825						
		(ZH)	1.372	2.330	4.116				0.028	0.044	0.070
		(ZL)	1.833	2.994	4.779				0.035	0.049	0.071
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.536	2.563	4.453				0.028	0.044	0.070
		(HL)	1.827	2.960	4.790				0.035	0.049	0.070
		(LH)	1.519	2.545	4.423				0.028	0.044	0.070
		(LL)	1.829	2.988	4.819				0.035	0.049	0.070
		(HZ)	1.877	2.581	3.940						
		(LZ)	1.672	2.496	3.979						
		(ZH)	1.422	2.439	4.282				0.028	0.044	0.070
		(ZL)	1.895	3.086	4.961				0.034	0.049	0.071
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.725	2.336	3.513						
		(LZ)	1.536	2.253	3.551						
		(ZH)	1.285	2.195	3.888				0.028	0.044	0.070
		(ZL)	1.761	2.842	4.572				0.034	0.049	0.070
	BS1 → Y0	(HH)	1.470	2.458	4.282				0.028	0.044	0.070
		(LL)	1.773	2.889	4.670				0.035	0.049	0.070
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.803	2.483	3.796						
		(LZ)	1.612	2.397	3.830						
		(ZH)	1.375	2.335	4.118				0.028	0.044	0.070
		(ZL)	1.837	2.981	4.783				0.035	0.049	0.071
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BFD3BB	A → Y0	(HH)	1.468	2.457	4.278				0.028	0.044	0.070
		(LL)	1.770	2.896	4.663				0.035	0.049	0.070
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	1.817	2.480	3.781						
		(LZ)	1.609	2.393	3.825						
		(ZH)	1.372	2.330	4.116				0.028	0.044	0.070
		(ZL)	1.833	2.994	4.779				0.035	0.049	0.071
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.536	2.563	4.453				0.028	0.044	0.070
		(HL)	1.827	2.960	4.790				0.035	0.049	0.070
		(LH)	1.519	2.545	4.423				0.028	0.044	0.070
		(LL)	1.829	2.988	4.819				0.035	0.049	0.070

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(HZ)	1.877	2.581	3.940						
		(LZ)	1.672	2.496	3.979						
		(ZH)	1.422	2.439	4.282				0.028	0.044	0.070
		(ZL)	1.895	3.086	4.961				0.034	0.049	0.071
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.725	2.336	3.513						
		(LZ)	1.536	2.253	3.551						
		(ZH)	1.285	2.195	3.888				0.028	0.044	0.070
		(ZL)	1.761	2.842	4.572				0.034	0.049	0.070
	BS1 → Y0	(HH)	1.470	2.458	4.282				0.028	0.044	0.070
		(LL)	1.773	2.889	4.670				0.035	0.049	0.070
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.803	2.483	3.796						
		(LZ)	1.612	2.397	3.830						
		(ZH)	1.375	2.335	4.118				0.028	0.044	0.070
		(ZL)	1.837	2.981	4.783				0.035	0.049	0.071
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BFU3BB	A → Y0	(HH)	1.468	2.457	4.278				0.028	0.044	0.070
		(LL)	1.770	2.896	4.663				0.035	0.049	0.070
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	1.817	2.480	3.781						
		(LZ)	1.609	2.393	3.825						
		(ZH)	1.372	2.330	4.116				0.028	0.044	0.070
		(ZL)	1.833	2.994	4.779				0.035	0.049	0.071
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.536	2.563	4.453				0.028	0.044	0.070
		(HL)	1.827	2.960	4.790				0.035	0.049	0.070
		(LH)	1.519	2.545	4.423				0.028	0.044	0.070
		(LL)	1.829	2.988	4.819				0.035	0.049	0.070
		(HZ)	1.877	2.581	3.940						
		(LZ)	1.672	2.496	3.979						
		(ZH)	1.422	2.439	4.282				0.028	0.044	0.070
		(ZL)	1.895	3.086	4.961				0.034	0.049	0.071
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.725	2.336	3.513						
		(LZ)	1.536	2.253	3.551						

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(ZH)	1.285	2.195	3.888				0.028	0.044	0.070
		(ZL)	1.761	2.842	4.572				0.034	0.049	0.070
	BS1 → Y0	(HH)	1.470	2.458	4.282				0.028	0.044	0.070
		(LL)	1.773	2.889	4.670				0.035	0.049	0.070
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.803	2.483	3.796						
		(LZ)	1.612	2.397	3.830						
		(ZH)	1.375	2.335	4.118				0.028	0.044	0.070
		(ZL)	1.837	2.981	4.783				0.035	0.049	0.071
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BFW3BB	A → Y0	(HH)	1.468	2.457	4.278				0.028	0.044	0.070
		(LL)	1.770	2.896	4.663				0.035	0.049	0.070
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	1.817	2.480	3.781						
		(LZ)	1.609	2.393	3.825						
		(ZH)	1.372	2.330	4.116				0.028	0.044	0.070
		(ZL)	1.833	2.994	4.779				0.035	0.049	0.071
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.536	2.563	4.453				0.028	0.044	0.070
		(HL)	1.827	2.960	4.790				0.035	0.049	0.070
		(LH)	1.519	2.545	4.423				0.028	0.044	0.070
		(LL)	1.829	2.988	4.819				0.035	0.049	0.070
		(HZ)	1.877	2.581	3.940						
		(LZ)	1.672	2.496	3.979						
		(ZH)	1.422	2.439	4.282				0.028	0.044	0.070
		(ZL)	1.895	3.086	4.961				0.034	0.049	0.071
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.725	2.336	3.513						
		(LZ)	1.536	2.253	3.551						
		(ZH)	1.285	2.195	3.888				0.028	0.044	0.070
		(ZL)	1.761	2.842	4.572				0.034	0.049	0.070
	BS1 → Y0	(HH)	1.470	2.458	4.282				0.028	0.044	0.070
		(LL)	1.773	2.889	4.670				0.035	0.049	0.070
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.803	2.483	3.796						
		(LZ)	1.612	2.397	3.830						
		(ZH)	1.375	2.335	4.118				0.028	0.044	0.070
		(ZL)	1.837	2.981	4.783				0.035	0.049	0.071
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BFI1BB	A → Y0	(HH)	1.445	2.436	4.266				0.022	0.035	0.057
		(LL)	1.682	2.804	4.541				0.028	0.040	0.058
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	1.977	2.739	4.174						
		(LZ)	1.711	2.548	4.079						
		(ZH)	1.349	2.313	4.099				0.022	0.035	0.056
		(ZL)	1.774	2.933	4.684				0.028	0.040	0.058
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.513	2.546	4.433				0.022	0.035	0.057
		(HL)	1.751	2.893	4.659				0.028	0.040	0.058
		(LH)	1.495	2.524	4.409				0.022	0.035	0.057
		(LL)	1.754	2.899	4.695				0.028	0.040	0.058
		(HZ)	2.045	2.836	4.338						
		(LZ)	1.775	2.650	4.234						
		(ZH)	1.399	2.422	4.268				0.022	0.035	0.057
		(ZL)	1.828	3.021	4.854				0.028	0.040	0.058
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.905	2.591	3.903						
		(LZ)	1.638	2.408	3.804						
		(ZH)	1.263	2.176	3.879				0.022	0.035	0.056
		(ZL)	1.688	2.798	4.471				0.028	0.040	0.058
	BS1 → Y0	(HH)	1.446	2.439	4.267				0.022	0.035	0.057
		(LL)	1.687	2.813	4.543				0.028	0.040	0.058
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.981	2.743	4.198						
		(LZ)	1.714	2.553	4.082						
		(ZH)	1.352	2.314	4.103				0.022	0.035	0.057
		(ZL)	1.771	2.936	4.691				0.028	0.040	0.058
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BFD1BB	A → Y0	(HH)	1.445	2.436	4.266				0.022	0.035	0.057
		(LL)	1.682	2.804	4.541				0.028	0.040	0.058
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	1.977	2.739	4.174						
		(LZ)	1.711	2.548	4.079						
		(ZH)	1.349	2.313	4.099				0.022	0.035	0.056
		(ZL)	1.774	2.933	4.684				0.028	0.040	0.058
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.513	2.546	4.433				0.022	0.035	0.057
		(HL)	1.751	2.893	4.659				0.028	0.040	0.058
		(LH)	1.495	2.524	4.409				0.022	0.035	0.057
		(LL)	1.754	2.899	4.695				0.028	0.040	0.058

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(HZ)	2.045	2.836	4.338						
		(LZ)	1.775	2.650	4.234						
		(ZH)	1.399	2.422	4.268				0.022	0.035	0.057
		(ZL)	1.828	3.021	4.854				0.028	0.040	0.058
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.905	2.591	3.903						
		(LZ)	1.638	2.408	3.804						
		(ZH)	1.263	2.176	3.879				0.022	0.035	0.056
		(ZL)	1.688	2.798	4.471				0.028	0.040	0.058
	BS1 → Y0	(HH)	1.446	2.439	4.267				0.022	0.035	0.057
		(LL)	1.687	2.813	4.543				0.028	0.040	0.058
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.981	2.743	4.198						
		(LZ)	1.714	2.553	4.082						
		(ZH)	1.352	2.314	4.103				0.022	0.035	0.057
		(ZL)	1.771	2.936	4.691				0.028	0.040	0.058
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BFU1BB	A → Y0	(HH)	1.445	2.436	4.266				0.022	0.035	0.057
		(LL)	1.682	2.804	4.541				0.028	0.040	0.058
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	1.977	2.739	4.174						
		(LZ)	1.711	2.548	4.079						
		(ZH)	1.349	2.313	4.099				0.022	0.035	0.056
		(ZL)	1.774	2.933	4.684				0.028	0.040	0.058
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.513	2.546	4.433				0.022	0.035	0.057
		(HL)	1.751	2.893	4.659				0.028	0.040	0.058
		(LH)	1.495	2.524	4.409				0.022	0.035	0.057
		(LL)	1.754	2.899	4.695				0.028	0.040	0.058
		(HZ)	2.045	2.836	4.338						
		(LZ)	1.775	2.650	4.234						
		(ZH)	1.399	2.422	4.268				0.022	0.035	0.057
		(ZL)	1.828	3.021	4.854				0.028	0.040	0.058
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.905	2.591	3.903						
		(LZ)	1.638	2.408	3.804						

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(ZH)	1.263	2.176	3.879				0.022	0.035	0.056
		(ZL)	1.688	2.798	4.471				0.028	0.040	0.058
	BS1 → Y0	(HH)	1.446	2.439	4.267				0.022	0.035	0.057
		(LL)	1.687	2.813	4.543				0.028	0.040	0.058
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.981	2.743	4.198						
		(LZ)	1.714	2.553	4.082						
		(ZH)	1.352	2.314	4.103				0.022	0.035	0.057
		(ZL)	1.771	2.936	4.691				0.028	0.040	0.058
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BFW1BB	A → Y0	(HH)	1.445	2.436	4.266				0.022	0.035	0.057
		(LL)	1.682	2.804	4.541				0.028	0.040	0.058
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	1.977	2.739	4.174						
		(LZ)	1.711	2.548	4.079						
		(ZH)	1.349	2.313	4.099				0.022	0.035	0.056
		(ZL)	1.774	2.933	4.684				0.028	0.040	0.058
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.513	2.546	4.433				0.022	0.035	0.057
		(HL)	1.751	2.893	4.659				0.028	0.040	0.058
		(LH)	1.495	2.524	4.409				0.022	0.035	0.057
		(LL)	1.754	2.899	4.695				0.028	0.040	0.058
		(HZ)	2.045	2.836	4.338						
		(LZ)	1.775	2.650	4.234						
		(ZH)	1.399	2.422	4.268				0.022	0.035	0.057
		(ZL)	1.828	3.021	4.854				0.028	0.040	0.058
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.905	2.591	3.903						
		(LZ)	1.638	2.408	3.804						
		(ZH)	1.263	2.176	3.879				0.022	0.035	0.056
		(ZL)	1.688	2.798	4.471				0.028	0.040	0.058
	BS1 → Y0	(HH)	1.446	2.439	4.267				0.022	0.035	0.057
		(LL)	1.687	2.813	4.543				0.028	0.040	0.058
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.981	2.743	4.198						
		(LZ)	1.714	2.553	4.082						
		(ZH)	1.352	2.314	4.103				0.022	0.035	0.057
		(ZL)	1.771	2.936	4.691				0.028	0.040	0.058
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BFI5BB	A → Y0	(HH)	1.475	2.528	4.459				0.018	0.028	0.045
		(LL)	1.683	2.813	4.609				0.023	0.032	0.047
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	2.424	3.334	5.122						
		(LZ)	1.970	2.936	4.720						
		(ZH)	1.387	2.405	4.288				0.018	0.027	0.045
		(ZL)	1.755	2.916	4.758				0.023	0.032	0.047
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.547	2.636	4.626				0.018	0.028	0.045
		(HL)	1.735	2.906	4.732				0.023	0.032	0.047
		(LH)	1.527	2.618	4.600				0.018	0.028	0.045
		(LL)	1.744	2.914	4.747				0.023	0.032	0.047
		(HZ)	2.488	3.432	5.291						
		(LZ)	2.034	3.039	4.871						
		(ZH)	1.436	2.513	4.452				0.018	0.027	0.045
		(ZL)	1.794	3.031	4.937				0.023	0.032	0.047
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	2.357	3.188	4.863						
		(LZ)	1.898	2.797	4.439						
		(ZH)	1.299	2.269	4.070				0.018	0.027	0.045
		(ZL)	1.660	2.786	4.544				0.023	0.032	0.047
	BS1 → Y0	(HH)	1.477	2.529	4.459				0.018	0.028	0.046
		(LL)	1.683	2.811	4.613				0.023	0.032	0.047
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	2.425	3.339	5.119						
		(LZ)	1.974	2.945	4.720						
		(ZH)	1.389	2.407	4.289				0.018	0.027	0.045
		(ZL)	1.750	2.917	4.766				0.023	0.033	0.047
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BFD5BB	A → Y0	(HH)	1.475	2.528	4.459				0.018	0.028	0.045
		(LL)	1.683	2.813	4.609				0.023	0.032	0.047
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	2.424	3.334	5.122						
		(LZ)	1.970	2.936	4.720						
		(ZH)	1.387	2.405	4.288				0.018	0.027	0.045
		(ZL)	1.755	2.916	4.758				0.023	0.032	0.047
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.547	2.636	4.626				0.018	0.028	0.045
		(HL)	1.735	2.906	4.732				0.023	0.032	0.047
		(LH)	1.527	2.618	4.600				0.018	0.028	0.045
		(LL)	1.744	2.914	4.747				0.023	0.032	0.047

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(HZ)	2.488	3.432	5.291						
		(LZ)	2.034	3.039	4.871						
		(ZH)	1.436	2.513	4.452				0.018	0.027	0.045
		(ZL)	1.794	3.031	4.937				0.023	0.032	0.047
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	2.357	3.188	4.863						
		(LZ)	1.898	2.797	4.439						
		(ZH)	1.299	2.269	4.070				0.018	0.027	0.045
		(ZL)	1.660	2.786	4.544				0.023	0.032	0.047
	BS1 → Y0	(HH)	1.477	2.529	4.459				0.018	0.028	0.046
		(LL)	1.683	2.811	4.613				0.023	0.032	0.047
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	2.425	3.339	5.119						
		(LZ)	1.974	2.945	4.720						
		(ZH)	1.389	2.407	4.289				0.018	0.027	0.045
		(ZL)	1.750	2.917	4.766				0.023	0.033	0.047
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BFU5BB	A → Y0	(HH)	1.475	2.528	4.459				0.018	0.028	0.045
		(LL)	1.683	2.813	4.609				0.023	0.032	0.047
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	2.424	3.334	5.122						
		(LZ)	1.970	2.936	4.720						
		(ZH)	1.387	2.405	4.288				0.018	0.027	0.045
		(ZL)	1.755	2.916	4.758				0.023	0.032	0.047
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.547	2.636	4.626				0.018	0.028	0.045
		(HL)	1.735	2.906	4.732				0.023	0.032	0.047
		(LH)	1.527	2.618	4.600				0.018	0.028	0.045
		(LL)	1.744	2.914	4.747				0.023	0.032	0.047
		(HZ)	2.488	3.432	5.291						
		(LZ)	2.034	3.039	4.871						
		(ZH)	1.436	2.513	4.452				0.018	0.027	0.045
		(ZL)	1.794	3.031	4.937				0.023	0.032	0.047
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	2.357	3.188	4.863						
		(LZ)	1.898	2.797	4.439						

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(ZH)	1.299	2.269	4.070				0.018	0.027	0.045
		(ZL)	1.660	2.786	4.544				0.023	0.032	0.047
	BS1 → Y0	(HH)	1.477	2.529	4.459				0.018	0.028	0.046
		(LL)	1.683	2.811	4.613				0.023	0.032	0.047
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	2.425	3.339	5.119						
		(LZ)	1.974	2.945	4.720						
		(ZH)	1.389	2.407	4.289				0.018	0.027	0.045
		(ZL)	1.750	2.917	4.766				0.023	0.033	0.047
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BFW5BB	A → Y0	(HH)	1.475	2.528	4.459				0.018	0.028	0.045
		(LL)	1.683	2.813	4.609				0.023	0.032	0.047
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	2.424	3.334	5.122						
		(LZ)	1.970	2.936	4.720						
		(ZH)	1.387	2.405	4.288				0.018	0.027	0.045
		(ZL)	1.755	2.916	4.758				0.023	0.032	0.047
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.547	2.636	4.626				0.018	0.028	0.045
		(HL)	1.735	2.906	4.732				0.023	0.032	0.047
		(LH)	1.527	2.618	4.600				0.018	0.028	0.045
		(LL)	1.744	2.914	4.747				0.023	0.032	0.047
		(HZ)	2.488	3.432	5.291						
		(LZ)	2.034	3.039	4.871						
		(ZH)	1.436	2.513	4.452				0.018	0.027	0.045
		(ZL)	1.794	3.031	4.937				0.023	0.032	0.047
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	2.357	3.188	4.863						
		(LZ)	1.898	2.797	4.439						
		(ZH)	1.299	2.269	4.070				0.018	0.027	0.045
		(ZL)	1.660	2.786	4.544				0.023	0.032	0.047
	BS1 → Y0	(HH)	1.477	2.529	4.459				0.018	0.028	0.046
		(LL)	1.683	2.811	4.613				0.023	0.032	0.047
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	2.425	3.339	5.119						
		(LZ)	1.974	2.945	4.720						
		(ZH)	1.389	2.407	4.289				0.018	0.027	0.045
		(ZL)	1.750	2.917	4.766				0.023	0.033	0.047
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			

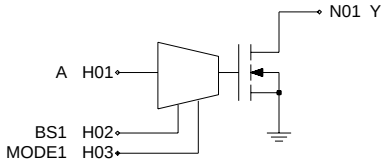
Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BFIFBB	A → Y0	(HH)	1.478	2.552	4.510				0.015	0.024	0.040
		(LL)	1.615	2.740	4.501				0.019	0.028	0.041
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	2.726	3.773	5.819						
		(LZ)	2.112	3.154	5.070						
		(ZH)	1.388	2.425	4.348				0.015	0.024	0.040
		(ZL)	1.703	2.839	4.676				0.020	0.028	0.041
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.552	2.662	4.680				0.015	0.024	0.040
		(HL)	1.675	2.826	4.615				0.020	0.028	0.041
		(LH)	1.534	2.638	4.653				0.015	0.024	0.040
		(LL)	1.682	2.854	4.658				0.020	0.028	0.041
		(HZ)	2.767	3.860	5.966						
		(LZ)	2.176	3.257	5.225						
		(ZH)	1.438	2.534	4.512				0.015	0.024	0.040
		(ZL)	1.757	2.958	4.839				0.019	0.028	0.041
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	2.631	3.612	5.539						
		(LZ)	2.039	3.017	4.796						
		(ZH)	1.302	2.288	4.125				0.015	0.024	0.040
		(ZL)	1.607	2.721	4.434				0.020	0.028	0.041
	BS1 → Y0	(HH)	1.486	2.553	4.515				0.015	0.024	0.040
		(LL)	1.622	2.745	4.502				0.020	0.028	0.041
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	2.715	3.754	5.828						
		(LZ)	2.115	3.161	5.078						
		(ZH)	1.391	2.428	4.350				0.015	0.024	0.040
		(ZL)	1.701	2.842	4.680				0.020	0.028	0.041
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BFDFBB	A → Y0	(HH)	1.478	2.552	4.510				0.015	0.024	0.040
		(LL)	1.615	2.740	4.501				0.019	0.028	0.041
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	2.726	3.773	5.819						
		(LZ)	2.112	3.154	5.070						
		(ZH)	1.388	2.425	4.348				0.015	0.024	0.040
		(ZL)	1.703	2.839	4.676				0.020	0.028	0.041
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.552	2.662	4.680				0.015	0.024	0.040
		(HL)	1.675	2.826	4.615				0.020	0.028	0.041
		(LH)	1.534	2.638	4.653				0.015	0.024	0.040
		(LL)	1.682	2.854	4.658				0.020	0.028	0.041

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(HZ)	2.767	3.860	5.966						
		(LZ)	2.176	3.257	5.225						
		(ZH)	1.438	2.534	4.512				0.015	0.024	0.040
		(ZL)	1.757	2.958	4.839				0.019	0.028	0.041
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	2.631	3.612	5.539						
		(LZ)	2.039	3.017	4.796						
		(ZH)	1.302	2.288	4.125				0.015	0.024	0.040
		(ZL)	1.607	2.721	4.434				0.020	0.028	0.041
	BS1 → Y0	(HH)	1.486	2.553	4.515				0.015	0.024	0.040
		(LL)	1.622	2.745	4.502				0.020	0.028	0.041
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	2.715	3.754	5.828						
		(LZ)	2.115	3.161	5.078						
		(ZH)	1.391	2.428	4.350				0.015	0.024	0.040
		(ZL)	1.701	2.842	4.680				0.020	0.028	0.041
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BFUFBB	A → Y0	(HH)	1.478	2.552	4.510				0.015	0.024	0.040
		(LL)	1.615	2.740	4.501				0.019	0.028	0.041
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	2.726	3.773	5.819						
		(LZ)	2.112	3.154	5.070						
		(ZH)	1.388	2.425	4.348				0.015	0.024	0.040
		(ZL)	1.703	2.839	4.676				0.020	0.028	0.041
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.552	2.662	4.680				0.015	0.024	0.040
		(HL)	1.675	2.826	4.615				0.020	0.028	0.041
		(LH)	1.534	2.638	4.653				0.015	0.024	0.040
		(LL)	1.682	2.854	4.658				0.020	0.028	0.041
		(HZ)	2.767	3.860	5.966						
		(LZ)	2.176	3.257	5.225						
		(ZH)	1.438	2.534	4.512				0.015	0.024	0.040
		(ZL)	1.757	2.958	4.839				0.019	0.028	0.041
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	2.631	3.612	5.539						
		(LZ)	2.039	3.017	4.796						

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(ZH)	1.302	2.288	4.125				0.015	0.024	0.040
		(ZL)	1.607	2.721	4.434				0.020	0.028	0.041
	BS1 → Y0	(HH)	1.486	2.553	4.515				0.015	0.024	0.040
		(LL)	1.622	2.745	4.502				0.020	0.028	0.041
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	2.715	3.754	5.828						
		(LZ)	2.115	3.161	5.078						
		(ZH)	1.391	2.428	4.350				0.015	0.024	0.040
		(ZL)	1.701	2.842	4.680				0.020	0.028	0.041
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			
BFWFBB	A → Y0	(HH)	1.478	2.552	4.510				0.015	0.024	0.040
		(LL)	1.615	2.740	4.501				0.019	0.028	0.041
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	2.726	3.773	5.819						
		(LZ)	2.112	3.154	5.070						
		(ZH)	1.388	2.425	4.348				0.015	0.024	0.040
		(ZL)	1.703	2.839	4.676				0.020	0.028	0.041
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.552	2.662	4.680				0.015	0.024	0.040
		(HL)	1.675	2.826	4.615				0.020	0.028	0.041
		(LH)	1.534	2.638	4.653				0.015	0.024	0.040
		(LL)	1.682	2.854	4.658				0.020	0.028	0.041
		(HZ)	2.767	3.860	5.966						
		(LZ)	2.176	3.257	5.225						
		(ZH)	1.438	2.534	4.512				0.015	0.024	0.040
		(ZL)	1.757	2.958	4.839				0.019	0.028	0.041
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	2.631	3.612	5.539						
		(LZ)	2.039	3.017	4.796						
		(ZH)	1.302	2.288	4.125				0.015	0.024	0.040
		(ZL)	1.607	2.721	4.434				0.020	0.028	0.041
	BS1 → Y0	(HH)	1.486	2.553	4.515				0.015	0.024	0.040
		(LL)	1.622	2.745	4.502				0.020	0.028	0.041
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	2.715	3.754	5.828						
		(LZ)	2.115	3.161	5.078						
		(ZH)	1.391	2.428	4.350				0.015	0.024	0.040
		(ZL)	1.701	2.842	4.680				0.020	0.028	0.041
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.450	0.689	1.102	0.002	0.003	0.004			
		(LL)	0.481	0.729	1.133	0.003	0.004	0.007			

Function	N-ch Open drain Buffer				3.3V	
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA	EXTHB2		EXUHB2	EXWHB2	1	13
6mA	EXTJB2		EXUJB2	EXWJB2	1	13
9mA	EXT1B2		EXT3B2	EXW3B2	1	13
12mA	EXT9B2		EXTBB2	EXWBB2	1	13
18mA	EXT5B2		EXT7B2	EXW7B2	1	25
24mA	EXTDB2		EXTFB2	EXWFB2	1	25

Logic Diagram



Truth Table

A	BS1	MODE1	Y
1	X	0	Z
0	X	0	0
X	1	1	Z
X	0	1	0

X:Irrelevant

Z:High Impedance

Connect a pull-up resistor to get a high level

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
EXTHB2 to EXWHB2	A	2.4	Y	-
	BS1	2.4		
	MODE1	1.3		
EXTJB2 to EXWJB2	A	2.4	Y	-
	BS1	2.4		
	MODE1	1.3		
EXT1B2 to EXWBB2	A	2.4	Y	-
	BS1	2.4		
	MODE1	1.3		
EXT5B2 to EXWFB2	A	2.4	Y	-
	BS1	2.4		
	MODE1	1.3		

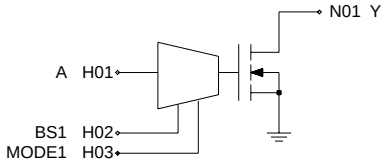
Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
EXTHB2	A → Y	(LZ)	0.360	0.542	0.850							
		(ZL)	0.969	1.444	2.169				0.088	0.125	0.179	
	BS1 → Y	(LZ)	0.362	0.547	0.855							
		(ZL)	0.975	1.447	2.173				0.088	0.125	0.179	
	MODE1 → Y	(LZ)	0.410	0.652	1.019							
		(ZL)	1.035	1.541	2.324				0.088	0.125	0.179	
EXUHB2	A → Y	(LZ)	0.360	0.542	0.850							
		(ZL)	0.969	1.444	2.169				0.088	0.125	0.179	
	BS1 → Y	(LZ)	0.362	0.547	0.855							
		(ZL)	0.975	1.447	2.173				0.088	0.125	0.179	
	MODE1 → Y	(LZ)	0.410	0.652	1.019							
		(ZL)	1.035	1.541	2.324				0.088	0.125	0.179	
EXWHB2	A → Y	(LZ)	0.360	0.542	0.850							
		(ZL)	0.969	1.444	2.169				0.088	0.125	0.179	
	BS1 → Y	(LZ)	0.362	0.547	0.855							
		(ZL)	0.975	1.447	2.173				0.088	0.125	0.179	
	MODE1 → Y	(LZ)	0.410	0.652	1.019							
		(ZL)	1.035	1.541	2.324				0.088	0.125	0.179	
EXTJB2	A → Y	(LZ)	0.470	0.709	1.118							
		(ZL)	0.728	1.119	1.726				0.044	0.063	0.090	
	BS1 → Y	(LZ)	0.472	0.713	1.124							
		(ZL)	0.731	1.122	1.729				0.044	0.063	0.090	
	MODE1 → Y	(LZ)	0.520	0.818	1.288							
		(ZL)	0.793	1.217	1.882				0.044	0.063	0.090	
EXUJB2	A → Y	(LZ)	0.470	0.709	1.118							
		(ZL)	0.728	1.119	1.726				0.044	0.063	0.090	
	BS1 → Y	(LZ)	0.472	0.713	1.124							
		(ZL)	0.731	1.122	1.729				0.044	0.063	0.090	
	MODE1 → Y	(LZ)	0.520	0.818	1.288							
		(ZL)	0.793	1.217	1.882				0.044	0.063	0.090	
EXWJB2	A → Y	(LZ)	0.470	0.709	1.118							
		(ZL)	0.728	1.119	1.726				0.044	0.063	0.090	
	BS1 → Y	(LZ)	0.472	0.713	1.124							
		(ZL)	0.731	1.122	1.729				0.044	0.063	0.090	
	MODE1 → Y	(LZ)	0.520	0.818	1.288							
		(ZL)	0.793	1.217	1.882				0.044	0.063	0.090	
EXT1B2	A → Y	(LZ)	0.485	0.734	1.157							
		(ZL)	0.632	0.983	1.540				0.030	0.042	0.060	
	BS1 → Y	(LZ)	0.488	0.737	1.161							
		(ZL)	0.633	0.986	1.542				0.030	0.042	0.060	
	MODE1 → Y	(LZ)	0.537	0.842	1.327							
		(ZL)	0.692	1.085	1.696				0.030	0.043	0.060	
EXT3B2	A → Y	(LZ)	0.485	0.734	1.157							
		(ZL)	0.632	0.983	1.540				0.030	0.042	0.060	
	BS1 → Y	(LZ)	0.488	0.737	1.161							
		(ZL)	0.633	0.986	1.542				0.030	0.042	0.060	
	MODE1 → Y	(LZ)	0.537	0.842	1.327							
		(ZL)	0.692	1.085	1.696				0.030	0.043	0.060	
EXW3B2	A → Y	(LZ)	0.485	0.734	1.157							
		(ZL)	0.632	0.983	1.540				0.030	0.042	0.060	
	BS1 → Y	(LZ)	0.488	0.737	1.161							
		(ZL)	0.633	0.986	1.542				0.030	0.042	0.060	
	MODE1 → Y	(LZ)	0.537	0.842	1.327							
		(ZL)	0.692	1.085	1.696				0.030	0.043	0.060	

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
EXT9B2	A → Y	(LZ)	0.493	0.744	1.175						
		(ZL)	0.578	0.910	1.434				0.023	0.032	0.046
	BS1 → Y	(LZ)	0.495	0.747	1.180						
		(ZL)	0.584	0.910	1.437				0.023	0.032	0.046
	MODE1 → Y	(LZ)	0.543	0.854	1.345						
		(ZL)	0.643	1.006	1.590				0.023	0.032	0.046
EXTBB2	A → Y	(LZ)	0.493	0.744	1.175						
		(ZL)	0.578	0.910	1.434				0.023	0.032	0.046
	BS1 → Y	(LZ)	0.495	0.747	1.180						
		(ZL)	0.584	0.910	1.437				0.023	0.032	0.046
	MODE1 → Y	(LZ)	0.543	0.854	1.345						
		(ZL)	0.643	1.006	1.590				0.023	0.032	0.046
EXWBB2	A → Y	(LZ)	0.493	0.744	1.175						
		(ZL)	0.578	0.910	1.434				0.023	0.032	0.046
	BS1 → Y	(LZ)	0.495	0.747	1.180						
		(ZL)	0.584	0.910	1.437				0.023	0.032	0.046
	MODE1 → Y	(LZ)	0.543	0.854	1.345						
		(ZL)	0.643	1.006	1.590				0.023	0.032	0.046
EXT5B2	A → Y	(LZ)	0.538	0.812	1.292						
		(ZL)	0.517	0.839	1.353				0.015	0.022	0.031
	BS1 → Y	(LZ)	0.541	0.815	1.296						
		(ZL)	0.520	0.842	1.358				0.015	0.022	0.031
	MODE1 → Y	(LZ)	0.591	0.917	1.455						
		(ZL)	0.576	0.935	1.506				0.016	0.022	0.031
EXT7B2	A → Y	(LZ)	0.538	0.812	1.292						
		(ZL)	0.517	0.839	1.353				0.015	0.022	0.031
	BS1 → Y	(LZ)	0.541	0.815	1.296						
		(ZL)	0.520	0.842	1.358				0.015	0.022	0.031
	MODE1 → Y	(LZ)	0.591	0.917	1.455						
		(ZL)	0.576	0.935	1.506				0.016	0.022	0.031
EXW7B2	A → Y	(LZ)	0.538	0.812	1.292						
		(ZL)	0.517	0.839	1.353				0.015	0.022	0.031
	BS1 → Y	(LZ)	0.541	0.815	1.296						
		(ZL)	0.520	0.842	1.358				0.015	0.022	0.031
	MODE1 → Y	(LZ)	0.591	0.917	1.455						
		(ZL)	0.576	0.935	1.506				0.016	0.022	0.031
EXTDB2	A → Y	(LZ)	0.556	0.838	1.334						
		(ZL)	0.498	0.811	1.316				0.012	0.017	0.023
	BS1 → Y	(LZ)	0.558	0.841	1.336						
		(ZL)	0.500	0.814	1.321				0.012	0.016	0.023
	MODE1 → Y	(LZ)	0.608	0.943	1.497						
		(ZL)	0.556	0.908	1.468				0.012	0.016	0.023
EXTFB2	A → Y	(LZ)	0.556	0.838	1.334						
		(ZL)	0.498	0.811	1.316				0.012	0.017	0.023
	BS1 → Y	(LZ)	0.558	0.841	1.336						
		(ZL)	0.500	0.814	1.321				0.012	0.016	0.023
	MODE1 → Y	(LZ)	0.608	0.943	1.497						
		(ZL)	0.556	0.908	1.468				0.012	0.016	0.023
EXWFB2	A → Y	(LZ)	0.556	0.838	1.334						
		(ZL)	0.498	0.811	1.316				0.012	0.017	0.023
	BS1 → Y	(LZ)	0.558	0.841	1.336						
		(ZL)	0.500	0.814	1.321				0.012	0.016	0.023
	MODE1 → Y	(LZ)	0.608	0.943	1.497						
		(ZL)	0.556	0.908	1.468				0.012	0.016	0.023

[MEMO]

Function	Low-noise N-ch Open drain Buffer				3.3V
Block type					
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA						
6mA	EETJB2		EEUJB2	EEWJB2	1	10
9mA	EET1B2		EET3B2	EEW3B2	1	10
12mA	EET9B2		EETBB2	EEWBB2	1	10
18mA	EET5B2		EET7B2	EEW7B2	1	10
24mA	EETDB2		EETFB2	EEWFB2	1	10

Logic Diagram



Truth Table

A	BS1	MODE1	Y
1	X	0	Z
0	X	0	0
X	1	1	Z
X	0	1	0

X:Irrelevant

Z:High Impedance

Connect a pull-up resistor to get a high level

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
EETJB2 to EEWJB2	A	2.4	Y	-
	BS1	2.4		
	MODE1	1.3		
EET1B2 to EEWBB2	A	2.4	Y	-
	BS1	2.4		
	MODE1	1.3		
EET5B2 to EEWFB2	A	2.4	Y	-
	BS1	2.4		
	MODE1	1.3		

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
EETJB2	A → Y	(LZ)	0.566	0.835	1.311							
		(ZL)	1.857	2.974	4.779				0.047	0.067	0.096	
	BS1 → Y	(LZ)	0.569	0.837	1.319							
		(ZL)	1.862	3.012	4.779				0.047	0.067	0.097	
	MODE1 → Y	(LZ)	0.617	0.944	1.482							
		(ZL)	1.909	3.107	4.940				0.047	0.067	0.096	
EEUJB2	A → Y	(LZ)	0.566	0.835	1.311							
		(ZL)	1.857	2.974	4.779				0.047	0.067	0.096	
	BS1 → Y	(LZ)	0.569	0.837	1.319							
		(ZL)	1.862	3.012	4.779				0.047	0.067	0.097	
	MODE1 → Y	(LZ)	0.617	0.944	1.482							
		(ZL)	1.909	3.107	4.940				0.047	0.067	0.096	
EEWJB2	A → Y	(LZ)	0.566	0.835	1.311							
		(ZL)	1.857	2.974	4.779				0.047	0.067	0.096	
	BS1 → Y	(LZ)	0.569	0.837	1.319							
		(ZL)	1.862	3.012	4.779				0.047	0.067	0.097	
	MODE1 → Y	(LZ)	0.617	0.944	1.482							
		(ZL)	1.909	3.107	4.940				0.047	0.067	0.096	
EET1B2	A → Y	(LZ)	0.605	0.893	1.408							
		(ZL)	1.773	2.877	4.680				0.035	0.050	0.071	
	BS1 → Y	(LZ)	0.607	0.896	1.414							
		(ZL)	1.754	2.881	4.685				0.035	0.050	0.071	
	MODE1 → Y	(LZ)	0.656	1.003	1.577							
		(ZL)	1.815	2.983	4.812				0.035	0.050	0.071	
EET3B2	A → Y	(LZ)	0.605	0.893	1.408							
		(ZL)	1.773	2.877	4.680				0.035	0.050	0.071	
	BS1 → Y	(LZ)	0.607	0.896	1.414							
		(ZL)	1.754	2.881	4.685				0.035	0.050	0.071	
	MODE1 → Y	(LZ)	0.656	1.003	1.577							
		(ZL)	1.815	2.983	4.812				0.035	0.050	0.071	
EEW3B2	A → Y	(LZ)	0.605	0.893	1.408							
		(ZL)	1.773	2.877	4.680				0.035	0.050	0.071	
	BS1 → Y	(LZ)	0.607	0.896	1.414							
		(ZL)	1.754	2.881	4.685				0.035	0.050	0.071	
	MODE1 → Y	(LZ)	0.656	1.003	1.577							
		(ZL)	1.815	2.983	4.812				0.035	0.050	0.071	
EET9B2	A → Y	(LZ)	0.618	0.914	1.443							
		(ZL)	1.653	2.710	4.435				0.028	0.040	0.057	
	BS1 → Y	(LZ)	0.621	0.917	1.447							
		(ZL)	1.649	2.735	4.408				0.028	0.040	0.058	
	MODE1 → Y	(LZ)	0.670	1.023	1.612							
		(ZL)	1.696	2.835	4.589				0.028	0.040	0.057	
EETBB2	A → Y	(LZ)	0.618	0.914	1.443							
		(ZL)	1.653	2.710	4.435				0.028	0.040	0.057	
	BS1 → Y	(LZ)	0.621	0.917	1.447							
		(ZL)	1.649	2.735	4.408				0.028	0.040	0.058	
	MODE1 → Y	(LZ)	0.670	1.023	1.612							
		(ZL)	1.696	2.835	4.589				0.028	0.040	0.057	
EEWBB2	A → Y	(LZ)	0.618	0.914	1.443							
		(ZL)	1.653	2.710	4.435				0.028	0.040	0.057	
	BS1 → Y	(LZ)	0.621	0.917	1.447							
		(ZL)	1.649	2.735	4.408				0.028	0.040	0.058	
	MODE1 → Y	(LZ)	0.670	1.023	1.612							
		(ZL)	1.696	2.835	4.589				0.028	0.040	0.057	

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
EET5B2	A → Y	(LZ)	0.686	1.015	1.607						
		(ZL)	1.631	2.735	4.475				0.023	0.032	0.047
	BS1 → Y	(LZ)	0.688	1.019	1.611						
		(ZL)	1.624	2.734	4.475				0.023	0.032	0.047
	MODE1 → Y	(LZ)	0.736	1.125	1.778						
		(ZL)	1.693	2.827	4.632				0.023	0.032	0.047
EET7B2	A → Y	(LZ)	0.686	1.015	1.607						
		(ZL)	1.631	2.735	4.475				0.023	0.032	0.047
	BS1 → Y	(LZ)	0.688	1.019	1.611						
		(ZL)	1.624	2.734	4.475				0.023	0.032	0.047
	MODE1 → Y	(LZ)	0.736	1.125	1.778						
		(ZL)	1.693	2.827	4.632				0.023	0.032	0.047
EEW7B2	A → Y	(LZ)	0.686	1.015	1.607						
		(ZL)	1.631	2.735	4.475				0.023	0.032	0.047
	BS1 → Y	(LZ)	0.688	1.019	1.611						
		(ZL)	1.624	2.734	4.475				0.023	0.032	0.047
	MODE1 → Y	(LZ)	0.736	1.125	1.778						
		(ZL)	1.693	2.827	4.632				0.023	0.032	0.047
EETDB2	A → Y	(LZ)	0.726	1.078	1.708						
		(ZL)	1.578	2.660	4.399				0.020	0.028	0.041
	BS1 → Y	(LZ)	0.729	1.080	1.712						
		(ZL)	1.574	2.669	4.364				0.020	0.028	0.042
	MODE1 → Y	(LZ)	0.777	1.186	1.877						
		(ZL)	1.645	2.768	4.556				0.020	0.028	0.041
EETFB2	A → Y	(LZ)	0.726	1.078	1.708						
		(ZL)	1.578	2.660	4.399				0.020	0.028	0.041
	BS1 → Y	(LZ)	0.729	1.080	1.712						
		(ZL)	1.574	2.669	4.364				0.020	0.028	0.042
	MODE1 → Y	(LZ)	0.777	1.186	1.877						
		(ZL)	1.645	2.768	4.556				0.020	0.028	0.041
EEWFB2	A → Y	(LZ)	0.726	1.078	1.708						
		(ZL)	1.578	2.660	4.399				0.020	0.028	0.041
	BS1 → Y	(LZ)	0.729	1.080	1.712						
		(ZL)	1.574	2.669	4.364				0.020	0.028	0.042
	MODE1 → Y	(LZ)	0.777	1.186	1.877						
		(ZL)	1.645	2.768	4.556				0.020	0.028	0.041

[MEMO]

[MEMO]

[MEMO]

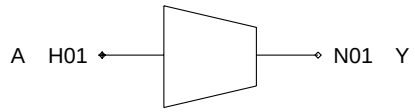
4.2 5V Interface

[MEMO]

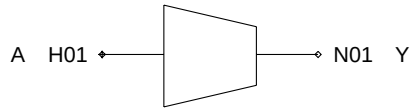
Function	Input Buffer				5V	
Block type						
Function	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
Normal	FIV1BI	FDV1BI			1	7
Schmitt	FIF1BI	FDF1BI			1	11
Clock	FIG1BI	FDG1BI			1	56

Logic Diagram

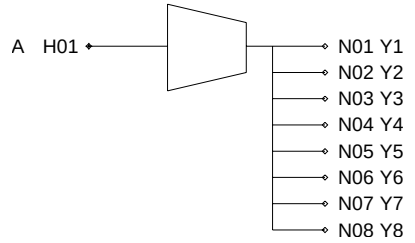
"Normal"



"Schmitt"



"Clock"



Truth Table

A	Yn
1	1
0	0

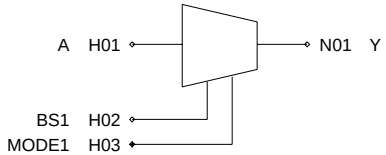
(n=1 to 8)

Block type	Input		Output	
	Symbol	Fan-In	Symbol	Fan-Out
FIV1BI to FDV1BI	A	-	Y	367
FIF1BI to FDF1BI	A	-	Y	227
FIG1BI to FDG1BI	A	-	Y0	228
	:	:	Y1	228
			:	:
			Y6	228
			Y7	228

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
FIV1BI	A → Y	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
FDV1BI	A → Y	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
FIF1BI	A → Y	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
FDF1BI	A → Y	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
FIG1BI	A → Yn	(HH)	0.149	0.225	0.355	0.000	0.000	0.000			
		(LL)	0.206	0.313	0.486	0.000	0.001	0.001			
	(n = 0 to 7)										
FDG1BI	A → Yn	(HH)	0.149	0.225	0.355	0.000	0.000	0.000			
		(LL)	0.206	0.313	0.486	0.000	0.001	0.001			
	(n = 0 to 7)										

Function	Output Buffer					CMOS 5V
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA	FY09B2				1	31
6mA	FY04B2				1	31
9mA	FY01B2				1	34
12mA	FY02B2				1	34
18mA	FY03B2				1	34
24mA	FY06B2				1	34

Logic Diagram



Truth Table

A	BS1	MODE1	Y
A	X	0	A
X	B	1	B

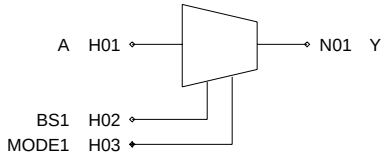
X:Irrelevant

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
FY09B2	A	2.4	Y	-
	BS1	2.4		
	MODE1	1.3		
FY04B2	A	2.4	Y	-
	BS1	2.4		
	MODE1	1.3		
FY01B2 to FY02B2	A	2.4	Y	-
	BS1	2.4		
	MODE1	1.3		
FY03B2 to FY06B2	A	2.4	Y	-
	BS1	2.4		
	MODE1	1.3		

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
FY09B2	A → Y	(HH)	1.794	2.897	4.742				0.076	0.120	0.190	
		(LL)	1.928	2.570	4.158				0.094	0.106	0.189	
	BS1 → Y	(HH)	1.796	2.900	4.747				0.076	0.120	0.190	
		(LL)	1.930	2.576	4.159				0.094	0.106	0.189	
	MODE1 → Y	(HH)	1.859	3.005	4.913				0.076	0.120	0.190	
		(HL)	1.995	2.659	4.280				0.094	0.106	0.189	
		(LH)	1.842	2.986	4.886				0.076	0.120	0.190	
		(LL)	1.989	2.672	4.316				0.094	0.106	0.189	
FY04B2	A → Y	(HH)	1.115	1.796	2.965				0.028	0.043	0.067	
		(LL)	1.140	1.721	2.684				0.033	0.046	0.065	
	BS1 → Y	(HH)	1.117	1.799	2.968				0.028	0.043	0.067	
		(LL)	1.144	1.725	2.684				0.033	0.046	0.066	
	MODE1 → Y	(HH)	1.182	1.905	3.134				0.028	0.043	0.067	
		(HL)	1.205	1.808	2.801				0.033	0.046	0.066	
		(LH)	1.164	1.883	3.107				0.028	0.043	0.067	
		(LL)	1.204	1.822	2.841				0.033	0.046	0.066	
FY01B2	A → Y	(HH)	0.850	1.367	2.260				0.020	0.032	0.050	
		(LL)	1.065	1.619	2.538				0.025	0.035	0.050	
	BS1 → Y	(HH)	0.852	1.370	2.264				0.020	0.032	0.050	
		(LL)	1.068	1.621	2.545				0.025	0.035	0.050	
	MODE1 → Y	(HH)	0.915	1.474	2.427				0.020	0.032	0.050	
		(HL)	1.131	1.712	2.678				0.025	0.035	0.050	
		(LH)	0.902	1.460	2.411				0.020	0.032	0.050	
		(LL)	1.127	1.718	2.693				0.025	0.035	0.050	
FY02B2	A → Y	(HH)	0.747	1.201	1.982				0.011	0.017	0.027	
		(LL)	1.041	1.531	2.507				0.017	0.019	0.032	
	BS1 → Y	(HH)	0.749	1.205	1.987				0.011	0.017	0.027	
		(LL)	1.043	1.534	2.510				0.017	0.019	0.032	
	MODE1 → Y	(HH)	0.813	1.308	2.150				0.011	0.017	0.027	
		(HL)	1.108	1.626	2.639				0.017	0.019	0.032	
		(LH)	0.799	1.294	2.134				0.011	0.017	0.027	
		(LL)	1.105	1.630	2.657				0.017	0.019	0.032	
FY03B2	A → Y	(HH)	0.776	1.244	2.054				0.011	0.016	0.026	
		(LL)	1.062	1.617	2.551				0.013	0.018	0.025	
	BS1 → Y	(HH)	0.778	1.247	2.056				0.011	0.016	0.026	
		(LL)	1.066	1.617	2.559				0.013	0.018	0.025	
	MODE1 → Y	(HH)	0.841	1.351	2.218				0.011	0.016	0.026	
		(HL)	1.129	1.718	2.687				0.013	0.018	0.025	
		(LH)	0.827	1.337	2.203				0.011	0.016	0.026	
		(LL)	1.124	1.717	2.705				0.013	0.018	0.025	
FY06B2	A → Y	(HH)	0.812	1.298	2.142				0.011	0.016	0.026	
		(LL)	1.061	1.617	2.537				0.012	0.016	0.023	
	BS1 → Y	(HH)	0.814	1.301	2.144				0.010	0.016	0.026	
		(LL)	1.063	1.622	2.554				0.012	0.016	0.023	
	MODE1 → Y	(HH)	0.878	1.405	2.307				0.011	0.016	0.026	
		(HL)	1.126	1.713	2.671				0.012	0.016	0.023	
		(LH)	0.864	1.392	2.291				0.011	0.016	0.026	
		(LL)	1.122	1.717	2.697				0.012	0.016	0.023	

Function	Low-noise Output Buffer				CMOS 5V	
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA						
6mA						
9mA						
12mA	FZ02B2				1	33
18mA	FZ03B2				1	33
24mA	FZ06B2				1	33

Logic Diagram



Truth Table

A	BS1	MODE1	Y
A	X	0	A
X	B	1	B

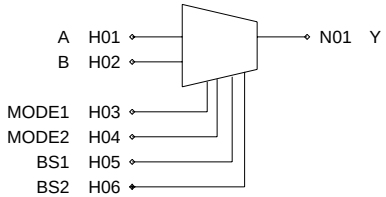
X:Irrelevant

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
FZ02B2	A	2.4	Y	-
	BS1	2.4		
	MODE1	1.3		
FZ03B2 to FZ06B2	A	2.4	Y	-
	BS1	2.4		
	MODE1	1.3		

Block type	Switching speed											
	Path			t_{LD0} (ns)			t_1			T		
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
FZ02B2	A → Y		(HH)	1.599	2.710	4.747				0.013	0.021	0.034
			(LL)	2.023	3.264	5.485				0.019	0.023	0.040
	BS1 → Y		(HH)	1.602	2.712	4.752				0.013	0.021	0.034
			(LL)	2.027	3.269	5.491				0.019	0.024	0.040
	MODE1 → Y		(HH)	1.667	2.818	4.912				0.013	0.021	0.034
			(HL)	2.089	3.356	5.606				0.019	0.023	0.040
			(LH)	1.650	2.797	4.889				0.013	0.021	0.034
			(LL)	2.087	3.369	5.642				0.019	0.024	0.040
FZ03B2	A → Y		(HH)	1.602	2.716	4.760				0.013	0.021	0.034
			(LL)	2.069	3.481	5.694				0.017	0.025	0.037
	BS1 → Y		(HH)	1.605	2.720	4.766				0.013	0.021	0.034
			(LL)	2.072	3.482	5.699				0.017	0.025	0.037
	MODE1 → Y		(HH)	1.669	2.825	4.931				0.013	0.021	0.034
			(HL)	2.134	3.571	5.814				0.017	0.025	0.037
			(LH)	1.652	2.804	4.901				0.013	0.021	0.034
			(LL)	2.132	3.580	5.840				0.017	0.025	0.037
FZ06B2	A → Y		(HH)	1.605	2.716	4.760				0.013	0.021	0.034
			(LL)	2.135	3.619	5.959				0.016	0.023	0.034
	BS1 → Y		(HH)	1.607	2.718	4.765				0.013	0.021	0.034
			(LL)	2.138	3.622	5.956				0.016	0.023	0.034
	MODE1 → Y		(HH)	1.673	2.824	4.930				0.013	0.021	0.034
			(HL)	2.200	3.711	6.074				0.016	0.023	0.034
			(LH)	1.655	2.803	4.903				0.013	0.021	0.034
			(LL)	2.199	3.720	6.100				0.016	0.023	0.034

Function	3-State Buffer					CMOS 5V
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA	BD0TB3				1	57
6mA	BD0EB3				1	57
9mA	BD08B3				1	60
12mA	BD07B3				1	60
18mA	BD09B3				1	60
24mA	BD0HB3				1	60

Logic Diagram



Truth Table

A	B	BS1	BS2	MODE1	MODE2	Y	
A	1	X	X	0	0	A	
A	0	X	X	0	0	Z	
X	X	A	1	1	0	A	
X	X	A	0	1	0	Z	
X	X	X	X	0	1	Z	
X	X	X	X	1	1	Z	← Prohibition

X:Irrelevant

Z:High Impedance

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
BD0TB3	A	2.4	Y	-
	B	2.4		
	MODE1	2.5		
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		
BD0EB3	A	2.4	Y	-
	B	2.4		
	MODE1	2.5		
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		
BD08B3 to BD07B3	A	2.4	Y	-
	B	2.4		
	MODE1	2.5		
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		
BD09B3 to BD0HB3	A	2.4	Y	-
	B	2.4		
	MODE1	2.5		
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		

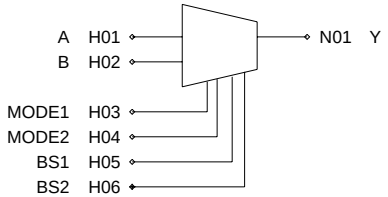
Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
BD0TB3	A → Y	(HH)	1.754	2.845	4.680				0.076	0.120	0.190	
		(LL)	1.992	2.689	4.348				0.094	0.106	0.189	
	B → Y	(HZ)	0.668	1.059	1.713							
		(LZ)	0.479	0.761	1.223							
		(ZH)	2.017	3.283	5.400				0.076	0.120	0.190	
		(ZL)	1.938	2.877	4.227				0.094	0.133	0.190	
	MODE1 → Y	(HH)	1.820	2.954	4.847				0.076	0.119	0.189	
		(HL)	2.061	3.015	4.483				0.093	0.133	0.189	
		(LH)	1.806	2.937	4.827				0.076	0.120	0.190	
		(LL)	2.055	3.021	4.501				0.093	0.133	0.189	
		(HZ)	0.734	1.162	1.870							
		(LZ)	0.545	0.863	1.381							
		(ZH)	2.068	3.393	5.565				0.076	0.120	0.190	
		(ZL)	1.988	2.987	4.399				0.094	0.132	0.190	
	MODE2 → Y	(HZ)	0.586	0.914	1.453							
		(LZ)	0.397	0.615	0.964							
		(ZH)	1.933	3.147	5.170				0.076	0.120	0.190	
		(ZL)	1.854	2.753	4.013				0.094	0.133	0.190	
	BS1 → Y	(HH)	1.756	2.848	4.684				0.076	0.120	0.190	
		(LL)	1.997	2.692	4.348				0.094	0.106	0.189	
	BS2 → Y	(HZ)	0.671	1.063	1.715							
		(LZ)	0.481	0.763	1.225							
		(ZH)	2.019	3.286	5.403				0.076	0.120	0.190	
		(ZL)	1.941	2.880	4.234				0.094	0.132	0.190	
BD0EB3	A → Y	(HH)	1.004	1.622	2.704				0.028	0.043	0.067	
		(LL)	1.207	1.778	2.926				0.033	0.037	0.066	
	B → Y	(HZ)	1.124	1.665	2.638							
		(LZ)	0.669	1.047	1.681							
		(ZH)	1.285	2.091	3.470				0.028	0.043	0.067	
		(ZL)	1.240	1.915	2.989				0.033	0.046	0.066	
	MODE1 → Y	(HH)	1.070	1.728	2.869				0.028	0.043	0.067	
		(HL)	1.273	1.955	3.064				0.033	0.046	0.066	
		(LH)	1.055	1.714	2.855				0.028	0.043	0.067	
		(LL)	1.269	1.962	3.080				0.033	0.046	0.066	
		(HZ)	1.188	1.769	2.792							
		(LZ)	0.736	1.150	1.840							
		(ZH)	1.336	2.199	3.638				0.028	0.043	0.067	
		(ZL)	1.291	2.025	3.157				0.033	0.046	0.066	
	MODE2 → Y	(HZ)	1.041	1.519	2.375							
		(LZ)	0.588	0.903	1.422							
		(ZH)	1.202	1.955	3.251				0.028	0.043	0.067	
		(ZL)	1.159	1.781	2.773				0.033	0.046	0.066	
	BS1 → Y	(HH)	1.006	1.625	2.709				0.028	0.043	0.067	
		(LL)	1.210	1.782	2.933				0.033	0.037	0.066	
	BS2 → Y	(HZ)	1.125	1.669	2.643							
		(LZ)	0.673	1.050	1.683							
		(ZH)	1.288	2.095	3.470				0.028	0.043	0.067	
		(ZL)	1.244	1.918	2.995				0.033	0.046	0.066	
BD08B3	A → Y	(HH)	0.887	1.437	2.410				0.020	0.032	0.050	
		(LL)	1.132	1.688	2.788				0.025	0.028	0.050	
	B → Y	(HZ)	1.192	1.764	2.786							
		(LZ)	0.690	1.078	1.727							
		(ZH)	1.177	1.918	3.181				0.020	0.032	0.050	
		(ZL)	1.174	1.809	2.838				0.025	0.035	0.050	
	MODE1 → Y	(HH)	0.950	1.543	2.572				0.020	0.032	0.050	
		(HL)	1.197	1.849	2.924				0.025	0.035	0.050	

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(LH)	0.939	1.531	2.562				0.020	0.032	0.050
		(LL)	1.193	1.852	2.937				0.025	0.035	0.050
		(HZ)	1.257	1.865	2.950						
		(LZ)	0.757	1.182	1.886						
		(ZH)	1.228	2.027	3.351				0.020	0.032	0.050
		(ZL)	1.224	1.916	3.007				0.025	0.035	0.050
	MODE2 → Y	(HZ)	1.110	1.618	2.529						
		(LZ)	0.608	0.933	1.468						
		(ZH)	1.093	1.783	2.963				0.020	0.032	0.050
		(ZL)	1.090	1.673	2.618				0.025	0.035	0.050
	BS1 → Y	(HH)	0.888	1.440	2.412				0.020	0.032	0.050
		(LL)	1.134	1.694	2.794				0.025	0.028	0.050
	BS2 → Y	(HZ)	1.186	1.768	2.789						
		(LZ)	0.693	1.081	1.729						
		(ZH)	1.180	1.922	3.185				0.020	0.032	0.050
		(ZL)	1.174	1.812	2.841				0.025	0.035	0.050
BD07B3	A → Y	(HH)	0.788	1.283	2.159				0.011	0.017	0.027
		(LL)	1.092	1.636	2.701				0.017	0.019	0.032
	B → Y	(HZ)	1.433	2.124	3.352						
		(LZ)	0.754	1.172	1.879						
		(ZH)	1.080	1.766	2.929				0.011	0.017	0.027
		(ZL)	1.137	1.755	2.767				0.017	0.023	0.032
	MODE1 → Y	(HH)	0.852	1.389	2.322				0.011	0.017	0.027
		(HL)	1.158	1.791	2.841				0.017	0.023	0.032
		(LH)	0.840	1.377	2.312				0.011	0.017	0.027
		(LL)	1.153	1.794	2.853				0.017	0.023	0.032
		(HZ)	1.499	2.229	3.509						
		(LZ)	0.821	1.276	2.037						
		(ZH)	1.131	1.875	3.099				0.011	0.017	0.027
		(ZL)	1.188	1.865	2.938				0.017	0.023	0.032
	MODE2 → Y	(HZ)	1.351	1.975	3.092						
		(LZ)	0.672	1.027	1.619						
		(ZH)	0.996	1.631	2.714				0.011	0.017	0.027
		(ZL)	1.053	1.618	2.551				0.017	0.023	0.032
	BS1 → Y	(HH)	0.790	1.286	2.162				0.011	0.017	0.027
		(LL)	1.095	1.640	2.706				0.017	0.019	0.032
	BS2 → Y	(HZ)	1.440	2.130	3.354						
		(LZ)	0.757	1.174	1.880						
		(ZH)	1.083	1.770	2.936				0.011	0.017	0.027
		(ZL)	1.140	1.757	2.772				0.017	0.023	0.032
BD09B3	A → Y	(HH)	0.803	1.301	2.186				0.011	0.017	0.027
		(LL)	1.117	1.674	2.764				0.013	0.015	0.025
	B → Y	(HZ)	1.436	2.127	3.346						
		(LZ)	0.812	1.256	2.010						
		(ZH)	1.087	1.776	2.949				0.011	0.017	0.027
		(ZL)	1.165	1.800	2.841				0.013	0.018	0.025
	MODE1 → Y	(HH)	0.866	1.406	2.349				0.011	0.017	0.027
		(HL)	1.182	1.831	2.906				0.013	0.018	0.025
		(LH)	0.855	1.395	2.338				0.011	0.017	0.027
		(LL)	1.179	1.835	2.916				0.013	0.018	0.025
		(HZ)	1.502	2.237	3.504						
		(LZ)	0.877	1.359	2.169						
		(ZH)	1.138	1.885	3.113				0.011	0.017	0.027
		(ZL)	1.216	1.908	3.009				0.013	0.018	0.025
	MODE2 → Y	(HZ)	1.356	1.981	3.097						
		(LZ)	0.729	1.111	1.751						

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(ZH)	1.003	1.641	2.732				0.011	0.017	0.027
		(ZL)	1.083	1.663	2.620				0.013	0.018	0.025
	BS1 → Y	(HH)	0.804	1.304	2.188				0.011	0.017	0.027
		(LL)	1.122	1.676	2.770				0.013	0.015	0.025
	BS2 → Y	(HZ)	1.454	2.128	3.359						
		(LZ)	0.815	1.259	2.012						
		(ZH)	1.089	1.779	2.951				0.011	0.017	0.027
		(ZL)	1.167	1.803	2.844				0.013	0.018	0.025
BD0HB3	A → Y	(HH)	0.823	1.323	2.215				0.011	0.017	0.026
		(LL)	1.121	1.681	2.783				0.012	0.014	0.023
	B → Y	(HZ)	1.436	2.130	3.355						
		(LZ)	0.889	1.369	2.190						
		(ZH)	1.087	1.776	2.948				0.011	0.017	0.027
		(ZL)	1.172	1.809	2.859				0.012	0.016	0.023
	MODE1 → Y	(HH)	0.886	1.428	2.378				0.011	0.017	0.027
		(HL)	1.186	1.841	2.923				0.012	0.016	0.023
		(LH)	0.874	1.416	2.368				0.011	0.017	0.027
		(LL)	1.181	1.843	2.933				0.012	0.016	0.023
		(HZ)	1.502	2.227	3.505						
		(LZ)	0.956	1.472	2.349						
		(ZH)	1.138	1.884	3.115				0.011	0.017	0.027
		(ZL)	1.223	1.921	3.028				0.012	0.016	0.023
	MODE2 → Y	(HZ)	1.355	1.986	3.088						
		(LZ)	0.807	1.223	1.931						
		(ZH)	1.003	1.641	2.732				0.011	0.017	0.027
		(ZL)	1.089	1.676	2.641				0.012	0.016	0.023
	BS1 → Y	(HH)	0.824	1.326	2.218				0.011	0.017	0.027
		(LL)	1.124	1.684	2.788				0.012	0.014	0.023
	BS2 → Y	(HZ)	1.440	2.128	3.358						
		(LZ)	0.892	1.371	2.191						
		(ZH)	1.089	1.779	2.952				0.011	0.017	0.027
		(ZL)	1.174	1.813	2.862				0.012	0.016	0.023

Function	Low-noise 3-State Buffer					CMOS 5V
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA						
6mA						
9mA						
12mA	BJ07B3				1	51
18mA	BJ09B3				1	51
24mA	BJ0HB3				1	51

Logic Diagram



Truth Table

A	B	BS1	BS2	MODE1	MODE2	Y	
A	1	X	X	0	0	A	
A	0	X	X	0	0	Z	
X	X	A	1	1	0	A	
X	X	A	0	1	0	Z	
X	X	X	X	0	1	Z	
X	X	X	X	1	1	Z	← Prohibition

X:Irrelevant

Z:High Impedance

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
BJ07B3	A	2.4	Y	-
	B	2.4		
	MODE1	2.5		
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		
BJ09B3 to BJ0HB3	A	2.4	Y	-
	B	2.4		
	MODE1	2.5		
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		

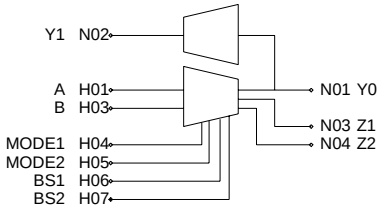
Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
BJ07B3	A → Y	(HH)	1.736	2.989	5.320				0.017	0.026	0.044	
		(LL)	1.928	3.221	5.256				0.023	0.033	0.048	
	B → Y	(HZ)	2.786	3.867	5.924							
		(LZ)	2.211	3.306	5.314							
		(ZH)	1.646	2.875	5.172				0.017	0.026	0.044	
		(ZL)	1.966	3.316	5.376				0.023	0.033	0.049	
	MODE1 → Y	(HH)	1.805	3.098	5.493				0.017	0.026	0.044	
		(HL)	1.993	3.309	5.369				0.023	0.033	0.048	
		(LH)	1.787	3.078	5.466				0.017	0.026	0.044	
		(LL)	1.992	3.320	5.412				0.023	0.033	0.048	
		(HZ)	2.843	3.969	6.106							
		(LZ)	2.276	3.408	5.474							
		(ZH)	1.696	2.983	5.335				0.017	0.026	0.043	
		(ZL)	2.016	3.423	5.553				0.023	0.033	0.049	
	MODE2 → Y	(HZ)	2.720	3.714	5.687							
		(LZ)	2.138	3.162	5.038							
		(ZH)	1.557	2.736	4.950				0.017	0.026	0.044	
		(ZL)	1.878	3.186	5.154				0.023	0.033	0.049	
	BS1 → Y	(HH)	1.736	2.993	5.329				0.017	0.026	0.044	
		(LL)	1.931	3.225	5.252				0.023	0.033	0.048	
	BS2 → Y	(HZ)	2.776	3.861	5.948							
		(LZ)	2.214	3.308	5.317							
		(ZH)	1.647	2.876	5.170				0.017	0.026	0.044	
		(ZL)	1.969	3.318	5.390				0.023	0.033	0.049	
BJ09B3	A → Y	(HH)	1.741	2.995	5.343				0.017	0.026	0.044	
		(LL)	1.972	3.331	5.445				0.021	0.030	0.045	
	B → Y	(HZ)	2.813	3.873	5.971							
		(LZ)	2.573	3.854	6.196							
		(ZH)	1.652	2.886	5.191				0.017	0.026	0.044	
		(ZL)	2.002	3.426	5.559				0.021	0.031	0.047	
	MODE1 → Y	(HH)	1.810	3.105	5.511				0.017	0.026	0.044	
		(HL)	2.038	3.418	5.559				0.021	0.030	0.045	
		(LH)	1.793	3.084	5.483				0.017	0.026	0.044	
		(LL)	2.036	3.431	5.603				0.021	0.030	0.045	
		(HZ)	2.858	3.969	6.136							
		(LZ)	2.636	3.956	6.344							
		(ZH)	1.703	2.994	5.358				0.017	0.026	0.044	
		(ZL)	2.052	3.524	5.737				0.021	0.031	0.046	
	MODE2 → Y	(HZ)	2.735	3.736	5.703							
		(LZ)	2.501	3.710	5.908							
		(ZH)	1.564	2.748	4.971				0.017	0.026	0.044	
		(ZL)	1.913	3.272	5.343				0.021	0.031	0.046	
	BS1 → Y	(HH)	1.745	3.000	5.345				0.017	0.026	0.044	
		(LL)	1.976	3.333	5.450				0.021	0.030	0.045	
	BS2 → Y	(HZ)	2.805	3.869	5.980							
		(LZ)	2.575	3.854	6.188							
		(ZH)	1.654	2.887	5.197				0.017	0.026	0.044	
		(ZL)	2.005	3.423	5.559				0.021	0.031	0.047	
BJ0HB3	A → Y	(HH)	1.751	3.001	5.342				0.017	0.026	0.044	
		(LL)	2.037	3.471	5.707				0.019	0.028	0.042	
	B → Y	(HZ)	2.815	3.884	5.987							
		(LZ)	3.071	4.610	7.425							
		(ZH)	1.652	2.886	5.192				0.017	0.026	0.044	
		(ZL)	2.055	3.541	5.817				0.019	0.029	0.044	
	MODE1 → Y	(HH)	1.818	3.108	5.510				0.017	0.026	0.043	
		(HL)	2.103	3.558	5.823				0.019	0.028	0.043	

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(LH)	1.801	3.088	5.481				0.017	0.026	0.044
		(LL)	2.101	3.573	5.857				0.019	0.028	0.043
		(HZ)	2.858	3.968	6.147						
		(LZ)	3.134	4.712	7.585						
		(ZH)	1.703	2.995	5.355				0.017	0.026	0.044
		(ZL)	2.103	3.655	5.959				0.019	0.029	0.044
	MODE2 → Y	(HZ)	2.735	3.727	5.716						
		(LZ)	3.000	4.463	7.147						
		(ZH)	1.564	2.748	4.967				0.017	0.026	0.044
		(ZL)	1.966	3.408	5.589				0.019	0.029	0.044
	BS1 → Y	(HH)	1.753	3.004	5.349				0.017	0.026	0.044
		(LL)	2.042	3.467	5.713				0.019	0.028	0.043
	BS2 → Y	(HZ)	2.802	3.871	5.978						
		(LZ)	3.074	4.613	7.426						
		(ZH)	1.654	2.887	5.191				0.017	0.026	0.044
		(ZL)	2.057	3.547	5.810				0.019	0.029	0.044

[MEMO]

Function	I/O Buffer					CMOS 5V
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA	BM0UBB				1	66
6mA	BM0CBB				1	66
9mA	BM03BB				1	69
12mA	BM01BB				1	69
18mA	BM05BB				1	69
24mA	BM0FBB				1	69

Logic Diagram



Truth Table

A	B	BS1	BS2	*1	*2	Y0	Z1	Z2	
A	1	X	X	0	0	A	A	1	
A	0	X	X	0	0	Z	A	0	
X	X	A	1	1	0	A	A	1	
X	X	A	0	1	0	Z	A	0	
A	B	X	X	0	1	Z	A	B	
X	X	A	B	1	1	Z	A	B	← Prohibition

*1:MODE1 , *2:MODE2

X:Irrelevant

Z:High Impedance

Y0	Y1
0	0
1	1

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
BM0UBB	A	2.4	Y1	367
	B	2.4	Z1	35
	MODE1	2.5	Z2	35
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		
BM0CBB	A	2.4	Y1	367
	B	2.4	Z1	35
	MODE1	2.5	Z2	35
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		
BM03BB to BM01BB	A	2.4	Y1	367
	B	2.4	Z1	35
	MODE1	2.5	Z2	35
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		
BM05BB to BM0FBB	A	2.4	Y1	367
	B	2.4	Z1	35
	MODE1	2.5	Z2	35
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BM0UBB	A → Y0	(HH)	1.754	2.845	4.680				0.076	0.120	0.190
		(LL)	1.992	2.689	4.348				0.094	0.106	0.189
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033			
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0	(HZ)	0.668	1.059	1.713						
		(LZ)	0.479	0.761	1.223						
		(ZH)	2.017	3.283	5.400				0.076	0.120	0.190
		(ZL)	1.938	2.877	4.227				0.094	0.133	0.190
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.820	2.954	4.847				0.076	0.119	0.189
		(HL)	2.061	3.015	4.483				0.093	0.133	0.189
		(LH)	1.806	2.937	4.827				0.076	0.120	0.190
		(LL)	2.055	3.021	4.501				0.093	0.133	0.189
		(HZ)	0.734	1.162	1.870						
		(LZ)	0.545	0.863	1.381						
		(ZH)	2.068	3.393	5.565				0.076	0.120	0.190
		(ZL)	1.988	2.987	4.399				0.094	0.132	0.190
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033			
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.586	0.914	1.453						
		(LZ)	0.397	0.615	0.964						
		(ZH)	1.933	3.147	5.170				0.076	0.120	0.190
		(ZL)	1.854	2.753	4.013				0.094	0.133	0.190
	BS1 → Y0	(HH)	1.756	2.848	4.684				0.076	0.120	0.190
		(LL)	1.997	2.692	4.348				0.094	0.106	0.189
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033			
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.671	1.063	1.715						
		(LZ)	0.481	0.763	1.225						
		(ZH)	2.019	3.286	5.403				0.076	0.120	0.190
		(ZL)	1.941	2.880	4.234				0.094	0.132	0.190
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
BM0CBB	A → Y0	(HH)	1.004	1.622	2.704				0.028	0.043	0.067
		(LL)	1.207	1.778	2.926				0.033	0.037	0.066
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033			
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0	(HZ)	1.124	1.665	2.638						
		(LZ)	0.669	1.047	1.681						
		(ZH)	1.285	2.091	3.470				0.028	0.043	0.067
		(ZL)	1.240	1.915	2.989				0.033	0.046	0.066
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.070	1.728	2.869				0.028	0.043	0.067
		(HL)	1.273	1.955	3.064				0.033	0.046	0.066
		(LH)	1.055	1.714	2.855				0.028	0.043	0.067
		(LL)	1.269	1.962	3.080				0.033	0.046	0.066

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(HZ)	1.188	1.769	2.792						
		(LZ)	0.736	1.150	1.840						
		(ZH)	1.336	2.199	3.638				0.028	0.043	0.067
		(ZL)	1.291	2.025	3.157				0.033	0.046	0.066
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033			
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.041	1.519	2.375						
		(LZ)	0.588	0.903	1.422						
		(ZH)	1.202	1.955	3.251				0.028	0.043	0.067
		(ZL)	1.159	1.781	2.773				0.033	0.046	0.066
	BS1 → Y0	(HH)	1.006	1.625	2.709				0.028	0.043	0.067
		(LL)	1.210	1.782	2.933				0.033	0.037	0.066
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033			
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.125	1.669	2.643						
		(LZ)	0.673	1.050	1.683						
		(ZH)	1.288	2.095	3.470				0.028	0.043	0.067
		(ZL)	1.244	1.918	2.995				0.033	0.046	0.066
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
BM03BB	A → Y0	(HH)	0.887	1.437	2.410				0.020	0.032	0.050
		(LL)	1.132	1.688	2.788				0.025	0.028	0.050
	A → Z1	(HH)	0.234	0.360	0.581	0.013	0.021	0.033			
		(LL)	0.288	0.473	0.769	0.010	0.016	0.025			
	B → Y0	(HZ)	1.192	1.764	2.786						
		(LZ)	0.690	1.078	1.727						
		(ZH)	1.177	1.918	3.181				0.020	0.032	0.050
		(ZL)	1.174	1.809	2.838				0.025	0.035	0.050
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.950	1.543	2.572				0.020	0.032	0.050
		(HL)	1.197	1.849	2.924				0.025	0.035	0.050
		(LH)	0.939	1.531	2.562				0.020	0.032	0.050
		(LL)	1.193	1.852	2.937				0.025	0.035	0.050
		(HZ)	1.257	1.865	2.950						
		(LZ)	0.757	1.182	1.886						
		(ZH)	1.228	2.027	3.351				0.020	0.032	0.050
		(ZL)	1.224	1.916	3.007				0.025	0.035	0.050
	MODE1 → Z1	(HH)	0.297	0.461	0.743	0.013	0.021	0.033			
		(HL)	0.353	0.570	0.912	0.010	0.016	0.025			
		(LH)	0.284	0.456	0.726	0.013	0.021	0.034			
		(LL)	0.346	0.569	0.921	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.110	1.618	2.529						
		(LZ)	0.608	0.933	1.468						

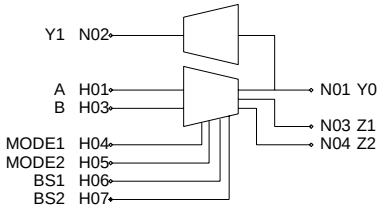
Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(ZH)	1.093	1.783	2.963				0.020	0.032	0.050
		(ZL)	1.090	1.673	2.618				0.025	0.035	0.050
	BS1 → Y0	(HH)	0.888	1.440	2.412				0.020	0.032	0.050
		(LL)	1.134	1.694	2.794				0.025	0.028	0.050
	BS1 → Z1	(HH)	0.235	0.365	0.584	0.013	0.021	0.033			
		(LL)	0.289	0.477	0.776	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.186	1.768	2.789						
		(LZ)	0.693	1.081	1.729						
		(ZH)	1.180	1.922	3.185				0.020	0.032	0.050
		(ZL)	1.174	1.812	2.841				0.025	0.035	0.050
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
BM01BB	A → Y0	(HH)	0.788	1.283	2.159				0.011	0.017	0.027
		(LL)	1.092	1.636	2.701				0.017	0.019	0.032
	A → Z1	(HH)	0.234	0.360	0.581	0.013	0.021	0.033			
		(LL)	0.288	0.473	0.769	0.010	0.016	0.025			
	B → Y0	(HZ)	1.433	2.124	3.352						
		(LZ)	0.754	1.172	1.879						
		(ZH)	1.080	1.766	2.929				0.011	0.017	0.027
		(ZL)	1.137	1.755	2.767				0.017	0.023	0.032
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.852	1.389	2.322				0.011	0.017	0.027
		(HL)	1.158	1.791	2.841				0.017	0.023	0.032
		(LH)	0.840	1.377	2.312				0.011	0.017	0.027
		(LL)	1.153	1.794	2.853				0.017	0.023	0.032
		(HZ)	1.499	2.229	3.509						
		(LZ)	0.821	1.276	2.037						
		(ZH)	1.131	1.875	3.099				0.011	0.017	0.027
		(ZL)	1.188	1.865	2.938				0.017	0.023	0.032
	MODE1 → Z1	(HH)	0.297	0.461	0.743	0.013	0.021	0.033			
		(HL)	0.353	0.570	0.912	0.010	0.016	0.025			
		(LH)	0.284	0.456	0.726	0.013	0.021	0.034			
		(LL)	0.346	0.569	0.921	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.351	1.975	3.092						
		(LZ)	0.672	1.027	1.619						
		(ZH)	0.996	1.631	2.714				0.011	0.017	0.027
		(ZL)	1.053	1.618	2.551				0.017	0.023	0.032
	BS1 → Y0	(HH)	0.790	1.286	2.162				0.011	0.017	0.027
		(LL)	1.095	1.640	2.706				0.017	0.019	0.032
	BS1 → Z1	(HH)	0.235	0.365	0.584	0.013	0.021	0.033			
		(LL)	0.289	0.477	0.776	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.440	2.130	3.354						
		(LZ)	0.757	1.174	1.880						
		(ZH)	1.083	1.770	2.936				0.011	0.017	0.027
		(ZL)	1.140	1.757	2.772				0.017	0.023	0.032
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BM05BB	A → Y0	(HH)	0.803	1.301	2.186				0.011	0.017	0.027
		(LL)	1.117	1.674	2.764				0.013	0.015	0.025
	A → Z1	(HH)	0.234	0.360	0.581	0.013	0.021	0.033			
		(LL)	0.288	0.473	0.769	0.010	0.016	0.025			
	B → Y0	(HZ)	1.436	2.127	3.346						
		(LZ)	0.812	1.256	2.010						
		(ZH)	1.087	1.776	2.949				0.011	0.017	0.027
		(ZL)	1.165	1.800	2.841				0.013	0.018	0.025
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.866	1.406	2.349				0.011	0.017	0.027
		(HL)	1.182	1.831	2.906				0.013	0.018	0.025
		(LH)	0.855	1.395	2.338				0.011	0.017	0.027
		(LL)	1.179	1.835	2.916				0.013	0.018	0.025
		(HZ)	1.502	2.237	3.504						
		(LZ)	0.877	1.359	2.169						
		(ZH)	1.138	1.885	3.113				0.011	0.017	0.027
		(ZL)	1.216	1.908	3.009				0.013	0.018	0.025
	MODE1 → Z1	(HH)	0.297	0.461	0.743	0.013	0.021	0.033			
		(HL)	0.353	0.570	0.912	0.010	0.016	0.025			
		(LH)	0.284	0.456	0.726	0.013	0.021	0.034			
		(LL)	0.346	0.569	0.921	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.356	1.981	3.097						
		(LZ)	0.729	1.111	1.751						
		(ZH)	1.003	1.641	2.732				0.011	0.017	0.027
		(ZL)	1.083	1.663	2.620				0.013	0.018	0.025
	BS1 → Y0	(HH)	0.804	1.304	2.188				0.011	0.017	0.027
		(LL)	1.122	1.676	2.770				0.013	0.015	0.025
	BS1 → Z1	(HH)	0.235	0.365	0.584	0.013	0.021	0.033			
		(LL)	0.289	0.477	0.776	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.454	2.128	3.359						
		(LZ)	0.815	1.259	2.012						
		(ZH)	1.089	1.779	2.951				0.011	0.017	0.027
		(ZL)	1.167	1.803	2.844				0.013	0.018	0.025
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
BM0FBB	A → Y0	(HH)	0.823	1.323	2.215				0.011	0.017	0.026
		(LL)	1.121	1.681	2.783				0.012	0.014	0.023
	A → Z1	(HH)	0.234	0.360	0.581	0.013	0.021	0.033			
		(LL)	0.288	0.473	0.769	0.010	0.016	0.025			
	B → Y0	(HZ)	1.436	2.130	3.355						
		(LZ)	0.889	1.369	2.190						
		(ZH)	1.087	1.776	2.948				0.011	0.017	0.027
		(ZL)	1.172	1.809	2.859				0.012	0.016	0.023
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.886	1.428	2.378				0.011	0.017	0.027
		(HL)	1.186	1.841	2.923				0.012	0.016	0.023
		(LH)	0.874	1.416	2.368				0.011	0.017	0.027
		(LL)	1.181	1.843	2.934				0.012	0.016	0.023

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(HZ)	1.502	2.227	3.505						
		(LZ)	0.956	1.472	2.349						
		(ZH)	1.138	1.884	3.115				0.011	0.017	0.027
		(ZL)	1.223	1.921	3.028				0.012	0.016	0.023
	MODE1 → Z1	(HH)	0.297	0.461	0.743	0.013	0.021	0.033			
		(HL)	0.353	0.570	0.912	0.010	0.016	0.025			
		(LH)	0.284	0.456	0.726	0.013	0.021	0.034			
		(LL)	0.346	0.569	0.921	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.355	1.986	3.088						
		(LZ)	0.807	1.223	1.931						
		(ZH)	1.003	1.641	2.732				0.011	0.017	0.027
		(ZL)	1.089	1.676	2.641				0.012	0.016	0.023
	BS1 → Y0	(HH)	0.824	1.326	2.218				0.011	0.017	0.027
		(LL)	1.124	1.684	2.788				0.012	0.014	0.023
	BS1 → Z1	(HH)	0.235	0.365	0.584	0.013	0.021	0.033			
		(LL)	0.289	0.477	0.776	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.440	2.128	3.358						
		(LZ)	0.892	1.371	2.191						
		(ZH)	1.089	1.779	2.952				0.011	0.017	0.027
		(ZL)	1.174	1.813	2.862				0.012	0.016	0.023
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			

Function	Low-noise I/O Buffer				CMOS 5V	
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA						
6mA						
9mA						
12mA	BP01BB				1	60
18mA	BP05BB				1	60
24mA	BP0FBB				1	60

Logic Diagram



Truth Table

A	B	BS1	BS2	*1	*2	Y0	Z1	Z2	
A	1	X	X	0	0	A	A	1	
A	0	X	X	0	0	Z	A	0	
X	X	A	1	1	0	A	A	1	
X	X	A	0	1	0	Z	A	0	
A	B	X	X	0	1	Z	A	B	
X	X	A	B	1	1	Z	A	B	← Prohibition

*1:MODE1 , *2:MODE2

X:Irrelevant

Z:High Impedance

Y0	Y1
0	0
1	1

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
BP01BB	A	2.4	Y1	367
	B	2.4	Z1	36
	MODE1	2.5	Z2	35
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		
BP05BB to BP0FBB	A	2.4	Y1	367
	B	2.4	Z1	36
	MODE1	2.5	Z2	35
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		

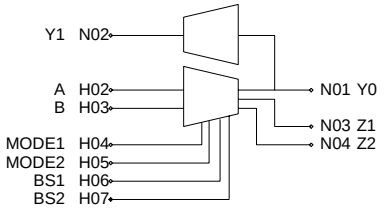
Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
BP01BB	A → Y0	(HH)	1.736	2.989	5.320				0.017	0.026	0.044	
		(LL)	1.928	3.221	5.256				0.023	0.033	0.048	
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034				
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025				
	B → Y0	(HZ)	2.786	3.867	5.924							
		(LZ)	2.211	3.306	5.314							
		(ZH)	1.646	2.875	5.172				0.017	0.026	0.044	
		(ZL)	1.966	3.316	5.376				0.023	0.033	0.049	
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034				
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025				
	MODE1 → Y0	(HH)	1.805	3.098	5.493				0.017	0.026	0.044	
		(HL)	1.993	3.309	5.369				0.023	0.033	0.048	
		(LH)	1.787	3.078	5.466				0.017	0.026	0.044	
		(LL)	1.992	3.320	5.412				0.023	0.033	0.048	
		(HZ)	2.843	3.969	6.106							
		(LZ)	2.276	3.408	5.474							
		(ZH)	1.696	2.983	5.335				0.017	0.026	0.043	
		(ZL)	2.016	3.423	5.553				0.023	0.033	0.049	
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034				
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025				
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034				
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025				
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034				
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025				
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034				
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025				
	MODE2 → Y0	(HZ)	2.720	3.714	5.687							
		(LZ)	2.138	3.162	5.038							
		(ZH)	1.557	2.736	4.950				0.017	0.026	0.044	
		(ZL)	1.878	3.186	5.154				0.023	0.033	0.049	
	BS1 → Y0	(HH)	1.736	2.993	5.329				0.017	0.026	0.044	
		(LL)	1.931	3.225	5.252				0.023	0.033	0.048	
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034				
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025				
	BS2 → Y0	(HZ)	2.776	3.861	5.948							
		(LZ)	2.214	3.308	5.317							
		(ZH)	1.647	2.876	5.170				0.017	0.026	0.044	
		(ZL)	1.969	3.318	5.390				0.023	0.033	0.049	
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034				
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025				
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003				
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003				
BP05BB	A → Y0	(HH)	1.741	2.995	5.343				0.017	0.026	0.044	
		(LL)	1.972	3.331	5.445				0.021	0.030	0.045	
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034				
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025				
	B → Y0	(HZ)	2.813	3.873	5.971							
		(LZ)	2.573	3.854	6.196							
		(ZH)	1.652	2.886	5.191				0.017	0.026	0.044	
		(ZL)	2.002	3.426	5.559				0.021	0.031	0.047	
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034				
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025				
	MODE1 → Y0	(HH)	1.810	3.105	5.511				0.017	0.026	0.044	
		(HL)	2.038	3.418	5.559				0.021	0.030	0.045	
		(LH)	1.793	3.084	5.483				0.017	0.026	0.044	
		(LL)	2.036	3.431	5.603				0.021	0.030	0.045	

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(HZ)	2.858	3.969	6.136						
		(LZ)	2.636	3.956	6.344						
		(ZH)	1.703	2.994	5.358				0.017	0.026	0.044
		(ZL)	2.052	3.524	5.737				0.021	0.031	0.046
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	2.735	3.736	5.703						
		(LZ)	2.501	3.710	5.908						
		(ZH)	1.564	2.748	4.971				0.017	0.026	0.044
		(ZL)	1.913	3.272	5.343				0.021	0.031	0.046
	BS1 → Y0	(HH)	1.745	3.000	5.345				0.017	0.026	0.044
		(LL)	1.976	3.333	5.450				0.021	0.030	0.045
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	2.805	3.869	5.980						
		(LZ)	2.575	3.854	6.188						
		(ZH)	1.654	2.887	5.197				0.017	0.026	0.044
		(ZL)	2.005	3.423	5.559				0.021	0.031	0.047
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
BP0FBB	A → Y0	(HH)	1.751	3.001	5.342				0.017	0.026	0.044
		(LL)	2.037	3.471	5.707				0.019	0.028	0.042
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	2.815	3.884	5.987						
		(LZ)	3.071	4.610	7.425						
		(ZH)	1.652	2.886	5.192				0.017	0.026	0.044
		(ZL)	2.055	3.541	5.817				0.019	0.029	0.044
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.818	3.108	5.510				0.017	0.026	0.043
		(HL)	2.103	3.558	5.823				0.019	0.028	0.043
		(LH)	1.801	3.088	5.481				0.017	0.026	0.044
		(LL)	2.101	3.573	5.857				0.019	0.028	0.043
		(HZ)	2.858	3.968	6.147						
		(LZ)	3.134	4.712	7.585						
		(ZH)	1.703	2.995	5.355				0.017	0.026	0.044
		(ZL)	2.103	3.655	5.959				0.019	0.029	0.044
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	2.735	3.727	5.716						
		(LZ)	3.000	4.463	7.147						

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(ZH)	1.564	2.748	4.967				0.017	0.026	0.044
		(ZL)	1.966	3.408	5.589				0.019	0.029	0.044
	BS1 → Y0	(HH)	1.753	3.004	5.349				0.017	0.026	0.044
		(LL)	2.042	3.467	5.713				0.019	0.028	0.043
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	2.802	3.871	5.978						
		(LZ)	3.074	4.613	7.426						
		(ZH)	1.654	2.887	5.191				0.017	0.026	0.044
		(ZL)	2.057	3.547	5.810				0.019	0.029	0.044
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			

Function	Schmitt I/O Buffer					CMOS 5V
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA	BQIUBB				1	70
6mA	BQICBB				1	70
9mA	BQI3BB				1	73
12mA	BQI1BB				1	73
18mA	BQI5BB				1	73
24mA	BQIFBB				1	73

Logic Diagram



Truth Table

A	B	BS1	BS2	*1	*2	Y0	Z1	Z2	
A	1	X	X	0	0	A	A	1	
A	0	X	X	0	0	Z	A	0	
X	X	A	1	1	0	A	A	1	
X	X	A	0	1	0	Z	A	0	
A	B	X	X	0	1	Z	A	B	
X	X	A	B	1	1	Z	A	B	← Prohibition

*1:MODE1 , *2:MODE2

X:Irrelevant

Z:High Impedance

Y0	Y1
0	0
1	1

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
BQIUBB	A	2.4	Y1	227
	B	2.4	Z1	35
	MODE1	2.5	Z2	35
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		
BQICBB	A	2.4	Y1	227
	B	2.4	Z1	35
	MODE1	2.5	Z2	35
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		
BQI3BB to BQI1BB	A	2.4	Y1	227
	B	2.4	Z1	35
	MODE1	2.5	Z2	35
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		
BQI5BB to BQIFBB	A	2.4	Y1	227
	B	2.4	Z1	35
	MODE1	2.5	Z2	35
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BQIUBB	A → Y0	(HH)	1.754	2.845	4.680				0.076	0.120	0.190
		(LL)	1.992	2.689	4.348				0.094	0.106	0.189
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033			
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0	(HZ)	0.668	1.059	1.713						
		(LZ)	0.479	0.761	1.223						
		(ZH)	2.017	3.283	5.400				0.076	0.120	0.190
		(ZL)	1.938	2.877	4.227				0.094	0.133	0.190
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.820	2.954	4.847				0.076	0.119	0.189
		(HL)	2.061	3.015	4.483				0.093	0.133	0.189
		(LH)	1.806	2.937	4.827				0.076	0.120	0.190
		(LL)	2.055	3.021	4.501				0.093	0.133	0.189
		(HZ)	0.734	1.162	1.870						
		(LZ)	0.545	0.863	1.381						
		(ZH)	2.068	3.393	5.565				0.076	0.120	0.190
		(ZL)	1.988	2.987	4.399				0.094	0.132	0.190
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033			
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.586	0.914	1.453						
		(LZ)	0.397	0.615	0.964						
		(ZH)	1.933	3.147	5.170				0.076	0.120	0.190
		(ZL)	1.854	2.753	4.013				0.094	0.133	0.190
	BS1 → Y0	(HH)	1.756	2.848	4.684				0.076	0.120	0.190
		(LL)	1.997	2.692	4.348				0.094	0.106	0.189
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033			
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.671	1.063	1.715						
		(LZ)	0.481	0.763	1.225						
		(ZH)	2.019	3.286	5.403				0.076	0.120	0.190
		(ZL)	1.941	2.880	4.234				0.094	0.132	0.190
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BQICBB	A → Y0	(HH)	1.004	1.622	2.704				0.028	0.043	0.067
		(LL)	1.207	1.778	2.926				0.033	0.037	0.066
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033			
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0	(HZ)	1.124	1.665	2.638						
		(LZ)	0.669	1.047	1.681						
		(ZH)	1.285	2.091	3.470				0.028	0.043	0.067
		(ZL)	1.240	1.915	2.989				0.033	0.046	0.066
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.070	1.728	2.869				0.028	0.043	0.067
		(HL)	1.273	1.955	3.064				0.033	0.046	0.066
		(LH)	1.055	1.714	2.855				0.028	0.043	0.067
		(LL)	1.269	1.962	3.080				0.033	0.046	0.066

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(HZ)	1.188	1.769	2.792						
		(LZ)	0.736	1.150	1.840						
		(ZH)	1.336	2.199	3.638				0.028	0.043	0.067
		(ZL)	1.291	2.025	3.157				0.033	0.046	0.066
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033			
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.041	1.519	2.375						
		(LZ)	0.588	0.903	1.422						
		(ZH)	1.202	1.955	3.251				0.028	0.043	0.067
		(ZL)	1.159	1.781	2.773				0.033	0.046	0.066
	BS1 → Y0	(HH)	1.006	1.625	2.709				0.028	0.043	0.067
		(LL)	1.210	1.782	2.933				0.033	0.037	0.066
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033			
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.125	1.669	2.643						
		(LZ)	0.673	1.050	1.683						
		(ZH)	1.288	2.095	3.470				0.028	0.043	0.067
		(ZL)	1.244	1.918	2.995				0.033	0.046	0.066
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BQI3BB	A → Y0	(HH)	0.887	1.437	2.410				0.020	0.032	0.050
		(LL)	1.132	1.688	2.788				0.025	0.028	0.050
	A → Z1	(HH)	0.234	0.360	0.581	0.013	0.021	0.033			
		(LL)	0.288	0.473	0.769	0.010	0.016	0.025			
	B → Y0	(HZ)	1.192	1.764	2.786						
		(LZ)	0.690	1.078	1.727						
		(ZH)	1.177	1.918	3.181				0.020	0.032	0.050
		(ZL)	1.174	1.809	2.838				0.025	0.035	0.050
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.950	1.543	2.572				0.020	0.032	0.050
		(HL)	1.197	1.849	2.924				0.025	0.035	0.050
		(LH)	0.939	1.531	2.562				0.020	0.032	0.050
		(LL)	1.193	1.852	2.937				0.025	0.035	0.050
		(HZ)	1.257	1.865	2.950						
		(LZ)	0.757	1.182	1.886						
		(ZH)	1.228	2.027	3.351				0.020	0.032	0.050
		(ZL)	1.224	1.916	3.007				0.025	0.035	0.050
	MODE1 → Z1	(HH)	0.297	0.461	0.743	0.013	0.021	0.033			
		(HL)	0.353	0.570	0.912	0.010	0.016	0.025			
		(LH)	0.284	0.456	0.726	0.013	0.021	0.034			
		(LL)	0.346	0.569	0.921	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.110	1.618	2.529						
		(LZ)	0.608	0.933	1.468						

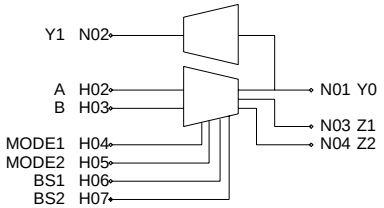
Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(ZH)	1.093	1.783	2.963				0.020	0.032	0.050
		(ZL)	1.090	1.673	2.618				0.025	0.035	0.050
	BS1 → Y0	(HH)	0.888	1.440	2.412				0.020	0.032	0.050
		(LL)	1.134	1.694	2.794				0.025	0.028	0.050
	BS1 → Z1	(HH)	0.235	0.365	0.584	0.013	0.021	0.033			
		(LL)	0.289	0.477	0.776	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.186	1.768	2.789						
		(LZ)	0.693	1.081	1.729						
		(ZH)	1.180	1.922	3.185				0.020	0.032	0.050
		(ZL)	1.174	1.812	2.841				0.025	0.035	0.050
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BQI1BB	A → Y0	(HH)	0.788	1.283	2.159				0.011	0.017	0.027
		(LL)	1.092	1.636	2.701				0.017	0.019	0.032
	A → Z1	(HH)	0.234	0.360	0.581	0.013	0.021	0.033			
		(LL)	0.288	0.473	0.769	0.010	0.016	0.025			
	B → Y0	(HZ)	1.433	2.124	3.352						
		(LZ)	0.754	1.172	1.879						
		(ZH)	1.080	1.766	2.929				0.011	0.017	0.027
		(ZL)	1.137	1.755	2.767				0.017	0.023	0.032
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.852	1.389	2.322				0.011	0.017	0.027
		(HL)	1.158	1.791	2.841				0.017	0.023	0.032
		(LH)	0.840	1.377	2.312				0.011	0.017	0.027
		(LL)	1.153	1.794	2.853				0.017	0.023	0.032
		(HZ)	1.499	2.229	3.509						
		(LZ)	0.821	1.276	2.037						
		(ZH)	1.131	1.875	3.099				0.011	0.017	0.027
		(ZL)	1.188	1.865	2.938				0.017	0.023	0.032
	MODE1 → Z1	(HH)	0.297	0.461	0.743	0.013	0.021	0.033			
		(HL)	0.353	0.570	0.912	0.010	0.016	0.025			
		(LH)	0.284	0.456	0.726	0.013	0.021	0.034			
		(LL)	0.346	0.569	0.921	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.351	1.975	3.092						
		(LZ)	0.672	1.027	1.619						
		(ZH)	0.996	1.631	2.714				0.011	0.017	0.027
		(ZL)	1.053	1.618	2.551				0.017	0.023	0.032
	BS1 → Y0	(HH)	0.790	1.286	2.162				0.011	0.017	0.027
		(LL)	1.095	1.640	2.706				0.017	0.019	0.032
	BS1 → Z1	(HH)	0.235	0.365	0.584	0.013	0.021	0.033			
		(LL)	0.289	0.477	0.776	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.440	2.130	3.354						
		(LZ)	0.757	1.174	1.880						
		(ZH)	1.083	1.770	2.936				0.011	0.017	0.027
		(ZL)	1.140	1.757	2.772				0.017	0.023	0.032
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BQI5BB	A → Y0	(HH)	0.803	1.301	2.186				0.011	0.017	0.027
		(LL)	1.117	1.674	2.764				0.013	0.015	0.025
	A → Z1	(HH)	0.234	0.360	0.581	0.013	0.021	0.033			
		(LL)	0.288	0.473	0.769	0.010	0.016	0.025			
	B → Y0	(HZ)	1.436	2.127	3.346						
		(LZ)	0.812	1.256	2.010						
		(ZH)	1.087	1.776	2.949				0.011	0.017	0.027
		(ZL)	1.165	1.800	2.841				0.013	0.018	0.025
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.866	1.406	2.349				0.011	0.017	0.027
		(HL)	1.182	1.831	2.906				0.013	0.018	0.025
		(LH)	0.855	1.395	2.338				0.011	0.017	0.027
		(LL)	1.179	1.835	2.916				0.013	0.018	0.025
		(HZ)	1.502	2.237	3.504						
		(LZ)	0.877	1.359	2.169						
		(ZH)	1.138	1.885	3.113				0.011	0.017	0.027
		(ZL)	1.216	1.908	3.009				0.013	0.018	0.025
	MODE1 → Z1	(HH)	0.297	0.461	0.743	0.013	0.021	0.033			
		(HL)	0.353	0.570	0.912	0.010	0.016	0.025			
		(LH)	0.284	0.456	0.726	0.013	0.021	0.034			
		(LL)	0.346	0.569	0.921	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.356	1.981	3.097						
		(LZ)	0.729	1.111	1.751						
		(ZH)	1.003	1.641	2.732				0.011	0.017	0.027
		(ZL)	1.083	1.663	2.620				0.013	0.018	0.025
	BS1 → Y0	(HH)	0.804	1.304	2.188				0.011	0.017	0.027
		(LL)	1.122	1.676	2.770				0.013	0.015	0.025
	BS1 → Z1	(HH)	0.235	0.365	0.584	0.013	0.021	0.033			
		(LL)	0.289	0.477	0.776	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.454	2.128	3.359						
		(LZ)	0.815	1.259	2.012						
		(ZH)	1.089	1.779	2.951				0.011	0.017	0.027
		(ZL)	1.167	1.803	2.844				0.013	0.018	0.025
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BQIFBB	A → Y0	(HH)	0.823	1.323	2.215				0.011	0.017	0.026
		(LL)	1.121	1.681	2.783				0.012	0.014	0.023
	A → Z1	(HH)	0.234	0.360	0.581	0.013	0.021	0.033			
		(LL)	0.288	0.473	0.769	0.010	0.016	0.025			
	B → Y0	(HZ)	1.436	2.130	3.355						
		(LZ)	0.889	1.369	2.190						
		(ZH)	1.087	1.776	2.948				0.011	0.017	0.027
		(ZL)	1.172	1.809	2.859				0.012	0.016	0.023
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.886	1.428	2.378				0.011	0.017	0.027
		(HL)	1.186	1.841	2.923				0.012	0.016	0.023
		(LH)	0.874	1.416	2.368				0.011	0.017	0.027
		(LL)	1.181	1.843	2.934				0.012	0.016	0.023

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(HZ)	1.502	2.227	3.505						
		(LZ)	0.956	1.472	2.349						
		(ZH)	1.138	1.884	3.115				0.011	0.017	0.027
		(ZL)	1.223	1.921	3.028				0.012	0.016	0.023
	MODE1 → Z1	(HH)	0.297	0.461	0.743	0.013	0.021	0.033			
		(HL)	0.353	0.570	0.912	0.010	0.016	0.025			
		(LH)	0.284	0.456	0.726	0.013	0.021	0.034			
		(LL)	0.346	0.569	0.921	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.355	1.986	3.088						
		(LZ)	0.807	1.223	1.931						
		(ZH)	1.003	1.641	2.732				0.011	0.017	0.027
		(ZL)	1.089	1.676	2.641				0.012	0.016	0.023
	BS1 → Y0	(HH)	0.824	1.326	2.218				0.011	0.017	0.027
		(LL)	1.124	1.684	2.788				0.012	0.014	0.023
	BS1 → Z1	(HH)	0.235	0.365	0.584	0.013	0.021	0.033			
		(LL)	0.289	0.477	0.776	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.440	2.128	3.358						
		(LZ)	0.892	1.371	2.191						
		(ZH)	1.089	1.779	2.952				0.011	0.017	0.027
		(ZL)	1.174	1.813	2.862				0.012	0.016	0.023
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			

Function	Low-noise Schmitt I/O Buffer				CMOS 5V
Block type					
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA						
6mA						
9mA						
12mA	BUI1BB				1	64
18mA	BUI5BB				1	64
24mA	BUIFBB				1	64

Logic Diagram



Truth Table

A	B	BS1	BS2	*1	*2	Y0	Z1	Z2	
A	1	X	X	0	0	A	A	1	
A	0	X	X	0	0	Z	A	0	
X	X	A	1	1	0	A	A	1	
X	X	A	0	1	0	Z	A	0	
A	B	X	X	0	1	Z	A	B	
X	X	A	B	1	1	Z	A	B	← Prohibition

*1:MODE1 , *2:MODE2

X:Irrelevant

Z:High Impedance

Y0	Y1
0	0
1	1

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
BUI1BB	A	2.4	Y1	227
	B	2.4	Z1	36
	MODE1	2.5	Z2	35
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		
BUI5BB to BUIFBB	A	2.4	Y1	227
	B	2.4	Z1	36
	MODE1	2.5	Z2	35
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		

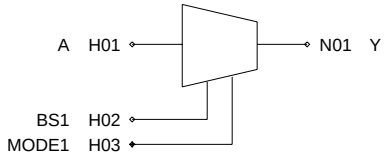
Block type	Switching speed											
	Path			t_{LD0} (ns)			t_1			T		
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BUI1BB	A → Y0		(HH)	1.736	2.989	5.320				0.017	0.026	0.044
			(LL)	1.928	3.221	5.256				0.023	0.033	0.048
	A → Z1		(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
			(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0		(HZ)	2.786	3.867	5.924						
			(LZ)	2.211	3.306	5.314						
			(ZH)	1.646	2.875	5.172				0.017	0.026	0.044
			(ZL)	1.966	3.316	5.376				0.023	0.033	0.049
	B → Z2		(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
			(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0		(HH)	1.805	3.098	5.493				0.017	0.026	0.044
			(HL)	1.993	3.309	5.369				0.023	0.033	0.048
			(LH)	1.787	3.078	5.466				0.017	0.026	0.044
			(LL)	1.992	3.320	5.412				0.023	0.033	0.048
			(HZ)	2.843	3.969	6.106						
			(LZ)	2.276	3.408	5.474						
			(ZH)	1.696	2.983	5.335				0.017	0.026	0.043
			(ZL)	2.016	3.423	5.553				0.023	0.033	0.049
	MODE1 → Z1		(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
			(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
			(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
			(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2		(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
			(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
			(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
			(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0		(HZ)	2.720	3.714	5.687						
			(LZ)	2.138	3.162	5.038						
			(ZH)	1.557	2.736	4.950				0.017	0.026	0.044
			(ZL)	1.878	3.186	5.154				0.023	0.033	0.049
	BS1 → Y0		(HH)	1.736	2.993	5.329				0.017	0.026	0.044
			(LL)	1.931	3.225	5.252				0.023	0.033	0.048
	BS1 → Z1		(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
			(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0		(HZ)	2.776	3.861	5.948						
			(LZ)	2.214	3.308	5.317						
			(ZH)	1.647	2.876	5.170				0.017	0.026	0.044
			(ZL)	1.969	3.318	5.390				0.023	0.033	0.049
	BS2 → Z2		(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
			(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1		(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
			(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BUI5BB	A → Y0		(HH)	1.741	2.995	5.343				0.017	0.026	0.044
			(LL)	1.972	3.331	5.445				0.021	0.030	0.045
	A → Z1		(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
			(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0		(HZ)	2.813	3.873	5.971						
			(LZ)	2.573	3.854	6.196						
			(ZH)	1.652	2.886	5.191				0.017	0.026	0.044
			(ZL)	2.002	3.426	5.559				0.021	0.031	0.047
	B → Z2		(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
			(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0		(HH)	1.810	3.105	5.511				0.017	0.026	0.044
			(HL)	2.038	3.418	5.559				0.021	0.030	0.045
			(LH)	1.793	3.084	5.483				0.017	0.026	0.044
			(LL)	2.036	3.431	5.603				0.021	0.030	0.045

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(HZ)	2.858	3.969	6.136						
		(LZ)	2.636	3.956	6.344						
		(ZH)	1.703	2.994	5.358				0.017	0.026	0.044
		(ZL)	2.052	3.524	5.737				0.021	0.031	0.046
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	2.735	3.736	5.703						
		(LZ)	2.501	3.710	5.908						
		(ZH)	1.564	2.748	4.971				0.017	0.026	0.044
		(ZL)	1.913	3.272	5.343				0.021	0.031	0.046
	BS1 → Y0	(HH)	1.745	3.000	5.345				0.017	0.026	0.044
		(LL)	1.976	3.333	5.450				0.021	0.030	0.045
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	2.805	3.869	5.980						
		(LZ)	2.575	3.854	6.188						
		(ZH)	1.654	2.887	5.197				0.017	0.026	0.044
		(ZL)	2.005	3.423	5.559				0.021	0.031	0.047
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BUIFBB	A → Y0	(HH)	1.751	3.001	5.342				0.017	0.026	0.044
		(LL)	2.037	3.471	5.707				0.019	0.028	0.042
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	2.815	3.884	5.987						
		(LZ)	3.071	4.610	7.425						
		(ZH)	1.652	2.886	5.192				0.017	0.026	0.044
		(ZL)	2.055	3.541	5.817				0.019	0.029	0.044
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.818	3.108	5.510				0.017	0.026	0.043
		(HL)	2.103	3.558	5.823				0.019	0.028	0.043
		(LH)	1.801	3.088	5.481				0.017	0.026	0.044
		(LL)	2.101	3.573	5.857				0.019	0.028	0.043
		(HZ)	2.858	3.968	6.147						
		(LZ)	3.134	4.712	7.585						
		(ZH)	1.703	2.995	5.355				0.017	0.026	0.044
		(ZL)	2.103	3.655	5.959				0.019	0.029	0.044
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	2.735	3.727	5.716						
		(LZ)	3.000	4.463	7.147						

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(ZH)	1.564	2.748	4.967				0.017	0.026	0.044
		(ZL)	1.966	3.408	5.589				0.019	0.029	0.044
	BS1 → Y0	(HH)	1.753	3.004	5.349				0.017	0.026	0.044
		(LL)	2.042	3.467	5.713				0.019	0.028	0.043
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	2.802	3.871	5.978						
		(LZ)	3.074	4.613	7.426						
		(ZH)	1.654	2.887	5.191				0.017	0.026	0.044
		(ZL)	2.057	3.547	5.810				0.019	0.029	0.044
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			

Function	Output Buffer				TTL 5V	
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA	FV0AB2				1	13
2mA	FV0BB2				1	13
3mA	FV09B2				1	13
6mA	FV04B2				1	13
9mA	FV01B2				1	25
12mA	FV02B2				1	25
18mA	FV03B2				1	25
24mA	FV06B2				1	25

Logic Diagram



Truth Table

A	BS1	MODE1	Y
A	X	0	A
X	B	1	B

X:Irrelevant

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
FV0AB2 to FV09B2	A	2.4	Y	-
	BS1	2.4		
	MODE1	1.3		
FV04B2	A	2.4	Y	-
	BS1	2.4		
	MODE1	1.3		
FV01B2 to FV02B2	A	2.4	Y	-
	BS1	2.4		
	MODE1	1.3		
FV03B2 to FV06B2	A	2.4	Y	-
	BS1	2.4		
	MODE1	1.3		

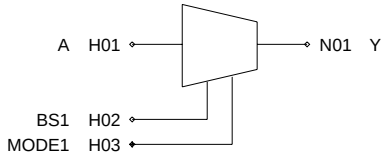
Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
FV0AB2	A → Y	(HH)	2.231	3.516	5.699				0.075	0.123	0.200
		(LL)	3.405	4.998	7.703				0.139	0.202	0.312
	BS1 → Y	(HH)	2.230	3.526	5.697				0.076	0.122	0.200
		(LL)	3.412	5.001	7.705				0.138	0.202	0.312
	MODE1 → Y	(HH)	2.299	3.633	5.877				0.075	0.122	0.200
		(HL)	3.475	5.084	7.823				0.138	0.202	0.312
		(LH)	2.279	3.604	5.833				0.076	0.122	0.200
		(LL)	3.474	5.094	7.860				0.138	0.202	0.312
FV0BB2	A → Y	(HH)	1.989	3.134	5.017				0.074	0.118	0.189
		(LL)	2.440	3.618	5.546				0.104	0.154	0.233
	BS1 → Y	(HH)	1.992	3.135	5.024				0.074	0.118	0.189
		(LL)	2.444	3.622	5.548				0.104	0.154	0.233
	MODE1 → Y	(HH)	2.058	3.233	5.191				0.073	0.118	0.189
		(HL)	2.505	3.707	5.661				0.104	0.154	0.233
		(LH)	2.040	3.220	5.168				0.073	0.118	0.189
		(LL)	2.504	3.722	5.700				0.104	0.154	0.233
FV09B2	A → Y	(HH)	2.083	3.281	5.214				0.072	0.114	0.183
		(LL)	2.280	3.247	4.715				0.088	0.125	0.180
	BS1 → Y	(HH)	2.085	3.285	5.239				0.072	0.114	0.183
		(LL)	2.291	3.253	4.719				0.088	0.125	0.180
	MODE1 → Y	(HH)	2.158	3.390	5.404				0.072	0.114	0.183
		(HL)	2.342	3.340	4.836				0.088	0.125	0.180
		(LH)	2.131	3.369	5.395				0.072	0.114	0.183
		(LL)	2.352	3.353	4.866				0.088	0.125	0.180
FV04B2	A → Y	(HH)	1.162	1.828	2.935				0.027	0.042	0.066
		(LL)	1.199	1.793	2.729				0.031	0.044	0.062
	BS1 → Y	(HH)	1.164	1.832	2.941				0.027	0.042	0.066
		(LL)	1.204	1.796	2.731				0.031	0.044	0.062
	MODE1 → Y	(HH)	1.230	1.936	3.105				0.027	0.042	0.066
		(HL)	1.264	1.882	2.849				0.031	0.044	0.062
		(LH)	1.213	1.918	3.079				0.027	0.042	0.066
		(LL)	1.264	1.895	2.886				0.031	0.044	0.062
FV01B2	A → Y	(HH)	1.040	1.639	2.645				0.020	0.031	0.050
		(LL)	0.980	1.493	2.305				0.024	0.033	0.047
	BS1 → Y	(HH)	1.041	1.641	2.651				0.020	0.031	0.049
		(LL)	0.985	1.496	2.310				0.024	0.033	0.047
	MODE1 → Y	(HH)	1.103	1.743	2.808				0.020	0.031	0.050
		(HL)	1.047	1.591	2.444				0.024	0.033	0.047
		(LH)	1.091	1.732	2.797				0.020	0.031	0.050
		(LL)	1.043	1.590	2.458				0.024	0.033	0.047
FV02B2	A → Y	(HH)	0.880	1.395	2.271				0.011	0.017	0.027
		(LL)	0.788	1.233	1.951				0.013	0.018	0.025
	BS1 → Y	(HH)	0.882	1.399	2.274				0.011	0.017	0.027
		(LL)	0.793	1.238	1.956				0.013	0.018	0.025
	MODE1 → Y	(HH)	0.943	1.502	2.435				0.011	0.016	0.027
		(HL)	0.856	1.329	2.089				0.013	0.018	0.025
		(LH)	0.931	1.489	2.424				0.011	0.017	0.027
		(LL)	0.851	1.331	2.103				0.013	0.018	0.025
FV03B2	A → Y	(HH)	0.915	1.449	2.357				0.011	0.017	0.027
		(LL)	0.741	1.170	1.868				0.010	0.014	0.020
	BS1 → Y	(HH)	0.918	1.451	2.360				0.011	0.017	0.027
		(LL)	0.744	1.173	1.870				0.010	0.014	0.020
	MODE1 → Y	(HH)	0.979	1.553	2.519				0.011	0.017	0.027
		(HL)	0.807	1.266	2.003				0.010	0.014	0.020
		(LH)	0.967	1.542	2.510				0.011	0.017	0.027
		(LL)	0.802	1.266	2.018				0.010	0.014	0.020

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
FV06B2	A → Y	(HH)	0.953	1.505	2.449				0.011	0.017	0.027
		(LL)	0.696	1.110	1.788				0.008	0.011	0.016
	BS1 → Y	(HH)	0.956	1.507	2.453				0.011	0.017	0.027
		(LL)	0.699	1.113	1.792				0.008	0.011	0.016
	MODE1 → Y	(HH)	1.017	1.610	2.612				0.011	0.017	0.027
		(HL)	0.762	1.206	1.926				0.008	0.011	0.016
		(LH)	1.005	1.599	2.602				0.011	0.017	0.027
		(LL)	0.757	1.206	1.940				0.008	0.011	0.016

[MEMO]

Function	Low-noise Output Buffer				TTL 5V	
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA						
6mA						
9mA						
12mA	FW02B2				1	15
18mA	FW03B2				1	15
24mA	FW06B2				1	15

Logic Diagram



Truth Table

A	BS1	MODE1	Y
A	X	0	A
X	B	1	B

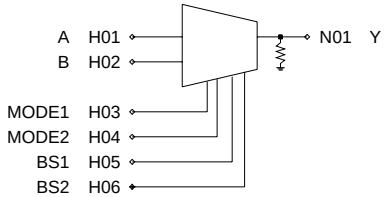
X:Irrelevant

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
FW02B2	A	2.4	Y	-
	BS1	2.4		
	MODE1	1.3		
FW03B2 to FW06B2	A	2.4	Y	-
	BS1	2.4		
	MODE1	1.3		

Block type	Switching speed											
	Path			t_{LD0} (ns)			t_1			T		
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
FW02B2	A → Y		(HH)	1.705	2.841	4.909				0.013	0.020	0.034
			(LL)	2.119	3.465	5.589				0.018	0.025	0.037
	BS1 → Y		(HH)	1.707	2.847	4.918				0.013	0.020	0.034
			(LL)	2.123	3.484	5.594				0.018	0.025	0.037
	MODE1 → Y		(HH)	1.772	2.952	5.080				0.013	0.020	0.034
			(HL)	2.183	3.570	5.708				0.018	0.025	0.037
			(LH)	1.755	2.929	5.054				0.013	0.020	0.034
			(LL)	2.181	3.570	5.748				0.018	0.025	0.037
FW03B2	A → Y		(HH)	1.739	2.899	5.011				0.013	0.021	0.034
			(LL)	2.194	3.648	5.930				0.016	0.023	0.034
	BS1 → Y		(HH)	1.741	2.902	5.018				0.013	0.021	0.034
			(LL)	2.193	3.651	5.935				0.016	0.023	0.034
	MODE1 → Y		(HH)	1.806	3.009	5.178				0.013	0.021	0.034
			(HL)	2.256	3.738	6.045				0.016	0.023	0.034
			(LH)	1.788	2.986	5.155				0.013	0.021	0.034
			(LL)	2.248	3.739	6.082				0.016	0.023	0.034
FW06B2	A → Y		(HH)	1.741	2.900	5.009				0.013	0.021	0.034
			(LL)	2.239	3.767	6.161				0.015	0.021	0.032
	BS1 → Y		(HH)	1.743	2.904	5.012				0.013	0.021	0.034
			(LL)	2.241	3.769	6.161				0.015	0.021	0.032
	MODE1 → Y		(HH)	1.808	3.008	5.179				0.013	0.021	0.034
			(HL)	2.302	3.854	6.279				0.015	0.021	0.032
			(LH)	1.792	2.989	5.154				0.013	0.021	0.034
			(LL)	2.301	3.866	6.306				0.015	0.021	0.032

Function	3-State Buffer					TTL 5V
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA	BV0QB3	BVDQB3			1	52
2mA	BV0MB3	BVDMB3			1	52
3mA	BV0TB3	BVDTB3			1	52
6mA	BV0EB3	BVDEB3			1	52
9mA	BV08B3	BVD8B3			1	54
12mA	BV07B3	BVD7B3			1	54
18mA	BV09B3	BVD9B3			1	54
24mA	BV0HB3	BVDHB3			1	54

Logic Diagram



Truth Table

A	B	BS1	BS2	*1	*2	Y	
A	1	X	X	0	0	A	
A	0	X	X	0	0	Z	
X	X	A	1	1	0	A	
X	X	A	0	1	0	Z	
X	X	X	X	0	1	Z	
X	X	X	X	1	1	Z	← Prohibition

*1:MODE1 , *2:MODE2

X:Irrelevant

Z:High Impedance

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
BV0QB3 to BVDTB3	A	2.4	Y	-
	B	2.4		
	MODE1	2.5		
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		
BV0EB3 to BVDEB3	A	2.4	Y	-
	B	2.4		
	MODE1	2.5		
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		
BV08B3 to BVD7B3	A	2.4	Y	-
	B	2.4		
	MODE1	2.5		
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		
BV09B3 to BVDHB3	A	2.4	Y	-
	B	2.4		
	MODE1	2.5		
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		

Block type	Switching speed											
	Path		t LD0 (ns)			t 1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
BV0QB3	A → Y	(HH)	1.871	3.053	5.091				0.080	0.128	0.208	
		(LL)	3.183	4.693	7.317				0.144	0.209	0.321	
	B → Y	(HZ)	0.677	1.071	1.738							
		(LZ)	0.464	0.739	1.186							
		(ZH)	1.718	2.840	4.653				0.077	0.125	0.204	
		(ZL)	3.113	4.592	7.070				0.143	0.209	0.321	
	MODE1 → Y	(HH)	1.937	3.163	5.256				0.080	0.128	0.208	
		(HL)	3.250	4.787	7.459				0.144	0.209	0.321	
		(LH)	1.923	3.152	5.240				0.080	0.128	0.208	
		(LL)	3.245	4.795	7.474				0.144	0.209	0.321	
		(HZ)	0.742	1.173	1.894							
		(LZ)	0.531	0.841	1.342							
		(ZH)	1.767	2.973	4.822				0.077	0.125	0.204	
		(ZL)	3.158	4.722	7.238				0.144	0.209	0.321	
	MODE2 → Y	(HZ)	0.596	0.929	1.479							
		(LZ)	0.382	0.594	0.926							
		(ZH)	1.634	2.723	4.433				0.077	0.125	0.204	
		(ZL)	3.024	4.459	6.854				0.144	0.209	0.321	
	BS1 → Y	(HH)	1.874	3.061	5.096				0.080	0.128	0.208	
		(LL)	3.194	4.699	7.326				0.143	0.209	0.321	
	BS2 → Y	(HZ)	0.679	1.074	1.738							
		(LZ)	0.468	0.741	1.185							
		(ZH)	1.720	2.843	4.658				0.077	0.125	0.204	
		(ZL)	3.116	4.599	7.076				0.143	0.209	0.321	
BVDQB3	A → Y	(HH)	1.871	3.053	5.091				0.080	0.128	0.208	
		(LL)	3.183	4.693	7.317				0.144	0.209	0.321	
	B → Y	(HZ)	0.677	1.071	1.738							
		(LZ)	0.464	0.739	1.186							
		(ZH)	1.718	2.840	4.653				0.077	0.125	0.204	
		(ZL)	3.113	4.592	7.070				0.143	0.209	0.321	
	MODE1 → Y	(HH)	1.937	3.163	5.256				0.080	0.128	0.208	
		(HL)	3.250	4.787	7.459				0.144	0.209	0.321	
		(LH)	1.923	3.152	5.240				0.080	0.128	0.208	
		(LL)	3.245	4.795	7.474				0.144	0.209	0.321	
		(HZ)	0.742	1.173	1.894							
		(LZ)	0.531	0.841	1.342							
		(ZH)	1.767	2.973	4.822				0.077	0.125	0.204	
		(ZL)	3.158	4.722	7.238				0.144	0.209	0.321	
	MODE2 → Y	(HZ)	0.596	0.929	1.479							
		(LZ)	0.382	0.594	0.926							
		(ZH)	1.634	2.723	4.433				0.077	0.125	0.204	
		(ZL)	3.024	4.459	6.854				0.144	0.209	0.321	
	BS1 → Y	(HH)	1.874	3.061	5.096				0.080	0.128	0.208	
		(LL)	3.194	4.699	7.326				0.143	0.209	0.321	
	BS2 → Y	(HZ)	0.679	1.074	1.738							
		(LZ)	0.468	0.741	1.185							
		(ZH)	1.720	2.843	4.658				0.077	0.125	0.204	
		(ZL)	3.116	4.599	7.076				0.143	0.209	0.321	
BV0MB3	A → Y	(HH)	1.715	2.773	4.560				0.077	0.122	0.195	
		(LL)	2.233	3.366	5.237				0.108	0.159	0.241	
	B → Y	(HZ)	0.677	1.071	1.738							
		(LZ)	0.464	0.738	1.185							
		(ZH)	1.621	2.665	4.323				0.074	0.119	0.192	
		(ZL)	2.211	3.349	5.154				0.108	0.159	0.242	
	MODE1 → Y	(HH)	1.780	2.880	4.735				0.077	0.122	0.193	
		(HL)	2.297	3.464	5.369				0.108	0.159	0.242	

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(LH)	1.766	2.866	4.707				0.077	0.122	0.195
		(LL)	2.296	3.466	5.384				0.108	0.159	0.242
		(HZ)	0.742	1.173	1.894						
		(LZ)	0.531	0.840	1.342						
		(ZH)	1.670	2.794	4.491				0.074	0.120	0.192
		(ZL)	2.263	3.471	5.329				0.108	0.159	0.241
	MODE2 → Y	(HZ)	0.596	0.929	1.479						
		(LZ)	0.383	0.594	0.926						
		(ZH)	1.538	2.544	4.105				0.074	0.120	0.192
		(ZL)	2.131	3.223	4.944				0.108	0.159	0.241
	BS1 → Y	(HH)	1.716	2.776	4.560				0.077	0.122	0.195
		(LL)	2.234	3.374	5.247				0.108	0.159	0.241
	BS2 → Y	(HZ)	0.679	1.074	1.738						
		(LZ)	0.468	0.741	1.186						
		(ZH)	1.624	2.668	4.319				0.074	0.119	0.192
		(ZL)	2.215	3.346	5.162				0.108	0.159	0.242
BVDMB3	A → Y	(HH)	1.715	2.773	4.560				0.077	0.122	0.195
		(LL)	2.233	3.366	5.237				0.108	0.159	0.241
	B → Y	(HZ)	0.677	1.071	1.738						
		(LZ)	0.464	0.738	1.185						
		(ZH)	1.621	2.665	4.323				0.074	0.119	0.192
		(ZL)	2.211	3.349	5.154				0.108	0.159	0.242
	MODE1 → Y	(HH)	1.780	2.880	4.735				0.077	0.122	0.193
		(HL)	2.297	3.464	5.369				0.108	0.159	0.242
		(LH)	1.766	2.866	4.707				0.077	0.122	0.195
		(LL)	2.296	3.466	5.384				0.108	0.159	0.242
		(HZ)	0.742	1.173	1.894						
		(LZ)	0.531	0.840	1.342						
		(ZH)	1.670	2.794	4.491				0.074	0.120	0.192
		(ZL)	2.263	3.471	5.329				0.108	0.159	0.241
	MODE2 → Y	(HZ)	0.596	0.929	1.479						
		(LZ)	0.383	0.594	0.926						
		(ZH)	1.538	2.544	4.105				0.074	0.120	0.192
		(ZL)	2.131	3.223	4.944				0.108	0.159	0.241
	BS1 → Y	(HH)	1.716	2.776	4.560				0.077	0.122	0.195
		(LL)	2.234	3.374	5.247				0.108	0.159	0.241
	BS2 → Y	(HZ)	0.679	1.074	1.738						
		(LZ)	0.468	0.741	1.186						
		(ZH)	1.624	2.668	4.319				0.074	0.119	0.192
		(ZL)	2.215	3.346	5.162				0.108	0.159	0.242
BV0TB3	A → Y	(HH)	1.752	2.841	4.684				0.077	0.120	0.189
		(LL)	1.962	2.871	4.272				0.094	0.133	0.189
	B → Y	(HZ)	0.677	1.071	1.739						
		(LZ)	0.463	0.738	1.185						
		(ZH)	1.624	2.673	4.325				0.073	0.117	0.187
		(ZL)	1.948	2.875	4.259				0.094	0.133	0.191
	MODE1 → Y	(HH)	1.817	2.948	4.844				0.077	0.120	0.191
		(HL)	2.027	2.967	4.414				0.094	0.132	0.189
		(LH)	1.803	2.933	4.841				0.077	0.120	0.189
		(LL)	2.020	2.971	4.430				0.094	0.133	0.189
		(HZ)	0.742	1.174	1.895						
		(LZ)	0.531	0.840	1.342						
		(ZH)	1.671	2.804	4.495				0.073	0.117	0.187
		(ZL)	2.001	2.995	4.427				0.094	0.133	0.190
	MODE2 → Y	(HZ)	0.596	0.929	1.480						
		(LZ)	0.382	0.593	0.927						

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(ZH)	1.541	2.554	4.107				0.073	0.117	0.187
		(ZL)	1.870	2.746	4.047				0.094	0.133	0.190
	BS1 → Y	(HH)	1.749	2.844	4.678				0.077	0.120	0.191
		(LL)	1.960	2.874	4.278				0.094	0.132	0.189
	BS2 → Y	(HZ)	0.680	1.073	1.739						
		(LZ)	0.467	0.742	1.185						
		(ZH)	1.627	2.675	4.331				0.073	0.117	0.187
		(ZL)	1.956	2.885	4.263				0.094	0.133	0.191
BVDTB3	A → Y	(HH)	1.752	2.841	4.684				0.077	0.120	0.189
		(LL)	1.962	2.871	4.272				0.094	0.133	0.189
	B → Y	(HZ)	0.677	1.071	1.739						
		(LZ)	0.463	0.738	1.185						
		(ZH)	1.624	2.673	4.325				0.073	0.117	0.187
		(ZL)	1.948	2.875	4.259				0.094	0.133	0.191
	MODE1 → Y	(HH)	1.817	2.948	4.844				0.077	0.120	0.191
		(HL)	2.027	2.967	4.414				0.094	0.132	0.189
		(LH)	1.803	2.933	4.841				0.077	0.120	0.189
		(LL)	2.020	2.971	4.430				0.094	0.133	0.189
		(HZ)	0.742	1.174	1.895						
		(LZ)	0.531	0.840	1.342						
		(ZH)	1.671	2.804	4.495				0.073	0.117	0.187
		(ZL)	2.001	2.995	4.427				0.094	0.133	0.190
	MODE2 → Y	(HZ)	0.596	0.929	1.480						
		(LZ)	0.382	0.593	0.927						
		(ZH)	1.541	2.554	4.107				0.073	0.117	0.187
		(ZL)	1.870	2.746	4.047				0.094	0.133	0.190
	BS1 → Y	(HH)	1.749	2.844	4.678				0.077	0.120	0.191
		(LL)	1.960	2.874	4.278				0.094	0.132	0.189
	BS2 → Y	(HZ)	0.680	1.073	1.739						
		(LZ)	0.467	0.742	1.185						
		(ZH)	1.627	2.675	4.331				0.073	0.117	0.187
		(ZL)	1.956	2.885	4.263				0.094	0.133	0.191
BV0EB3	A → Y	(HH)	0.997	1.611	2.692				0.028	0.043	0.067
		(LL)	1.174	1.821	2.856				0.033	0.046	0.066
	B → Y	(HZ)	1.130	1.673	2.662						
		(LZ)	0.652	1.019	1.634						
		(ZH)	1.220	1.979	3.231				0.026	0.042	0.066
		(ZL)	1.332	2.031	3.191				0.033	0.046	0.066
	MODE1 → Y	(HH)	1.063	1.717	2.855				0.028	0.043	0.067
		(HL)	1.239	1.916	2.993				0.033	0.046	0.066
		(LH)	1.049	1.702	2.843				0.028	0.043	0.067
		(LL)	1.237	1.920	3.009				0.033	0.046	0.066
		(HZ)	1.193	1.776	2.816						
		(LZ)	0.719	1.121	1.790						
		(ZH)	1.271	2.092	3.400				0.026	0.042	0.066
		(ZL)	1.383	2.141	3.358				0.033	0.046	0.066
	MODE2 → Y	(HZ)	1.046	1.529	2.401						
		(LZ)	0.570	0.875	1.375						
		(ZH)	1.137	1.848	3.013				0.026	0.042	0.066
		(ZL)	1.248	1.897	2.975				0.033	0.046	0.065
	BS1 → Y	(HH)	0.999	1.612	2.696				0.028	0.043	0.067
		(LL)	1.177	1.824	2.862				0.033	0.046	0.066
	BS2 → Y	(HZ)	1.128	1.676	2.662						
		(LZ)	0.655	1.022	1.633						
		(ZH)	1.222	1.983	3.235				0.026	0.042	0.066
		(ZL)	1.334	2.036	3.196				0.033	0.046	0.065

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
BVDEB3	A → Y	(HH)	0.997	1.611	2.692				0.028	0.043	0.067	
		(LL)	1.174	1.821	2.856				0.033	0.046	0.066	
	B → Y	(HZ)	1.130	1.673	2.662							
		(LZ)	0.652	1.019	1.634							
		(ZH)	1.220	1.979	3.231				0.026	0.042	0.066	
		(ZL)	1.332	2.031	3.191				0.033	0.046	0.066	
	MODE1 → Y	(HH)	1.063	1.717	2.855				0.028	0.043	0.067	
		(HL)	1.239	1.916	2.993				0.033	0.046	0.066	
		(LH)	1.049	1.702	2.843				0.028	0.043	0.067	
		(LL)	1.237	1.920	3.009				0.033	0.046	0.066	
		(HZ)	1.193	1.776	2.816							
		(LZ)	0.719	1.121	1.790							
		(ZH)	1.271	2.092	3.400				0.026	0.042	0.066	
		(ZL)	1.383	2.141	3.358				0.033	0.046	0.066	
	MODE2 → Y	(HZ)	1.046	1.529	2.401							
		(LZ)	0.570	0.875	1.375							
		(ZH)	1.137	1.848	3.013				0.026	0.042	0.066	
		(ZL)	1.248	1.897	2.975				0.033	0.046	0.065	
	BS1 → Y	(HH)	0.999	1.612	2.696				0.028	0.043	0.067	
		(LL)	1.177	1.824	2.862				0.033	0.046	0.066	
	BS2 → Y	(HZ)	1.128	1.676	2.662							
		(LZ)	0.655	1.022	1.633							
		(ZH)	1.222	1.983	3.235				0.026	0.042	0.066	
		(ZL)	1.334	2.036	3.196				0.033	0.046	0.065	
BV08B3	A → Y	(HH)	0.995	1.603	2.663				0.028	0.043	0.067	
		(LL)	1.159	1.786	2.792				0.032	0.045	0.064	
	B → Y	(HZ)	1.113	1.653	2.631							
		(LZ)	0.648	1.010	1.619							
		(ZH)	1.200	1.949	3.173				0.027	0.042	0.066	
		(ZL)	1.331	2.032	3.173				0.032	0.045	0.064	
	MODE1 → Y	(HH)	1.060	1.706	2.839				0.028	0.043	0.067	
		(HL)	1.225	1.882	2.930				0.032	0.045	0.064	
		(LH)	1.046	1.695	2.819				0.028	0.043	0.067	
		(LL)	1.222	1.886	2.946				0.032	0.045	0.064	
		(HZ)	1.177	1.756	2.788							
		(LZ)	0.714	1.112	1.776							
		(ZH)	1.251	2.063	3.341				0.027	0.042	0.066	
		(ZL)	1.384	2.134	3.347				0.032	0.045	0.064	
	MODE2 → Y	(HZ)	1.032	1.507	2.373							
		(LZ)	0.566	0.865	1.361							
		(ZH)	1.117	1.819	2.956				0.027	0.042	0.066	
		(ZL)	1.249	1.896	2.962				0.032	0.045	0.064	
	BS1 → Y	(HH)	0.996	1.606	2.671				0.028	0.043	0.067	
		(LL)	1.163	1.790	2.798				0.032	0.045	0.064	
	BS2 → Y	(HZ)	1.116	1.656	2.633							
		(LZ)	0.651	1.013	1.619							
		(ZH)	1.203	1.952	3.178				0.027	0.042	0.066	
		(ZL)	1.335	2.036	3.182				0.032	0.045	0.064	
BVD8B3	A → Y	(HH)	0.995	1.603	2.663				0.028	0.043	0.067	
		(LL)	1.159	1.786	2.792				0.032	0.045	0.064	
	B → Y	(HZ)	1.113	1.653	2.631							
		(LZ)	0.648	1.010	1.619							
		(ZH)	1.200	1.949	3.173				0.027	0.042	0.066	
		(ZL)	1.331	2.032	3.173				0.032	0.045	0.064	
	MODE1 → Y	(HH)	1.060	1.706	2.839				0.028	0.043	0.067	
		(HL)	1.225	1.882	2.930				0.032	0.045	0.064	

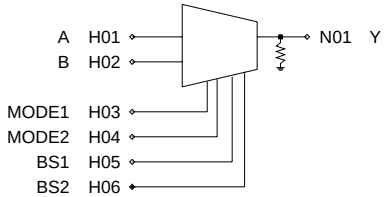
Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
		(LH)	1.046	1.695	2.819				0.028	0.043	0.067	
		(LL)	1.222	1.886	2.946				0.032	0.045	0.064	
		(HZ)	1.177	1.756	2.788							
		(LZ)	0.714	1.112	1.776							
		(ZH)	1.251	2.063	3.341				0.027	0.042	0.066	
		(ZL)	1.384	2.134	3.347				0.032	0.045	0.064	
	MODE2 → Y	(HZ)	1.032	1.507	2.373							
		(LZ)	0.566	0.865	1.361							
		(ZH)	1.117	1.819	2.956				0.027	0.042	0.066	
		(ZL)	1.249	1.896	2.962				0.032	0.045	0.064	
	BS1 → Y	(HH)	0.996	1.606	2.671				0.028	0.043	0.067	
		(LL)	1.163	1.790	2.798				0.032	0.045	0.064	
	BS2 → Y	(HZ)	1.116	1.656	2.633							
		(LZ)	0.651	1.013	1.619							
		(ZH)	1.203	1.952	3.178				0.027	0.042	0.066	
		(ZL)	1.335	2.036	3.182				0.032	0.045	0.064	
BV07B3	A → Y	(HH)	0.797	1.296	2.175				0.011	0.017	0.027	
		(LL)	1.050	1.628	2.569				0.015	0.020	0.029	
	B → Y	(HZ)	1.433	2.112	3.344							
		(LZ)	0.729	1.131	1.814							
		(ZH)	1.078	1.754	2.889				0.011	0.017	0.027	
		(ZL)	1.291	1.990	3.131				0.015	0.020	0.029	
	MODE1 → Y	(HH)	0.863	1.402	2.342				0.011	0.017	0.027	
		(HL)	1.116	1.723	2.702				0.015	0.020	0.029	
		(LH)	0.850	1.388	2.326				0.011	0.017	0.027	
		(LL)	1.112	1.728	2.723				0.015	0.020	0.029	
		(HZ)	1.499	2.212	3.495							
		(LZ)	0.795	1.233	1.970							
		(ZH)	1.129	1.864	3.056				0.011	0.017	0.027	
		(ZL)	1.341	2.097	3.304				0.015	0.020	0.029	
	MODE2 → Y	(HZ)	1.356	1.963	3.083							
		(LZ)	0.647	0.987	1.554							
		(ZH)	0.994	1.620	2.669				0.011	0.017	0.027	
		(ZL)	1.206	1.855	2.917				0.015	0.020	0.029	
	BS1 → Y	(HH)	0.800	1.298	2.178				0.011	0.017	0.027	
		(LL)	1.054	1.631	2.575				0.015	0.020	0.029	
	BS2 → Y	(HZ)	1.437	2.113	3.346							
		(LZ)	0.733	1.134	1.815							
		(ZH)	1.081	1.757	2.892				0.011	0.017	0.027	
		(ZL)	1.295	1.991	3.140				0.015	0.021	0.029	
BVD7B3	A → Y	(HH)	0.797	1.296	2.175				0.011	0.017	0.027	
		(LL)	1.050	1.628	2.569				0.015	0.020	0.029	
	B → Y	(HZ)	1.433	2.112	3.344							
		(LZ)	0.729	1.131	1.814							
		(ZH)	1.078	1.754	2.889				0.011	0.017	0.027	
		(ZL)	1.291	1.990	3.131				0.015	0.020	0.029	
	MODE1 → Y	(HH)	0.863	1.402	2.342				0.011	0.017	0.027	
		(HL)	1.116	1.723	2.702				0.015	0.020	0.029	
		(LH)	0.850	1.388	2.326				0.011	0.017	0.027	
		(LL)	1.112	1.728	2.723				0.015	0.020	0.029	
		(HZ)	1.499	2.212	3.495							
		(LZ)	0.795	1.233	1.970							
		(ZH)	1.129	1.864	3.056				0.011	0.017	0.027	
		(ZL)	1.341	2.097	3.304				0.015	0.020	0.029	
	MODE2 → Y	(HZ)	1.356	1.963	3.083							
		(LZ)	0.647	0.987	1.554							

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(ZH)	0.994	1.620	2.669				0.011	0.017	0.027
		(ZL)	1.206	1.855	2.917				0.015	0.020	0.029
	BS1 → Y	(HH)	0.800	1.298	2.178				0.011	0.017	0.027
		(LL)	1.054	1.631	2.575				0.015	0.020	0.029
	BS2 → Y	(HZ)	1.437	2.113	3.346						
		(LZ)	0.733	1.134	1.815						
		(ZH)	1.081	1.757	2.892				0.011	0.017	0.027
		(ZL)	1.295	1.991	3.140				0.015	0.021	0.029
BV09B3	A → Y	(HH)	0.815	1.318	2.207				0.011	0.017	0.027
		(LL)	1.059	1.649	2.606				0.013	0.018	0.025
	B → Y	(HZ)	1.455	2.139	3.381						
		(LZ)	0.793	1.225	1.963						
		(ZH)	1.085	1.768	2.913				0.011	0.017	0.027
		(ZL)	1.293	1.996	3.155				0.013	0.018	0.025
	MODE1 → Y	(HH)	0.880	1.424	2.374				0.011	0.017	0.027
		(HL)	1.124	1.743	2.743				0.013	0.018	0.025
		(LH)	0.865	1.410	2.358				0.011	0.017	0.027
		(LL)	1.121	1.747	2.763				0.013	0.018	0.025
		(HZ)	1.521	2.246	3.547						
		(LZ)	0.861	1.328	2.117						
		(ZH)	1.137	1.877	3.079				0.011	0.017	0.027
		(ZL)	1.344	2.100	3.322				0.013	0.018	0.026
	MODE2 → Y	(HZ)	1.375	1.998	3.122						
		(LZ)	0.713	1.081	1.702						
		(ZH)	1.003	1.634	2.692				0.011	0.017	0.027
		(ZL)	1.209	1.857	2.937				0.013	0.018	0.025
	BS1 → Y	(HH)	0.816	1.321	2.210				0.011	0.017	0.027
		(LL)	1.061	1.650	2.615				0.013	0.018	0.025
	BS2 → Y	(HZ)	1.458	2.141	3.383						
		(LZ)	0.798	1.228	1.961						
		(ZH)	1.089	1.771	2.913				0.011	0.017	0.027
		(ZL)	1.295	1.999	3.158				0.013	0.018	0.025
BVD9B3	A → Y	(HH)	0.815	1.318	2.207				0.011	0.017	0.027
		(LL)	1.059	1.649	2.606				0.013	0.018	0.025
	B → Y	(HZ)	1.455	2.139	3.381						
		(LZ)	0.793	1.225	1.963						
		(ZH)	1.085	1.768	2.913				0.011	0.017	0.027
		(ZL)	1.293	1.996	3.155				0.013	0.018	0.025
	MODE1 → Y	(HH)	0.880	1.424	2.374				0.011	0.017	0.027
		(HL)	1.124	1.743	2.743				0.013	0.018	0.025
		(LH)	0.865	1.410	2.358				0.011	0.017	0.027
		(LL)	1.121	1.747	2.763				0.013	0.018	0.025
		(HZ)	1.521	2.246	3.547						
		(LZ)	0.861	1.328	2.117						
		(ZH)	1.137	1.877	3.079				0.011	0.017	0.027
		(ZL)	1.344	2.100	3.322				0.013	0.018	0.026
	MODE2 → Y	(HZ)	1.375	1.998	3.122						
		(LZ)	0.713	1.081	1.702						
		(ZH)	1.003	1.634	2.692				0.011	0.017	0.027
		(ZL)	1.209	1.857	2.937				0.013	0.018	0.025
	BS1 → Y	(HH)	0.816	1.321	2.210				0.011	0.017	0.027
		(LL)	1.061	1.650	2.615				0.013	0.018	0.025
	BS2 → Y	(HZ)	1.458	2.141	3.383						
		(LZ)	0.798	1.228	1.961						
		(ZH)	1.089	1.771	2.913				0.011	0.017	0.027
		(ZL)	1.295	1.999	3.158				0.013	0.018	0.025

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BV0HB3	A → Y	(HH)	0.837	1.345	2.243				0.011	0.016	0.026
		(LL)	1.062	1.662	2.633				0.012	0.016	0.023
	B → Y	(HZ)	1.458	2.141	3.381						
		(LZ)	0.870	1.336	2.141						
		(ZH)	1.086	1.768	2.909				0.011	0.017	0.027
		(ZL)	1.300	1.999	3.155				0.012	0.016	0.023
	MODE1 → Y	(HH)	0.903	1.452	2.408				0.011	0.016	0.026
		(HL)	1.129	1.757	2.769				0.012	0.016	0.023
		(LH)	0.889	1.438	2.392				0.011	0.016	0.026
		(LL)	1.125	1.763	2.788				0.012	0.016	0.023
		(HZ)	1.521	2.244	3.540						
		(LZ)	0.938	1.439	2.298						
		(ZH)	1.137	1.878	3.079				0.011	0.017	0.027
		(ZL)	1.348	2.105	3.325				0.012	0.016	0.023
	MODE2 → Y	(HZ)	1.375	1.996	3.121						
		(LZ)	0.789	1.193	1.883						
		(ZH)	1.002	1.634	2.691				0.011	0.017	0.027
		(ZL)	1.214	1.864	2.937				0.012	0.016	0.023
	BS1 → Y	(HH)	0.840	1.348	2.245				0.011	0.016	0.026
		(LL)	1.066	1.665	2.638				0.012	0.016	0.023
	BS2 → Y	(HZ)	1.460	2.150	3.383						
		(LZ)	0.875	1.339	2.142						
		(ZH)	1.089	1.771	2.914				0.011	0.017	0.027
		(ZL)	1.300	2.001	3.161				0.012	0.016	0.023
BVDHB3	A → Y	(HH)	0.837	1.345	2.243				0.011	0.016	0.026
		(LL)	1.062	1.662	2.633				0.012	0.016	0.023
	B → Y	(HZ)	1.458	2.141	3.381						
		(LZ)	0.870	1.336	2.141						
		(ZH)	1.086	1.768	2.909				0.011	0.017	0.027
		(ZL)	1.300	1.999	3.155				0.012	0.016	0.023
	MODE1 → Y	(HH)	0.903	1.452	2.408				0.011	0.016	0.026
		(HL)	1.129	1.757	2.769				0.012	0.016	0.023
		(LH)	0.889	1.438	2.392				0.011	0.016	0.026
		(LL)	1.125	1.763	2.788				0.012	0.016	0.023
		(HZ)	1.521	2.244	3.540						
		(LZ)	0.938	1.439	2.298						
		(ZH)	1.137	1.878	3.079				0.011	0.017	0.027
		(ZL)	1.348	2.105	3.325				0.012	0.016	0.023
	MODE2 → Y	(HZ)	1.375	1.996	3.121						
		(LZ)	0.789	1.193	1.883						
		(ZH)	1.002	1.634	2.691				0.011	0.017	0.027
		(ZL)	1.214	1.864	2.937				0.012	0.016	0.023
	BS1 → Y	(HH)	0.840	1.348	2.245				0.011	0.016	0.026
		(LL)	1.066	1.665	2.638				0.012	0.016	0.023
	BS2 → Y	(HZ)	1.460	2.150	3.383						
		(LZ)	0.875	1.339	2.142						
		(ZH)	1.089	1.771	2.914				0.011	0.017	0.027
		(ZL)	1.300	2.001	3.161				0.012	0.016	0.023

Function	Low-noise 3-State Buffer					TTL 5V
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA						
6mA						
9mA						
12mA	BY07B3	BYD7B3			1	39
18mA	BY09B3	BYD9B3			1	39
24mA	BY0HB3	BYDHB3			1	39

Logic Diagram



Truth Table

A	B	BS1	BS2	MODE1	MODE2	Y	
A	1	X	X	0	0	A	
A	0	X	X	0	0	Z	
X	X	A	1	1	0	A	
X	X	A	0	1	0	Z	
X	X	X	X	0	1	Z	
X	X	X	X	1	1	Z	← Prohibition

X:Irrelevant

Z:High Impedance

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
BY07B3 to BYD7B3	A	2.4	Y	-
	B	2.4		
	MODE1	2.5		
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		
BY09B3 to BYDHB3	A	2.4	Y	-
	B	2.4		
	MODE1	2.5		
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		

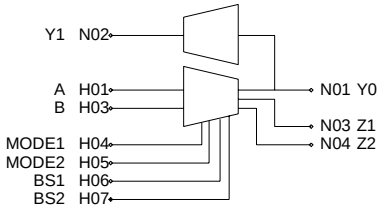
Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BY07B3	A → Y	(HH)	1.729	2.971	5.288				0.015	0.023	0.037
		(LL)	1.923	3.206	5.220				0.019	0.027	0.039
	B → Y	(HZ)	2.737	3.794	5.846						
		(LZ)	2.129	3.194	5.128						
		(ZH)	1.560	2.731	4.851				0.015	0.023	0.040
		(ZL)	1.995	3.360	5.442				0.019	0.028	0.040
	MODE1 → Y	(HH)	1.798	3.080	5.453				0.015	0.023	0.037
		(HL)	1.991	3.299	5.341				0.019	0.027	0.040
		(LH)	1.781	3.059	5.430				0.015	0.023	0.037
		(LL)	1.988	3.308	5.374				0.019	0.027	0.040
		(HZ)	2.802	3.893	6.007						
		(LZ)	2.193	3.293	5.283						
		(ZH)	1.613	2.840	5.016				0.015	0.023	0.040
		(ZL)	2.043	3.475	5.603				0.020	0.028	0.040
	MODE2 → Y	(HZ)	2.666	3.651	5.565						
		(LZ)	2.061	3.049	4.843						
		(ZH)	1.471	2.591	4.623				0.015	0.024	0.040
		(ZL)	1.910	3.228	5.221				0.019	0.028	0.040
	BS1 → Y	(HH)	1.732	2.974	5.288				0.015	0.023	0.037
		(LL)	1.930	3.209	5.216				0.019	0.027	0.040
	BS2 → Y	(HZ)	2.741	3.795	5.848						
		(LZ)	2.133	3.197	5.128						
		(ZH)	1.563	2.733	4.844				0.015	0.024	0.040
		(ZL)	1.994	3.369	5.446				0.020	0.027	0.040
BYD7B3	A → Y	(HH)	1.729	2.971	5.288				0.015	0.023	0.037
		(LL)	1.923	3.206	5.220				0.019	0.027	0.039
	B → Y	(HZ)	2.737	3.794	5.846						
		(LZ)	2.129	3.194	5.128						
		(ZH)	1.560	2.731	4.851				0.015	0.023	0.040
		(ZL)	1.995	3.360	5.442				0.019	0.028	0.040
	MODE1 → Y	(HH)	1.798	3.080	5.453				0.015	0.023	0.037
		(HL)	1.991	3.299	5.341				0.019	0.027	0.040
		(LH)	1.781	3.059	5.430				0.015	0.023	0.037
		(LL)	1.988	3.308	5.374				0.019	0.027	0.040
		(HZ)	2.802	3.893	6.007						
		(LZ)	2.193	3.293	5.283						
		(ZH)	1.613	2.840	5.016				0.015	0.023	0.040
		(ZL)	2.043	3.475	5.603				0.020	0.028	0.040
	MODE2 → Y	(HZ)	2.666	3.651	5.565						
		(LZ)	2.061	3.049	4.843						
		(ZH)	1.471	2.591	4.623				0.015	0.024	0.040
		(ZL)	1.910	3.228	5.221				0.019	0.028	0.040
	BS1 → Y	(HH)	1.732	2.974	5.288				0.015	0.023	0.037
		(LL)	1.930	3.209	5.216				0.019	0.027	0.040
	BS2 → Y	(HZ)	2.741	3.795	5.848						
		(LZ)	2.133	3.197	5.128						
		(ZH)	1.563	2.733	4.844				0.015	0.024	0.040
		(ZL)	1.994	3.369	5.446				0.020	0.027	0.040
BY09B3	A → Y	(HH)	1.762	3.032	5.401				0.015	0.023	0.038
		(LL)	2.017	3.398	5.556				0.017	0.025	0.037
	B → Y	(HZ)	2.810	3.891	5.991						
		(LZ)	2.550	3.824	6.141						
		(ZH)	1.591	2.790	4.953				0.015	0.024	0.040
		(ZL)	2.080	3.534	5.767				0.018	0.025	0.037
	MODE1 → Y	(HH)	1.832	3.140	5.571				0.015	0.023	0.038
		(HL)	2.080	3.485	5.675				0.018	0.025	0.037

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(LH)	1.813	3.117	5.541				0.015	0.023	0.038
		(LL)	2.079	3.500	5.712				0.018	0.025	0.037
		(HZ)	2.875	3.996	6.148						
		(LZ)	2.614	3.927	6.304						
		(ZH)	1.642	2.900	5.122				0.015	0.024	0.040
		(ZL)	2.130	3.640	5.931				0.018	0.025	0.037
	MODE2 → Y	(HZ)	2.741	3.746	5.707						
		(LZ)	2.480	3.677	5.854						
		(ZH)	1.501	2.652	4.732				0.015	0.024	0.040
		(ZL)	1.989	3.394	5.545				0.018	0.025	0.037
	BS1 → Y	(HH)	1.765	3.033	5.406				0.015	0.023	0.038
		(LL)	2.020	3.400	5.559				0.017	0.025	0.037
	BS2 → Y	(HZ)	2.812	3.891	5.993						
		(LZ)	2.553	3.830	6.146						
		(ZH)	1.594	2.794	4.958				0.015	0.024	0.040
		(ZL)	2.080	3.532	5.774				0.018	0.025	0.037
BYD9B3	A → Y	(HH)	1.762	3.032	5.401				0.015	0.023	0.038
		(LL)	2.017	3.398	5.556				0.017	0.025	0.037
	B → Y	(HZ)	2.810	3.891	5.991						
		(LZ)	2.550	3.824	6.141						
		(ZH)	1.591	2.790	4.953				0.015	0.024	0.040
		(ZL)	2.080	3.534	5.767				0.018	0.025	0.037
	MODE1 → Y	(HH)	1.832	3.140	5.571				0.015	0.023	0.038
		(HL)	2.080	3.485	5.675				0.018	0.025	0.037
		(LH)	1.813	3.117	5.541				0.015	0.023	0.038
		(LL)	2.079	3.500	5.712				0.018	0.025	0.037
		(HZ)	2.875	3.996	6.148						
		(LZ)	2.614	3.927	6.304						
		(ZH)	1.642	2.900	5.122				0.015	0.024	0.040
		(ZL)	2.130	3.640	5.931				0.018	0.025	0.037
	MODE2 → Y	(HZ)	2.741	3.746	5.707						
		(LZ)	2.480	3.677	5.854						
		(ZH)	1.501	2.652	4.732				0.015	0.024	0.040
		(ZL)	1.989	3.394	5.545				0.018	0.025	0.037
	BS1 → Y	(HH)	1.765	3.033	5.406				0.015	0.023	0.038
		(LL)	2.020	3.400	5.559				0.017	0.025	0.037
	BS2 → Y	(HZ)	2.812	3.891	5.992						
		(LZ)	2.553	3.830	6.146						
		(ZH)	1.594	2.794	4.958				0.015	0.024	0.040
		(ZL)	2.080	3.532	5.774				0.018	0.025	0.037
BY0HB3	A → Y	(HH)	1.770	3.031	5.401				0.015	0.023	0.038
		(LL)	2.084	3.543	5.814				0.016	0.023	0.035
	B → Y	(HZ)	2.807	3.894	5.991						
		(LZ)	3.047	4.578	7.387						
		(ZH)	1.591	2.789	4.951				0.015	0.024	0.040
		(ZL)	2.130	3.663	6.004				0.016	0.023	0.035
	MODE1 → Y	(HH)	1.839	3.142	5.569				0.015	0.023	0.038
		(HL)	2.149	3.630	5.936				0.016	0.023	0.034
		(LH)	1.820	3.121	5.546				0.015	0.023	0.038
		(LL)	2.147	3.645	5.973				0.016	0.023	0.034
		(HZ)	2.873	3.995	6.147						
		(LZ)	3.113	4.690	7.534						
		(ZH)	1.642	2.899	5.122				0.015	0.024	0.040
		(ZL)	2.180	3.767	6.169				0.016	0.023	0.035
	MODE2 → Y	(HZ)	2.736	3.747	5.707						
		(LZ)	2.974	4.434	7.093						

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(ZH)	1.502	2.651	4.730				0.015	0.024	0.040
		(ZL)	2.044	3.527	5.782				0.016	0.023	0.035
	BS1 → Y	(HH)	1.774	3.034	5.404				0.015	0.023	0.038
		(LL)	2.086	3.544	5.821				0.016	0.023	0.034
	BS2 → Y	(HZ)	2.813	3.893	5.987						
		(LZ)	3.050	4.577	7.387						
		(ZH)	1.594	2.793	4.960				0.015	0.024	0.040
		(ZL)	2.130	3.661	6.007				0.016	0.023	0.035
BYDHB3	A → Y	(HH)	1.770	3.031	5.401				0.015	0.023	0.038
		(LL)	2.084	3.543	5.814				0.016	0.023	0.035
	B → Y	(HZ)	2.807	3.894	5.991						
		(LZ)	3.047	4.578	7.387						
		(ZH)	1.591	2.789	4.951				0.015	0.024	0.040
		(ZL)	2.130	3.663	6.004				0.016	0.023	0.035
	MODE1 → Y	(HH)	1.839	3.142	5.569				0.015	0.023	0.038
		(HL)	2.149	3.630	5.936				0.016	0.023	0.034
		(LH)	1.820	3.121	5.546				0.015	0.023	0.038
		(LL)	2.147	3.645	5.973				0.016	0.023	0.034
		(HZ)	2.873	3.995	6.147						
		(LZ)	3.113	4.690	7.534						
		(ZH)	1.642	2.899	5.122				0.015	0.024	0.040
		(ZL)	2.180	3.767	6.169				0.016	0.023	0.035
	MODE2 → Y	(HZ)	2.736	3.747	5.707						
		(LZ)	2.974	4.434	7.093						
		(ZH)	1.502	2.651	4.730				0.015	0.024	0.040
		(ZL)	2.044	3.527	5.782				0.016	0.023	0.035
	BS1 → Y	(HH)	1.774	3.034	5.404				0.015	0.023	0.038
		(LL)	2.086	3.544	5.821				0.016	0.023	0.034
	BS2 → Y	(HZ)	2.813	3.893	5.987						
		(LZ)	3.050	4.577	7.387						
		(ZH)	1.594	2.793	4.960				0.015	0.024	0.040
		(ZL)	2.130	3.661	6.007				0.016	0.023	0.035

Function	I/O Buffer					TTL 5V
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA	BW0XBB	BWDXBB			1	61
2mA	BW0KBB	BWDKBB			1	61
3mA	BW0UBB	BWDUBB			1	61
6mA	BW0CBB	BWDCBB			1	61
9mA	BW03BB	BWD3BB			1	63
12mA	BW01BB	BWD1BB			1	63
18mA	BW05BB	BWD5BB			1	63
24mA	BW0FBB	BWDFBB			1	63

Logic Diagram



Truth Table

A	B	BS1	BS2	*1	*2	Y0	Z1	Z2	
A	1	X	X	0	0	A	A	1	
A	0	X	X	0	0	Z	A	0	
X	X	A	1	1	0	A	A	1	
X	X	A	0	1	0	Z	A	0	
A	B	X	X	0	1	Z	A	B	
X	X	A	B	1	1	Z	A	B	← Prohibition

*1:MODE1 , *2:MODE2

X:Irrelevant

Z:High Impedance

Y0	Y1
0	0
1	1

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
BW0XBB to BWDUBB	A	2.4	Y1	367
	B	2.4	Z1	35
	MODE1	2.5	Z2	35
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		
BW0CBB to BWDCBB	A	2.4	Y1	367
	B	2.4	Z1	35
	MODE1	2.5	Z2	35
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		
BW03BB to BWD1BB	A	2.4	Y1	367
	B	2.4	Z1	35
	MODE1	2.5	Z2	35
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		
BW05BB to BWDFBB	A	2.4	Y1	367
	B	2.4	Z1	35
	MODE1	2.5	Z2	35
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BW0XBB	A → Y0	(HH)	1.871	3.053	5.091				0.080	0.128	0.208
		(LL)	3.183	4.693	7.317				0.144	0.209	0.321
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033			
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0	(HZ)	0.677	1.071	1.738						
		(LZ)	0.464	0.739	1.186						
		(ZH)	1.718	2.840	4.653				0.077	0.125	0.204
		(ZL)	3.113	4.592	7.070				0.143	0.209	0.321
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.937	3.163	5.256				0.080	0.128	0.208
		(HL)	3.250	4.787	7.459				0.144	0.209	0.321
		(LH)	1.923	3.152	5.240				0.080	0.128	0.208
		(LL)	3.245	4.795	7.474				0.144	0.209	0.321
		(HZ)	0.742	1.173	1.894						
		(LZ)	0.531	0.841	1.342						
		(ZH)	1.767	2.973	4.822				0.077	0.125	0.204
		(ZL)	3.158	4.722	7.238				0.144	0.209	0.321
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033			
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.596	0.929	1.479						
		(LZ)	0.382	0.594	0.926						
		(ZH)	1.634	2.723	4.433				0.077	0.125	0.204
		(ZL)	3.024	4.459	6.854				0.144	0.209	0.321
	BS1 → Y0	(HH)	1.874	3.061	5.096				0.080	0.128	0.208
		(LL)	3.194	4.699	7.326				0.143	0.209	0.321
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033			
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.679	1.074	1.738						
		(LZ)	0.468	0.741	1.185						
		(ZH)	1.720	2.843	4.658				0.077	0.125	0.204
		(ZL)	3.116	4.599	7.076				0.143	0.209	0.321
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
BWDXBB	A → Y0	(HH)	1.871	3.053	5.091				0.080	0.128	0.208
		(LL)	3.183	4.693	7.317				0.144	0.209	0.321
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033			
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0	(HZ)	0.677	1.071	1.738						
		(LZ)	0.464	0.739	1.186						
		(ZH)	1.718	2.840	4.653				0.077	0.125	0.204
		(ZL)	3.113	4.592	7.070				0.143	0.209	0.321
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.937	3.163	5.256				0.080	0.128	0.208
		(HL)	3.250	4.787	7.459				0.144	0.209	0.321
		(LH)	1.923	3.152	5.240				0.080	0.128	0.208
		(LL)	3.245	4.795	7.474				0.144	0.209	0.321

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(HZ)	0.742	1.173	1.894						
		(LZ)	0.531	0.841	1.342						
		(ZH)	1.767	2.973	4.822				0.077	0.125	0.204
		(ZL)	3.158	4.722	7.238				0.144	0.209	0.321
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033			
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.596	0.929	1.479						
		(LZ)	0.382	0.594	0.926						
		(ZH)	1.634	2.723	4.433				0.077	0.125	0.204
		(ZL)	3.024	4.459	6.854				0.144	0.209	0.321
	BS1 → Y0	(HH)	1.874	3.061	5.096				0.080	0.128	0.208
		(LL)	3.194	4.699	7.326				0.143	0.209	0.321
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033			
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.679	1.074	1.738						
		(LZ)	0.468	0.741	1.185						
		(ZH)	1.720	2.843	4.658				0.077	0.125	0.204
		(ZL)	3.116	4.599	7.076				0.143	0.209	0.321
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
BW0KBB	A → Y0	(HH)	1.715	2.773	4.560				0.077	0.122	0.195
		(LL)	2.233	3.366	5.237				0.108	0.159	0.241
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033			
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0	(HZ)	0.677	1.071	1.738						
		(LZ)	0.464	0.738	1.185						
		(ZH)	1.621	2.665	4.323				0.074	0.119	0.192
		(ZL)	2.211	3.349	5.154				0.108	0.159	0.242
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.780	2.880	4.735				0.077	0.122	0.193
		(HL)	2.297	3.464	5.369				0.108	0.159	0.242
		(LH)	1.766	2.866	4.707				0.077	0.122	0.195
		(LL)	2.296	3.466	5.384				0.108	0.159	0.242
		(HZ)	0.742	1.173	1.894						
		(LZ)	0.531	0.840	1.342						
		(ZH)	1.670	2.794	4.491				0.074	0.120	0.192
		(ZL)	2.263	3.471	5.329				0.108	0.159	0.241
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033			
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.596	0.929	1.479						
		(LZ)	0.383	0.594	0.926						

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(ZH)	1.538	2.544	4.105				0.074	0.120	0.192
		(ZL)	2.131	3.223	4.944				0.108	0.159	0.241
	BS1 → Y0	(HH)	1.716	2.776	4.560				0.077	0.122	0.195
		(LL)	2.234	3.374	5.247				0.108	0.159	0.241
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033			
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.679	1.074	1.738						
		(LZ)	0.468	0.741	1.186						
		(ZH)	1.624	2.668	4.319				0.074	0.119	0.192
		(ZL)	2.215	3.346	5.162				0.108	0.159	0.242
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
BWDKBB	A → Y0	(HH)	1.715	2.773	4.560				0.077	0.122	0.195
		(LL)	2.233	3.366	5.237				0.108	0.159	0.241
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033			
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0	(HZ)	0.677	1.071	1.738						
		(LZ)	0.464	0.738	1.185						
		(ZH)	1.621	2.665	4.323				0.074	0.119	0.192
		(ZL)	2.211	3.349	5.154				0.108	0.159	0.242
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.780	2.880	4.735				0.077	0.122	0.193
		(HL)	2.297	3.464	5.369				0.108	0.159	0.242
		(LH)	1.766	2.866	4.707				0.077	0.122	0.195
		(LL)	2.296	3.466	5.384				0.108	0.159	0.242
		(HZ)	0.742	1.173	1.894						
		(LZ)	0.531	0.840	1.342						
		(ZH)	1.670	2.794	4.491				0.074	0.120	0.192
		(ZL)	2.263	3.471	5.329				0.108	0.159	0.241
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033			
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.596	0.929	1.479						
		(LZ)	0.383	0.594	0.926						
		(ZH)	1.538	2.544	4.105				0.074	0.120	0.192
		(ZL)	2.131	3.223	4.944				0.108	0.159	0.241
	BS1 → Y0	(HH)	1.716	2.776	4.560				0.077	0.122	0.195
		(LL)	2.234	3.374	5.247				0.108	0.159	0.241
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033			
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.679	1.074	1.738						
		(LZ)	0.468	0.741	1.186						
		(ZH)	1.624	2.668	4.319				0.074	0.119	0.192
		(ZL)	2.215	3.346	5.162				0.108	0.159	0.242
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			

Block type	Path		Switching speed								
			t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BW0UBB	A → Y0	(HH)	1.752	2.841	4.684				0.077	0.120	0.189
		(LL)	1.962	2.871	4.272				0.094	0.133	0.189
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033			
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0	(HZ)	0.677	1.071	1.739						
		(LZ)	0.463	0.738	1.185						
		(ZH)	1.624	2.673	4.325				0.073	0.117	0.187
		(ZL)	1.948	2.875	4.259				0.094	0.133	0.191
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.817	2.948	4.844				0.077	0.120	0.191
		(HL)	2.027	2.967	4.414				0.094	0.132	0.189
		(LH)	1.803	2.933	4.841				0.077	0.120	0.189
		(LL)	2.020	2.971	4.430				0.094	0.133	0.189
		(HZ)	0.742	1.174	1.895						
		(LZ)	0.531	0.840	1.342						
		(ZH)	1.671	2.804	4.495				0.073	0.117	0.187
		(ZL)	2.001	2.995	4.427				0.094	0.133	0.190
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033			
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.596	0.929	1.480						
		(LZ)	0.382	0.593	0.927						
		(ZH)	1.541	2.554	4.107				0.073	0.117	0.187
		(ZL)	1.870	2.746	4.047				0.094	0.133	0.190
	BS1 → Y0	(HH)	1.749	2.844	4.678				0.077	0.120	0.191
		(LL)	1.960	2.874	4.278				0.094	0.132	0.189
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033			
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.680	1.073	1.739						
		(LZ)	0.467	0.742	1.185						
		(ZH)	1.627	2.675	4.331				0.073	0.117	0.187
		(ZL)	1.956	2.885	4.263				0.094	0.133	0.191
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
BWDUBB	A → Y0	(HH)	1.752	2.841	4.684				0.077	0.120	0.189
		(LL)	1.962	2.871	4.272				0.094	0.133	0.189
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033			
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0	(HZ)	0.677	1.071	1.739						
		(LZ)	0.463	0.738	1.185						
		(ZH)	1.624	2.673	4.325				0.073	0.117	0.187
		(ZL)	1.948	2.875	4.259				0.094	0.133	0.191
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.817	2.948	4.844				0.077	0.120	0.191
		(HL)	2.027	2.967	4.414				0.094	0.132	0.189
		(LH)	1.803	2.933	4.841				0.077	0.120	0.189
		(LL)	2.020	2.971	4.430				0.094	0.133	0.189

Block type	Path		Switching speed								
			t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(HZ)	0.742	1.174	1.895						
		(LZ)	0.531	0.840	1.342						
		(ZH)	1.671	2.804	4.495				0.073	0.117	0.187
		(ZL)	2.001	2.995	4.427				0.094	0.133	0.190
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033			
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.596	0.929	1.480						
		(LZ)	0.382	0.593	0.927						
		(ZH)	1.541	2.554	4.107				0.073	0.117	0.187
		(ZL)	1.870	2.746	4.047				0.094	0.133	0.190
	BS1 → Y0	(HH)	1.749	2.844	4.678				0.077	0.120	0.191
		(LL)	1.960	2.874	4.278				0.094	0.132	0.189
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033			
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.680	1.073	1.739						
		(LZ)	0.467	0.742	1.185						
		(ZH)	1.627	2.675	4.331				0.073	0.117	0.187
		(ZL)	1.956	2.885	4.263				0.094	0.133	0.191
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
BW0CBB	A → Y0	(HH)	0.997	1.611	2.692				0.028	0.043	0.067
		(LL)	1.174	1.821	2.856				0.033	0.046	0.066
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033			
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0	(HZ)	1.130	1.673	2.662						
		(LZ)	0.652	1.019	1.634						
		(ZH)	1.220	1.979	3.231				0.026	0.042	0.066
		(ZL)	1.332	2.031	3.191				0.033	0.046	0.066
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.063	1.717	2.855				0.028	0.043	0.067
		(HL)	1.239	1.916	2.993				0.033	0.046	0.066
		(LH)	1.049	1.702	2.843				0.028	0.043	0.067
		(LL)	1.237	1.920	3.009				0.033	0.046	0.066
		(HZ)	1.193	1.776	2.816						
		(LZ)	0.719	1.121	1.790						
		(ZH)	1.271	2.092	3.400				0.026	0.042	0.066
		(ZL)	1.383	2.141	3.358				0.033	0.046	0.066
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033			
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.046	1.529	2.401						
		(LZ)	0.570	0.875	1.375						

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(ZH)	1.137	1.848	3.013				0.026	0.042	0.066
		(ZL)	1.248	1.897	2.975				0.033	0.046	0.065
	BS1 → Y0	(HH)	0.999	1.612	2.696				0.028	0.043	0.067
		(LL)	1.177	1.824	2.862				0.033	0.046	0.066
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033			
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.128	1.676	2.662						
		(LZ)	0.655	1.022	1.633						
		(ZH)	1.222	1.983	3.235				0.026	0.042	0.066
		(ZL)	1.334	2.036	3.196				0.033	0.046	0.065
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
BWDCBB	A → Y0	(HH)	0.997	1.611	2.692				0.028	0.043	0.067
		(LL)	1.174	1.821	2.856				0.033	0.046	0.066
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033			
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0	(HZ)	1.130	1.673	2.662						
		(LZ)	0.652	1.019	1.634						
		(ZH)	1.220	1.979	3.231				0.026	0.042	0.066
		(ZL)	1.332	2.031	3.191				0.033	0.046	0.066
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.063	1.717	2.855				0.028	0.043	0.067
		(HL)	1.239	1.916	2.993				0.033	0.046	0.066
		(LH)	1.049	1.702	2.843				0.028	0.043	0.067
		(LL)	1.237	1.920	3.009				0.033	0.046	0.066
		(HZ)	1.193	1.776	2.816						
		(LZ)	0.719	1.121	1.790						
		(ZH)	1.271	2.092	3.400				0.026	0.042	0.066
		(ZL)	1.383	2.141	3.358				0.033	0.046	0.066
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033			
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.046	1.529	2.401						
		(LZ)	0.570	0.875	1.375						
		(ZH)	1.137	1.848	3.013				0.026	0.042	0.066
		(ZL)	1.248	1.897	2.975				0.033	0.046	0.065
	BS1 → Y0	(HH)	0.999	1.612	2.696				0.028	0.043	0.067
		(LL)	1.177	1.824	2.862				0.033	0.046	0.066
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033			
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.128	1.676	2.662						
		(LZ)	0.655	1.022	1.633						
		(ZH)	1.222	1.983	3.235				0.026	0.042	0.066
		(ZL)	1.334	2.036	3.196				0.033	0.046	0.065
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T	
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BW03BB	A → Y0	(HH)	0.995	1.603	2.663				0.028	0.043	0.067
		(LL)	1.159	1.786	2.792				0.032	0.045	0.064
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033			
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0	(HZ)	1.113	1.653	2.631						
		(LZ)	0.648	1.010	1.619						
		(ZH)	1.200	1.949	3.173				0.027	0.042	0.066
		(ZL)	1.331	2.032	3.173				0.032	0.045	0.064
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.060	1.706	2.839				0.028	0.043	0.067
		(HL)	1.225	1.882	2.930				0.032	0.045	0.064
		(LH)	1.046	1.695	2.819				0.028	0.043	0.067
		(LL)	1.222	1.886	2.946				0.032	0.045	0.064
		(HZ)	1.177	1.756	2.788						
		(LZ)	0.714	1.112	1.776						
		(ZH)	1.251	2.063	3.341				0.027	0.042	0.066
		(ZL)	1.384	2.134	3.347				0.032	0.045	0.064
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033			
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.032	1.507	2.373						
		(LZ)	0.566	0.865	1.361						
		(ZH)	1.117	1.819	2.956				0.027	0.042	0.066
		(ZL)	1.249	1.896	2.962				0.032	0.045	0.064
	BS1 → Y0	(HH)	0.996	1.606	2.671				0.028	0.043	0.067
		(LL)	1.163	1.790	2.798				0.032	0.045	0.064
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033			
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.116	1.656	2.633						
		(LZ)	0.651	1.013	1.619						
		(ZH)	1.203	1.952	3.178				0.027	0.042	0.066
		(ZL)	1.335	2.036	3.182				0.032	0.045	0.064
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
BWD3BB	A → Y0	(HH)	0.995	1.603	2.663				0.028	0.043	0.067
		(LL)	1.159	1.786	2.792				0.032	0.045	0.064
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033			
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0	(HZ)	1.113	1.653	2.631						
		(LZ)	0.648	1.010	1.619						
		(ZH)	1.200	1.949	3.173				0.027	0.042	0.066
		(ZL)	1.331	2.032	3.173				0.032	0.045	0.064
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.060	1.706	2.839				0.028	0.043	0.067
		(HL)	1.225	1.882	2.930				0.032	0.045	0.064
		(LH)	1.046	1.695	2.819				0.028	0.043	0.067
		(LL)	1.222	1.886	2.946				0.032	0.045	0.064

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(HZ)	1.177	1.756	2.788						
		(LZ)	0.714	1.112	1.776						
		(ZH)	1.251	2.063	3.341				0.027	0.042	0.066
		(ZL)	1.384	2.134	3.347				0.032	0.045	0.064
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033			
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.032	1.507	2.373						
		(LZ)	0.566	0.865	1.361						
		(ZH)	1.117	1.819	2.956				0.027	0.042	0.066
		(ZL)	1.249	1.896	2.962				0.032	0.045	0.064
	BS1 → Y0	(HH)	0.996	1.606	2.671				0.028	0.043	0.067
		(LL)	1.163	1.790	2.798				0.032	0.045	0.064
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033			
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.116	1.656	2.633						
		(LZ)	0.651	1.013	1.619						
		(ZH)	1.203	1.952	3.178				0.027	0.042	0.066
		(ZL)	1.335	2.036	3.182				0.032	0.045	0.064
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
BW01BB	A → Y0	(HH)	0.797	1.296	2.175				0.011	0.017	0.027
		(LL)	1.050	1.628	2.569				0.015	0.020	0.029
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033			
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0	(HZ)	1.433	2.112	3.344						
		(LZ)	0.729	1.131	1.814						
		(ZH)	1.078	1.754	2.889				0.011	0.017	0.027
		(ZL)	1.291	1.990	3.131				0.015	0.020	0.029
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.863	1.402	2.342				0.011	0.017	0.027
		(HL)	1.116	1.723	2.702				0.015	0.020	0.029
		(LH)	0.850	1.388	2.326				0.011	0.017	0.027
		(LL)	1.112	1.728	2.723				0.015	0.020	0.029
		(HZ)	1.499	2.212	3.495						
		(LZ)	0.795	1.233	1.970						
		(ZH)	1.129	1.864	3.056				0.011	0.017	0.027
		(ZL)	1.341	2.097	3.304				0.015	0.020	0.029
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033			
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.356	1.963	3.083						
		(LZ)	0.647	0.987	1.554						

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(ZH)	0.994	1.620	2.669				0.011	0.017	0.027
		(ZL)	1.206	1.855	2.917				0.015	0.020	0.029
	BS1 → Y0	(HH)	0.800	1.298	2.178				0.011	0.017	0.027
		(LL)	1.054	1.631	2.575				0.015	0.020	0.029
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033			
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.437	2.113	3.346						
		(LZ)	0.733	1.134	1.815						
		(ZH)	1.081	1.757	2.892				0.011	0.017	0.027
		(ZL)	1.295	1.991	3.140				0.015	0.021	0.029
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
BWD1BB	A → Y0	(HH)	0.797	1.296	2.175				0.011	0.017	0.027
		(LL)	1.050	1.628	2.569				0.015	0.020	0.029
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033			
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0	(HZ)	1.433	2.112	3.344						
		(LZ)	0.729	1.131	1.814						
		(ZH)	1.078	1.754	2.889				0.011	0.017	0.027
		(ZL)	1.291	1.990	3.131				0.015	0.020	0.029
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.863	1.402	2.342				0.011	0.017	0.027
		(HL)	1.116	1.723	2.702				0.015	0.020	0.029
		(LH)	0.850	1.388	2.326				0.011	0.017	0.027
		(LL)	1.112	1.728	2.723				0.015	0.020	0.029
		(HZ)	1.499	2.212	3.495						
		(LZ)	0.795	1.233	1.970						
		(ZH)	1.129	1.864	3.056				0.011	0.017	0.027
		(ZL)	1.341	2.097	3.304				0.015	0.020	0.029
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033			
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.356	1.963	3.083						
		(LZ)	0.647	0.987	1.554						
		(ZH)	0.994	1.620	2.669				0.011	0.017	0.027
		(ZL)	1.206	1.855	2.917				0.015	0.020	0.029
	BS1 → Y0	(HH)	0.800	1.298	2.178				0.011	0.017	0.027
		(LL)	1.054	1.631	2.575				0.015	0.020	0.029
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033			
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.437	2.113	3.346						
		(LZ)	0.733	1.134	1.815						
		(ZH)	1.081	1.757	2.892				0.011	0.017	0.027
		(ZL)	1.295	1.991	3.140				0.015	0.021	0.029
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
BW05BB	A → Y0	(HH)	0.815	1.318	2.207				0.011	0.017	0.027	
		(LL)	1.059	1.649	2.606				0.013	0.018	0.025	
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033				
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025				
	B → Y0	(HZ)	1.455	2.139	3.381							
		(LZ)	0.793	1.225	1.963							
		(ZH)	1.085	1.768	2.913				0.011	0.017	0.027	
		(ZL)	1.293	1.996	3.155				0.013	0.018	0.025	
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034				
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025				
	MODE1 → Y0	(HH)	0.880	1.424	2.374				0.011	0.017	0.027	
		(HL)	1.124	1.743	2.743				0.013	0.018	0.025	
		(LH)	0.865	1.410	2.358				0.011	0.017	0.027	
		(LL)	1.121	1.747	2.763				0.013	0.018	0.025	
		(HZ)	1.521	2.246	3.547							
		(LZ)	0.861	1.328	2.117							
		(ZH)	1.137	1.877	3.079				0.011	0.017	0.027	
		(ZL)	1.344	2.100	3.322				0.013	0.018	0.026	
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033				
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025				
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033				
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025				
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034				
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025				
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034				
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025				
	MODE2 → Y0	(HZ)	1.375	1.998	3.122							
		(LZ)	0.713	1.081	1.702							
		(ZH)	1.003	1.634	2.692				0.011	0.017	0.027	
		(ZL)	1.209	1.857	2.937				0.013	0.018	0.025	
	BS1 → Y0	(HH)	0.816	1.321	2.210				0.011	0.017	0.027	
		(LL)	1.061	1.650	2.615				0.013	0.018	0.025	
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033				
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025				
	BS2 → Y0	(HZ)	1.458	2.141	3.383							
		(LZ)	0.798	1.228	1.961							
		(ZH)	1.089	1.771	2.913				0.011	0.017	0.027	
		(ZL)	1.295	1.999	3.158				0.013	0.018	0.025	
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034				
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025				
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003				
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003				
BWD5BB	A → Y0	(HH)	0.815	1.318	2.207				0.011	0.017	0.027	
		(LL)	1.059	1.649	2.606				0.013	0.018	0.025	
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033				
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025				
	B → Y0	(HZ)	1.455	2.139	3.381							
		(LZ)	0.793	1.225	1.963							
		(ZH)	1.085	1.768	2.913				0.011	0.017	0.027	
		(ZL)	1.293	1.996	3.155				0.013	0.018	0.025	
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034				
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025				
	MODE1 → Y0	(HH)	0.880	1.424	2.374				0.011	0.017	0.027	
		(HL)	1.124	1.743	2.743				0.013	0.018	0.025	
		(LH)	0.865	1.410	2.358				0.011	0.017	0.027	
		(LL)	1.121	1.747	2.763				0.013	0.018	0.025	

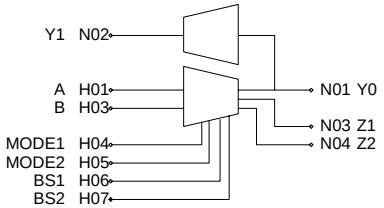
Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
		(HZ)	1.521	2.246	3.547							
		(LZ)	0.861	1.328	2.117							
		(ZH)	1.137	1.877	3.079				0.011	0.017	0.027	
		(ZL)	1.344	2.100	3.322				0.013	0.018	0.026	
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033				
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025				
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033				
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025				
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034				
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025				
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034				
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025				
	MODE2 → Y0	(HZ)	1.375	1.998	3.122							
		(LZ)	0.713	1.081	1.702							
		(ZH)	1.003	1.634	2.692				0.011	0.017	0.027	
		(ZL)	1.209	1.857	2.937				0.013	0.018	0.025	
	BS1 → Y0	(HH)	0.816	1.321	2.210				0.011	0.017	0.027	
		(LL)	1.061	1.650	2.615				0.013	0.018	0.025	
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033				
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025				
	BS2 → Y0	(HZ)	1.458	2.141	3.383							
		(LZ)	0.798	1.228	1.961							
		(ZH)	1.089	1.771	2.913				0.011	0.017	0.027	
		(ZL)	1.295	1.999	3.158				0.013	0.018	0.025	
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034				
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025				
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003				
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003				
BW0FBB	A → Y0	(HH)	0.837	1.345	2.243				0.011	0.016	0.026	
		(LL)	1.062	1.662	2.633				0.012	0.016	0.023	
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033				
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025				
	B → Y0	(HZ)	1.458	2.141	3.381							
		(LZ)	0.870	1.336	2.141							
		(ZH)	1.086	1.768	2.909				0.011	0.017	0.027	
		(ZL)	1.300	1.999	3.155				0.012	0.016	0.023	
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034				
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025				
	MODE1 → Y0	(HH)	0.903	1.452	2.408				0.011	0.016	0.026	
		(HL)	1.129	1.757	2.769				0.012	0.016	0.023	
		(LH)	0.889	1.438	2.392				0.011	0.016	0.026	
		(LL)	1.125	1.763	2.788				0.012	0.016	0.023	
		(HZ)	1.521	2.244	3.540							
		(LZ)	0.938	1.439	2.298							
		(ZH)	1.137	1.878	3.079				0.011	0.017	0.027	
		(ZL)	1.348	2.105	3.325				0.012	0.016	0.023	
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033				
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025				
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033				
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025				
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034				
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025				
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034				
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025				
	MODE2 → Y0	(HZ)	1.375	1.996	3.121							
		(LZ)	0.789	1.193	1.883							

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(ZH)	1.002	1.634	2.691				0.011	0.017	0.027
		(ZL)	1.214	1.864	2.937				0.012	0.016	0.023
	BS1 → Y0	(HH)	0.840	1.348	2.245				0.011	0.016	0.026
		(LL)	1.066	1.665	2.638				0.012	0.016	0.023
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033			
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.460	2.150	3.383						
		(LZ)	0.875	1.339	2.142						
		(ZH)	1.089	1.771	2.914				0.011	0.017	0.027
		(ZL)	1.300	2.001	3.161				0.012	0.016	0.023
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
BWDFBB	A → Y0	(HH)	0.837	1.345	2.243				0.011	0.016	0.026
		(LL)	1.062	1.662	2.633				0.012	0.016	0.023
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033			
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0	(HZ)	1.458	2.141	3.381						
		(LZ)	0.870	1.336	2.141						
		(ZH)	1.086	1.768	2.909				0.011	0.017	0.027
		(ZL)	1.300	1.999	3.155				0.012	0.016	0.023
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.903	1.452	2.408				0.011	0.016	0.026
		(HL)	1.129	1.757	2.769				0.012	0.016	0.023
		(LH)	0.889	1.438	2.392				0.011	0.016	0.026
		(LL)	1.125	1.763	2.788				0.012	0.016	0.023
		(HZ)	1.521	2.244	3.540						
		(LZ)	0.938	1.439	2.298						
		(ZH)	1.137	1.878	3.079				0.011	0.017	0.027
		(ZL)	1.348	2.105	3.325				0.012	0.016	0.023
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033			
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.375	1.996	3.121						
		(LZ)	0.789	1.193	1.883						
		(ZH)	1.002	1.634	2.691				0.011	0.017	0.027
		(ZL)	1.214	1.864	2.937				0.012	0.016	0.023
	BS1 → Y0	(HH)	0.840	1.348	2.245				0.011	0.016	0.026
		(LL)	1.066	1.665	2.638				0.012	0.016	0.023
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033			
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.460	2.150	3.383						
		(LZ)	0.875	1.339	2.142						
		(ZH)	1.089	1.771	2.914				0.011	0.017	0.027
		(ZL)	1.300	2.001	3.161				0.012	0.016	0.023
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			

[MEMO]

Function	Low-noise I/O Buffer				TTL 5V	
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA						
6mA						
9mA						
12mA	BX01BB	BXD1BB			1	48
18mA	BX05BB	BXD5BB			1	48
24mA	BX0FBB	BXDFBB			1	48

Logic Diagram



Truth Table

A	B	BS1	BS2	*1	*2	Y0	Z1	Z2	
A	1	X	X	0	0	A	A	1	
A	0	X	X	0	0	Z	A	0	
X	X	A	1	1	0	A	A	1	
X	X	A	0	1	0	Z	A	0	
A	B	X	X	0	1	Z	A	B	
X	X	A	B	1	1	Z	A	B	← Prohibition

*1:MODE1 , *2:MODE2

X:Irrelevant

Z:High Impedance

Y0	Y1
0	0
1	1

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
BX01BB to BXD1BB	A	2.4	Y1	367
	B	2.4	Z1	36
	MODE1	2.5	Z2	35
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		
BX05BB to BXDFBB	A	2.4	Y1	367
	B	2.4	Z1	36
	MODE1	2.5	Z2	35
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
BX01BB	A → Y0	(HH)	1.729	2.971	5.288				0.015	0.023	0.037	
		(LL)	1.923	3.206	5.220				0.019	0.027	0.039	
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034				
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025				
	B → Y0	(HZ)	2.737	3.794	5.846							
		(LZ)	2.129	3.194	5.128							
		(ZH)	1.560	2.731	4.851				0.015	0.023	0.040	
		(ZL)	1.995	3.360	5.442				0.019	0.028	0.040	
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034				
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025				
	MODE1 → Y0	(HH)	1.798	3.080	5.453				0.015	0.023	0.037	
		(HL)	1.991	3.299	5.341				0.019	0.027	0.040	
		(LH)	1.781	3.059	5.430				0.015	0.023	0.037	
		(LL)	1.988	3.308	5.374				0.019	0.027	0.040	
		(HZ)	2.802	3.893	6.007							
		(LZ)	2.193	3.293	5.283							
		(ZH)	1.613	2.840	5.016				0.015	0.023	0.040	
		(ZL)	2.043	3.475	5.603				0.020	0.028	0.040	
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034				
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025				
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034				
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025				
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034				
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025				
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034				
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025				
	MODE2 → Y0	(HZ)	2.666	3.651	5.565							
		(LZ)	2.061	3.049	4.843							
		(ZH)	1.471	2.591	4.623				0.015	0.024	0.040	
		(ZL)	1.910	3.228	5.221				0.019	0.028	0.040	
	BS1 → Y0	(HH)	1.732	2.974	5.288				0.015	0.023	0.037	
		(LL)	1.930	3.209	5.216				0.019	0.027	0.040	
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034				
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025				
	BS2 → Y0	(HZ)	2.741	3.795	5.848							
		(LZ)	2.133	3.197	5.128							
		(ZH)	1.563	2.733	4.844				0.015	0.024	0.040	
		(ZL)	1.994	3.369	5.446				0.020	0.027	0.040	
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034				
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025				
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003				
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003				
BXD1BB	A → Y0	(HH)	1.729	2.971	5.288				0.015	0.023	0.037	
		(LL)	1.923	3.206	5.220				0.019	0.027	0.039	
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034				
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025				
	B → Y0	(HZ)	2.737	3.794	5.846							
		(LZ)	2.129	3.194	5.128							
		(ZH)	1.560	2.731	4.851				0.015	0.023	0.040	
		(ZL)	1.995	3.360	5.442				0.019	0.028	0.040	
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034				
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025				
	MODE1 → Y0	(HH)	1.798	3.080	5.453				0.015	0.023	0.037	
		(HL)	1.991	3.299	5.341				0.019	0.027	0.040	
		(LH)	1.781	3.059	5.430				0.015	0.023	0.037	
		(LL)	1.988	3.308	5.374				0.019	0.027	0.040	

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(HZ)	2.802	3.893	6.007						
		(LZ)	2.193	3.293	5.283						
		(ZH)	1.613	2.840	5.016				0.015	0.023	0.040
		(ZL)	2.043	3.475	5.603				0.020	0.028	0.040
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	2.666	3.651	5.565						
		(LZ)	2.061	3.049	4.843						
		(ZH)	1.471	2.591	4.623				0.015	0.024	0.040
		(ZL)	1.910	3.228	5.221				0.019	0.028	0.040
	BS1 → Y0	(HH)	1.732	2.974	5.288				0.015	0.023	0.037
		(LL)	1.930	3.209	5.216				0.019	0.027	0.040
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	2.741	3.795	5.848						
		(LZ)	2.133	3.197	5.128						
		(ZH)	1.563	2.733	4.844				0.015	0.024	0.040
		(ZL)	1.994	3.369	5.446				0.020	0.027	0.040
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
BX05BB	A → Y0	(HH)	1.762	3.032	5.401				0.015	0.023	0.038
		(LL)	2.017	3.398	5.556				0.017	0.025	0.037
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	2.810	3.891	5.991						
		(LZ)	2.550	3.824	6.141						
		(ZH)	1.591	2.790	4.953				0.015	0.024	0.040
		(ZL)	2.080	3.534	5.767				0.018	0.025	0.037
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.832	3.140	5.571				0.015	0.023	0.038
		(HL)	2.080	3.485	5.675				0.018	0.025	0.037
		(LH)	1.813	3.117	5.541				0.015	0.023	0.038
		(LL)	2.079	3.500	5.712				0.018	0.025	0.037
		(HZ)	2.875	3.996	6.148						
		(LZ)	2.614	3.927	6.304						
		(ZH)	1.642	2.900	5.122				0.015	0.024	0.040
		(ZL)	2.130	3.640	5.931				0.018	0.025	0.037
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	2.741	3.746	5.707						
		(LZ)	2.480	3.677	5.854						

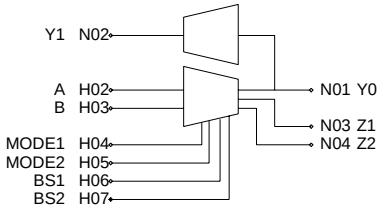
Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(ZH)	1.501	2.652	4.732				0.015	0.024	0.040
		(ZL)	1.989	3.394	5.545				0.018	0.025	0.037
	BS1 → Y0	(HH)	1.765	3.033	5.406				0.015	0.023	0.038
		(LL)	2.020	3.400	5.559				0.017	0.025	0.037
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	2.812	3.891	5.992						
		(LZ)	2.553	3.830	6.146						
		(ZH)	1.594	2.794	4.958				0.015	0.024	0.040
		(ZL)	2.080	3.532	5.774				0.018	0.025	0.037
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
BXD5BB	A → Y0	(HH)	1.762	3.032	5.401				0.015	0.023	0.038
		(LL)	2.017	3.398	5.556				0.017	0.025	0.037
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	2.810	3.891	5.991						
		(LZ)	2.550	3.824	6.141						
		(ZH)	1.591	2.790	4.953				0.015	0.024	0.040
		(ZL)	2.080	3.534	5.767				0.018	0.025	0.037
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.832	3.140	5.571				0.015	0.023	0.038
		(HL)	2.080	3.485	5.675				0.018	0.025	0.037
		(LH)	1.813	3.117	5.541				0.015	0.023	0.038
		(LL)	2.079	3.500	5.712				0.018	0.025	0.037
		(HZ)	2.875	3.996	6.148						
		(LZ)	2.614	3.927	6.304						
		(ZH)	1.642	2.900	5.122				0.015	0.024	0.040
		(ZL)	2.130	3.640	5.931				0.018	0.025	0.037
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	2.741	3.746	5.707						
		(LZ)	2.480	3.677	5.854						
		(ZH)	1.501	2.652	4.732				0.015	0.024	0.040
		(ZL)	1.989	3.394	5.545				0.018	0.025	0.037
	BS1 → Y0	(HH)	1.765	3.033	5.406				0.015	0.023	0.038
		(LL)	2.020	3.400	5.559				0.017	0.025	0.037
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	2.812	3.891	5.992						
		(LZ)	2.553	3.830	6.146						
		(ZH)	1.594	2.794	4.958				0.015	0.024	0.040
		(ZL)	2.080	3.532	5.774				0.018	0.025	0.037
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			

Block type	Path		Switching speed t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BX0FBB	A → Y0	(HH)	1.770	3.031	5.401				0.015	0.023	0.038
		(LL)	2.084	3.543	5.814				0.016	0.023	0.035
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	2.807	3.894	5.991						
		(LZ)	3.047	4.578	7.387						
		(ZH)	1.591	2.789	4.951				0.015	0.024	0.040
		(ZL)	2.130	3.663	6.004				0.016	0.023	0.035
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.839	3.142	5.569				0.015	0.023	0.038
		(HL)	2.149	3.630	5.936				0.016	0.023	0.034
		(LH)	1.820	3.121	5.546				0.015	0.023	0.038
		(LL)	2.147	3.645	5.973				0.016	0.023	0.034
		(HZ)	2.873	3.995	6.147						
		(LZ)	3.113	4.690	7.534						
		(ZH)	1.642	2.899	5.122				0.015	0.024	0.040
		(ZL)	2.180	3.767	6.169				0.016	0.023	0.035
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	2.736	3.747	5.707						
		(LZ)	2.974	4.434	7.093						
		(ZH)	1.502	2.651	4.730				0.015	0.024	0.040
		(ZL)	2.044	3.527	5.782				0.016	0.023	0.035
	BS1 → Y0	(HH)	1.774	3.034	5.404				0.015	0.023	0.038
		(LL)	2.086	3.544	5.821				0.016	0.023	0.034
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	2.813	3.893	5.987						
		(LZ)	3.050	4.577	7.387						
		(ZH)	1.594	2.793	4.960				0.015	0.024	0.040
		(ZL)	2.130	3.661	6.007				0.016	0.023	0.035
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			
BXDFBB	A → Y0	(HH)	1.770	3.031	5.401				0.015	0.023	0.038
		(LL)	2.084	3.543	5.814				0.016	0.023	0.035
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	2.807	3.894	5.991						
		(LZ)	3.047	4.578	7.387						
		(ZH)	1.591	2.789	4.951				0.015	0.024	0.040
		(ZL)	2.130	3.663	6.004				0.016	0.023	0.035
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.839	3.142	5.569				0.015	0.023	0.038
		(HL)	2.149	3.630	5.936				0.016	0.023	0.034
		(LH)	1.820	3.121	5.546				0.015	0.023	0.038
		(LL)	2.147	3.645	5.973				0.016	0.023	0.034

Block type	Path		Switching speed t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(HZ)	2.873	3.995	6.147						
		(LZ)	3.113	4.690	7.534						
		(ZH)	1.642	2.899	5.122				0.015	0.024	0.040
		(ZL)	2.180	3.767	6.169				0.016	0.023	0.035
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	2.736	3.747	5.707						
		(LZ)	2.974	4.434	7.093						
		(ZH)	1.502	2.651	4.730				0.015	0.024	0.040
		(ZL)	2.044	3.527	5.782				0.016	0.023	0.035
	BS1 → Y0	(HH)	1.774	3.034	5.404				0.015	0.023	0.038
		(LL)	2.086	3.544	5.821				0.016	0.023	0.034
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	2.813	3.893	5.987						
		(LZ)	3.050	4.577	7.387						
		(ZH)	1.594	2.793	4.960				0.015	0.024	0.040
		(ZL)	2.130	3.661	6.007				0.016	0.023	0.035
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			

Function	Schmitt I/O Buffer				TTL 5V	
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA	BKIXBB	BKDXBB			1	65
2mA	BKIKBB	BKDKBB			1	65
3mA	BKIUBB	BKDUBB			1	65
6mA	BKICBB	BKDCBB			1	65
9mA	BKI3BB	BKD3BB			1	67
12mA	BKI1BB	BKD1BB			1	67
18mA	BKI5BB	BKD5BB			1	67
24mA	BKIFBB	BKDFBB			1	67

Logic Diagram



Truth Table

A	B	BS1	BS2	*1	*2	Y0	Z1	Z2	
A	1	X	X	0	0	A	A	1	
A	0	X	X	0	0	Z	A	0	
X	X	A	1	1	0	A	A	1	
X	X	A	0	1	0	Z	A	0	
A	B	X	X	0	1	Z	A	B	
X	X	A	B	1	1	Z	A	B	← Prohibition

*1:MODE1 , *2:MODE2

X:Irrelevant

Z:High Impedance

Y0	Y1
0	0
1	1

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
BKIXBB to BKDUBB	A	2.4	Y1	227
	B	2.4	Z1	35
	MODE1	2.5	Z2	35
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		
BKICBB to BKDCBB	A	2.4	Y1	227
	B	2.4	Z1	35
	MODE1	2.5	Z2	35
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		
BKI3BB to BKD1BB	A	2.4	Y1	227
	B	2.4	Z1	35
	MODE1	2.5	Z2	35
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		
BKI5BB to BKDFBB	A	2.4	Y1	227
	B	2.4	Z1	35
	MODE1	2.5	Z2	35
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BKIXBB	A → Y0	(HH)	1.871	3.053	5.091				0.080	0.128	0.208
		(LL)	3.183	4.693	7.317				0.144	0.209	0.321
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033			
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0	(HZ)	0.677	1.071	1.738						
		(LZ)	0.464	0.739	1.186						
		(ZH)	1.718	2.840	4.653				0.077	0.125	0.204
		(ZL)	3.113	4.592	7.070				0.143	0.209	0.321
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.937	3.163	5.256				0.080	0.128	0.208
		(HL)	3.250	4.787	7.459				0.144	0.209	0.321
		(LH)	1.923	3.152	5.240				0.080	0.128	0.208
		(LL)	3.245	4.795	7.474				0.144	0.209	0.321
		(HZ)	0.742	1.173	1.894						
		(LZ)	0.531	0.841	1.342						
		(ZH)	1.767	2.973	4.822				0.077	0.125	0.204
		(ZL)	3.158	4.722	7.238				0.144	0.209	0.321
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033			
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.596	0.929	1.479						
		(LZ)	0.382	0.594	0.926						
		(ZH)	1.634	2.723	4.433				0.077	0.125	0.204
		(ZL)	3.024	4.459	6.854				0.144	0.209	0.321
	BS1 → Y0	(HH)	1.874	3.061	5.096				0.080	0.128	0.208
		(LL)	3.194	4.699	7.326				0.143	0.209	0.321
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033			
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.679	1.074	1.738						
		(LZ)	0.468	0.741	1.185						
		(ZH)	1.720	2.843	4.658				0.077	0.125	0.204
		(ZL)	3.116	4.599	7.076				0.143	0.209	0.321
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BKDXBB	A → Y0	(HH)	1.871	3.053	5.091				0.080	0.128	0.208
		(LL)	3.183	4.693	7.317				0.144	0.209	0.321
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033			
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0	(HZ)	0.677	1.071	1.738						
		(LZ)	0.464	0.739	1.186						
		(ZH)	1.718	2.840	4.653				0.077	0.125	0.204
		(ZL)	3.113	4.592	7.070				0.143	0.209	0.321
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.937	3.163	5.256				0.080	0.128	0.208
		(HL)	3.250	4.787	7.459				0.144	0.209	0.321
		(LH)	1.923	3.152	5.240				0.080	0.128	0.208
		(LL)	3.245	4.795	7.474				0.144	0.209	0.321

Block type	Switching speed									
	Path	t_{LD0} (ns)			t_1			T		
	IN → OUT	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
	(HZ)	0.742	1.173	1.894						
	(LZ)	0.531	0.841	1.342						
	(ZH)	1.767	2.973	4.822				0.077	0.125	0.204
	(ZL)	3.158	4.722	7.238				0.144	0.209	0.321
	MODE1 → Z1 (HH)	0.261	0.407	0.643	0.013	0.021	0.033			
	(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
	(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
	(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2 (HH)	0.225	0.348	0.545	0.013	0.021	0.034			
	(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
	(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
	(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0 (HZ)	0.596	0.929	1.479						
	(LZ)	0.382	0.594	0.926						
	(ZH)	1.634	2.723	4.433				0.077	0.125	0.204
	(ZL)	3.024	4.459	6.854				0.144	0.209	0.321
	BS1 → Y0 (HH)	1.874	3.061	5.096				0.080	0.128	0.208
	(LL)	3.194	4.699	7.326				0.143	0.209	0.321
	BS1 → Z1 (HH)	0.198	0.303	0.484	0.013	0.021	0.033			
	(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0 (HZ)	0.679	1.074	1.738						
	(LZ)	0.468	0.741	1.185						
	(ZH)	1.720	2.843	4.658				0.077	0.125	0.204
	(ZL)	3.116	4.599	7.076				0.143	0.209	0.321
	BS2 → Z2 (HH)	0.160	0.244	0.383	0.013	0.021	0.034			
	(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1 (HH)	0.483	0.746	1.231	0.002	0.003	0.004			
	(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BKIKBB	A → Y0 (HH)	1.715	2.773	4.560				0.077	0.122	0.195
	(LL)	2.233	3.366	5.237				0.108	0.159	0.241
	A → Z1 (HH)	0.196	0.301	0.480	0.013	0.021	0.033			
	(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0 (HZ)	0.677	1.071	1.738						
	(LZ)	0.464	0.738	1.185						
	(ZH)	1.621	2.665	4.323				0.074	0.119	0.192
	(ZL)	2.211	3.349	5.154				0.108	0.159	0.242
	B → Z2 (HH)	0.158	0.241	0.379	0.013	0.021	0.034			
	(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0 (HH)	1.780	2.880	4.735				0.077	0.122	0.193
	(HL)	2.297	3.464	5.369				0.108	0.159	0.242
	(LH)	1.766	2.866	4.707				0.077	0.122	0.195
	(LL)	2.296	3.466	5.384				0.108	0.159	0.242
	(HZ)	0.742	1.173	1.894						
	(LZ)	0.531	0.840	1.342						
	(ZH)	1.670	2.794	4.491				0.074	0.120	0.192
	(ZL)	2.263	3.471	5.329				0.108	0.159	0.241
	MODE1 → Z1 (HH)	0.261	0.407	0.643	0.013	0.021	0.033			
	(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
	(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
	(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2 (HH)	0.225	0.348	0.545	0.013	0.021	0.034			
	(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
	(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
	(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0 (HZ)	0.596	0.929	1.479						
	(LZ)	0.383	0.594	0.926						

Block type	Switching speed									
	Path	t_{LD0} (ns)			t_1			T		
	IN → OUT	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
	(ZH)	1.538	2.544	4.105				0.074	0.120	0.192
	(ZL)	2.131	3.223	4.944				0.108	0.159	0.241
	BS1 → Y0 (HH)	1.716	2.776	4.560				0.077	0.122	0.195
	(LL)	2.234	3.374	5.247				0.108	0.159	0.241
	BS1 → Z1 (HH)	0.198	0.303	0.484	0.013	0.021	0.033			
	(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0 (HZ)	0.679	1.074	1.738						
	(LZ)	0.468	0.741	1.186						
	(ZH)	1.624	2.668	4.319				0.074	0.119	0.192
	(ZL)	2.215	3.346	5.162				0.108	0.159	0.242
	BS2 → Z2 (HH)	0.160	0.244	0.383	0.013	0.021	0.034			
	(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1 (HH)	0.483	0.746	1.231	0.002	0.003	0.004			
	(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BKDKBB	A → Y0 (HH)	1.715	2.773	4.560				0.077	0.122	0.195
	(LL)	2.233	3.366	5.237				0.108	0.159	0.241
	A → Z1 (HH)	0.196	0.301	0.480	0.013	0.021	0.033			
	(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0 (HZ)	0.677	1.071	1.738						
	(LZ)	0.464	0.738	1.185						
	(ZH)	1.621	2.665	4.323				0.074	0.119	0.192
	(ZL)	2.211	3.349	5.154				0.108	0.159	0.242
	B → Z2 (HH)	0.158	0.241	0.379	0.013	0.021	0.034			
	(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0 (HH)	1.780	2.880	4.735				0.077	0.122	0.193
	(HL)	2.297	3.464	5.369				0.108	0.159	0.242
	(LH)	1.766	2.866	4.707				0.077	0.122	0.195
	(LL)	2.296	3.466	5.384				0.108	0.159	0.242
	(HZ)	0.742	1.173	1.894						
	(LZ)	0.531	0.840	1.342						
	(ZH)	1.670	2.794	4.491				0.074	0.120	0.192
	(ZL)	2.263	3.471	5.329				0.108	0.159	0.241
	MODE1 → Z1 (HH)	0.261	0.407	0.643	0.013	0.021	0.033			
	(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
	(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
	(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2 (HH)	0.225	0.348	0.545	0.013	0.021	0.034			
	(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
	(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
	(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0 (HZ)	0.596	0.929	1.479						
	(LZ)	0.383	0.594	0.926						
	(ZH)	1.538	2.544	4.105				0.074	0.120	0.192
	(ZL)	2.131	3.223	4.944				0.108	0.159	0.241
	BS1 → Y0 (HH)	1.716	2.776	4.560				0.077	0.122	0.195
	(LL)	2.234	3.374	5.247				0.108	0.159	0.241
	BS1 → Z1 (HH)	0.198	0.303	0.484	0.013	0.021	0.033			
	(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0 (HZ)	0.679	1.074	1.738						
	(LZ)	0.468	0.741	1.186						
	(ZH)	1.624	2.668	4.319				0.074	0.119	0.192
	(ZL)	2.215	3.346	5.162				0.108	0.159	0.242
	BS2 → Z2 (HH)	0.160	0.244	0.383	0.013	0.021	0.034			
	(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1 (HH)	0.483	0.746	1.231	0.002	0.003	0.004			
	(LL)	0.504	0.772	1.211	0.003	0.004	0.007			

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BKIUBB	A → Y0	(HH)	1.752	2.841	4.684				0.077	0.120	0.189
		(LL)	1.962	2.871	4.272				0.094	0.133	0.189
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033			
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0	(HZ)	0.677	1.071	1.739						
		(LZ)	0.463	0.738	1.185						
		(ZH)	1.624	2.673	4.325				0.073	0.117	0.187
		(ZL)	1.948	2.875	4.259				0.094	0.133	0.191
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.817	2.948	4.844				0.077	0.120	0.191
		(HL)	2.027	2.967	4.414				0.094	0.132	0.189
		(LH)	1.803	2.933	4.841				0.077	0.120	0.189
		(LL)	2.020	2.971	4.430				0.094	0.133	0.189
		(HZ)	0.742	1.174	1.895						
		(LZ)	0.531	0.840	1.342						
		(ZH)	1.671	2.804	4.495				0.073	0.117	0.187
		(ZL)	2.001	2.995	4.427				0.094	0.133	0.190
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033			
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.596	0.929	1.480						
		(LZ)	0.382	0.593	0.927						
		(ZH)	1.541	2.554	4.107				0.073	0.117	0.187
		(ZL)	1.870	2.746	4.047				0.094	0.133	0.190
	BS1 → Y0	(HH)	1.749	2.844	4.678				0.077	0.120	0.191
		(LL)	1.960	2.874	4.278				0.094	0.132	0.189
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033			
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.680	1.073	1.739						
		(LZ)	0.467	0.742	1.185						
		(ZH)	1.627	2.675	4.331				0.073	0.117	0.187
		(ZL)	1.956	2.885	4.263				0.094	0.133	0.191
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BKDUBB	A → Y0	(HH)	1.752	2.841	4.684				0.077	0.120	0.189
		(LL)	1.962	2.871	4.272				0.094	0.133	0.189
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033			
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0	(HZ)	0.677	1.071	1.739						
		(LZ)	0.463	0.738	1.185						
		(ZH)	1.624	2.673	4.325				0.073	0.117	0.187
		(ZL)	1.948	2.875	4.259				0.094	0.133	0.191
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.817	2.948	4.844				0.077	0.120	0.191
		(HL)	2.027	2.967	4.414				0.094	0.132	0.189
		(LH)	1.803	2.933	4.841				0.077	0.120	0.189
		(LL)	2.020	2.971	4.430				0.094	0.133	0.189

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(HZ)	0.742	1.174	1.895						
		(LZ)	0.531	0.840	1.342						
		(ZH)	1.671	2.804	4.495				0.073	0.117	0.187
		(ZL)	2.001	2.995	4.427				0.094	0.133	0.190
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033			
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.596	0.929	1.480						
		(LZ)	0.382	0.593	0.927						
		(ZH)	1.541	2.554	4.107				0.073	0.117	0.187
		(ZL)	1.870	2.746	4.047				0.094	0.133	0.190
	BS1 → Y0	(HH)	1.749	2.844	4.678				0.077	0.120	0.191
		(LL)	1.960	2.874	4.278				0.094	0.132	0.189
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033			
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.680	1.073	1.739						
		(LZ)	0.467	0.742	1.185						
		(ZH)	1.627	2.675	4.331				0.073	0.117	0.187
		(ZL)	1.956	2.885	4.263				0.094	0.133	0.191
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BKICBB	A → Y0	(HH)	0.997	1.611	2.692				0.028	0.043	0.067
		(LL)	1.174	1.821	2.856				0.033	0.046	0.066
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033			
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0	(HZ)	1.130	1.673	2.662						
		(LZ)	0.652	1.019	1.634						
		(ZH)	1.220	1.979	3.231				0.026	0.042	0.066
		(ZL)	1.332	2.031	3.191				0.033	0.046	0.066
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.063	1.717	2.855				0.028	0.043	0.067
		(HL)	1.239	1.916	2.993				0.033	0.046	0.066
		(LH)	1.049	1.702	2.843				0.028	0.043	0.067
		(LL)	1.237	1.920	3.009				0.033	0.046	0.066
		(HZ)	1.193	1.776	2.816						
		(LZ)	0.719	1.121	1.790						
		(ZH)	1.271	2.092	3.400				0.026	0.042	0.066
		(ZL)	1.383	2.141	3.358				0.033	0.046	0.066
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033			
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.046	1.529	2.401						
		(LZ)	0.570	0.875	1.375						

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(ZH)	1.137	1.848	3.013				0.026	0.042	0.066
		(ZL)	1.248	1.897	2.975				0.033	0.046	0.065
	BS1 → Y0	(HH)	0.999	1.612	2.696				0.028	0.043	0.067
		(LL)	1.177	1.824	2.862				0.033	0.046	0.066
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033			
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.128	1.676	2.662						
		(LZ)	0.655	1.022	1.633						
		(ZH)	1.222	1.983	3.235				0.026	0.042	0.066
		(ZL)	1.334	2.036	3.196				0.033	0.046	0.065
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BKDCBB	A → Y0	(HH)	0.997	1.611	2.692				0.028	0.043	0.067
		(LL)	1.174	1.821	2.856				0.033	0.046	0.066
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033			
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0	(HZ)	1.130	1.673	2.662						
		(LZ)	0.652	1.019	1.634						
		(ZH)	1.220	1.979	3.231				0.026	0.042	0.066
		(ZL)	1.332	2.031	3.191				0.033	0.046	0.066
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.063	1.717	2.855				0.028	0.043	0.067
		(HL)	1.239	1.916	2.993				0.033	0.046	0.066
		(LH)	1.049	1.702	2.843				0.028	0.043	0.067
		(LL)	1.237	1.920	3.009				0.033	0.046	0.066
		(HZ)	1.193	1.776	2.816						
		(LZ)	0.719	1.121	1.790						
		(ZH)	1.271	2.092	3.400				0.026	0.042	0.066
		(ZL)	1.383	2.141	3.358				0.033	0.046	0.066
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033			
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.046	1.529	2.401						
		(LZ)	0.570	0.875	1.375						
		(ZH)	1.137	1.848	3.013				0.026	0.042	0.066
		(ZL)	1.248	1.897	2.975				0.033	0.046	0.065
	BS1 → Y0	(HH)	0.999	1.612	2.696				0.028	0.043	0.067
		(LL)	1.177	1.824	2.862				0.033	0.046	0.066
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033			
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.128	1.676	2.662						
		(LZ)	0.655	1.022	1.633						
		(ZH)	1.222	1.983	3.235				0.026	0.042	0.066
		(ZL)	1.334	2.036	3.196				0.033	0.046	0.065
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BKI3BB	A → Y0	(HH)	0.995	1.603	2.663				0.028	0.043	0.067
		(LL)	1.159	1.786	2.792				0.032	0.045	0.064
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033			
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0	(HZ)	1.113	1.653	2.631						
		(LZ)	0.648	1.010	1.619						
		(ZH)	1.200	1.949	3.173				0.027	0.042	0.066
		(ZL)	1.331	2.032	3.173				0.032	0.045	0.064
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.060	1.706	2.839				0.028	0.043	0.067
		(HL)	1.225	1.882	2.930				0.032	0.045	0.064
		(LH)	1.046	1.695	2.819				0.028	0.043	0.067
		(LL)	1.222	1.886	2.946				0.032	0.045	0.064
		(HZ)	1.177	1.756	2.788						
		(LZ)	0.714	1.112	1.776						
		(ZH)	1.251	2.063	3.341				0.027	0.042	0.066
		(ZL)	1.384	2.134	3.347				0.032	0.045	0.064
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033			
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.032	1.507	2.373						
		(LZ)	0.566	0.865	1.361						
		(ZH)	1.117	1.819	2.956				0.027	0.042	0.066
		(ZL)	1.249	1.896	2.962				0.032	0.045	0.064
	BS1 → Y0	(HH)	0.996	1.606	2.671				0.028	0.043	0.067
		(LL)	1.163	1.790	2.798				0.032	0.045	0.064
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033			
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.116	1.656	2.633						
		(LZ)	0.651	1.013	1.619						
		(ZH)	1.203	1.952	3.178				0.027	0.042	0.066
		(ZL)	1.335	2.036	3.182				0.032	0.045	0.064
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BKD3BB	A → Y0	(HH)	0.995	1.603	2.663				0.028	0.043	0.067
		(LL)	1.159	1.786	2.792				0.032	0.045	0.064
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033			
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0	(HZ)	1.113	1.653	2.631						
		(LZ)	0.648	1.010	1.619						
		(ZH)	1.200	1.949	3.173				0.027	0.042	0.066
		(ZL)	1.331	2.032	3.173				0.032	0.045	0.064
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.060	1.706	2.839				0.028	0.043	0.067
		(HL)	1.225	1.882	2.930				0.032	0.045	0.064
		(LH)	1.046	1.695	2.819				0.028	0.043	0.067
		(LL)	1.222	1.886	2.946				0.032	0.045	0.064

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(HZ)	1.177	1.756	2.788						
		(LZ)	0.714	1.112	1.776						
		(ZH)	1.251	2.063	3.341				0.027	0.042	0.066
		(ZL)	1.384	2.134	3.347				0.032	0.045	0.064
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033			
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.032	1.507	2.373						
		(LZ)	0.566	0.865	1.361						
		(ZH)	1.117	1.819	2.956				0.027	0.042	0.066
		(ZL)	1.249	1.896	2.962				0.032	0.045	0.064
	BS1 → Y0	(HH)	0.996	1.606	2.671				0.028	0.043	0.067
		(LL)	1.163	1.790	2.798				0.032	0.045	0.064
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033			
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.116	1.656	2.633						
		(LZ)	0.651	1.013	1.619						
		(ZH)	1.203	1.952	3.178				0.027	0.042	0.066
		(ZL)	1.335	2.036	3.182				0.032	0.045	0.064
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BKI1BB	A → Y0	(HH)	0.797	1.296	2.175				0.011	0.017	0.027
		(LL)	1.050	1.628	2.569				0.015	0.020	0.029
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033			
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0	(HZ)	1.433	2.112	3.344						
		(LZ)	0.729	1.131	1.814						
		(ZH)	1.078	1.754	2.889				0.011	0.017	0.027
		(ZL)	1.291	1.990	3.131				0.015	0.020	0.029
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.863	1.402	2.342				0.011	0.017	0.027
		(HL)	1.116	1.723	2.702				0.015	0.020	0.029
		(LH)	0.850	1.388	2.326				0.011	0.017	0.027
		(LL)	1.112	1.728	2.723				0.015	0.020	0.029
		(HZ)	1.499	2.212	3.495						
		(LZ)	0.795	1.233	1.970						
		(ZH)	1.129	1.864	3.056				0.011	0.017	0.027
		(ZL)	1.341	2.097	3.304				0.015	0.020	0.029
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033			
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.356	1.963	3.083						
		(LZ)	0.647	0.987	1.554						

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(ZH)	0.994	1.620	2.669				0.011	0.017	0.027
		(ZL)	1.206	1.855	2.917				0.015	0.020	0.029
	BS1 → Y0	(HH)	0.800	1.298	2.178				0.011	0.017	0.027
		(LL)	1.054	1.631	2.575				0.015	0.020	0.029
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033			
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.437	2.113	3.346						
		(LZ)	0.733	1.134	1.815						
		(ZH)	1.081	1.757	2.892				0.011	0.017	0.027
		(ZL)	1.295	1.991	3.140				0.015	0.021	0.029
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BKD1BB	A → Y0	(HH)	0.797	1.296	2.175				0.011	0.017	0.027
		(LL)	1.050	1.628	2.569				0.015	0.020	0.029
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033			
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0	(HZ)	1.433	2.112	3.344						
		(LZ)	0.729	1.131	1.814						
		(ZH)	1.078	1.754	2.889				0.011	0.017	0.027
		(ZL)	1.291	1.990	3.131				0.015	0.020	0.029
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.863	1.402	2.342				0.011	0.017	0.027
		(HL)	1.116	1.723	2.702				0.015	0.020	0.029
		(LH)	0.850	1.388	2.326				0.011	0.017	0.027
		(LL)	1.112	1.728	2.723				0.015	0.020	0.029
		(HZ)	1.499	2.212	3.495						
		(LZ)	0.795	1.233	1.970						
		(ZH)	1.129	1.864	3.056				0.011	0.017	0.027
		(ZL)	1.341	2.097	3.304				0.015	0.020	0.029
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033			
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.356	1.963	3.083						
		(LZ)	0.647	0.987	1.554						
		(ZH)	0.994	1.620	2.669				0.011	0.017	0.027
		(ZL)	1.206	1.855	2.917				0.015	0.020	0.029
	BS1 → Y0	(HH)	0.800	1.298	2.178				0.011	0.017	0.027
		(LL)	1.054	1.631	2.575				0.015	0.020	0.029
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033			
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.437	2.113	3.346						
		(LZ)	0.733	1.134	1.815						
		(ZH)	1.081	1.757	2.892				0.011	0.017	0.027
		(ZL)	1.295	1.991	3.140				0.015	0.021	0.029
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BKI5BB	A → Y0	(HH)	0.815	1.318	2.207				0.011	0.017	0.027
		(LL)	1.059	1.649	2.606				0.013	0.018	0.025
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033			
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0	(HZ)	1.455	2.139	3.381						
		(LZ)	0.793	1.225	1.963						
		(ZH)	1.085	1.768	2.913				0.011	0.017	0.027
		(ZL)	1.293	1.996	3.155				0.013	0.018	0.025
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.880	1.424	2.374				0.011	0.017	0.027
		(HL)	1.124	1.743	2.743				0.013	0.018	0.025
		(LH)	0.865	1.410	2.358				0.011	0.017	0.027
		(LL)	1.121	1.747	2.763				0.013	0.018	0.025
		(HZ)	1.521	2.246	3.547						
		(LZ)	0.861	1.328	2.117						
		(ZH)	1.137	1.877	3.079				0.011	0.017	0.027
		(ZL)	1.344	2.100	3.322				0.013	0.018	0.026
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033			
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.375	1.998	3.122						
		(LZ)	0.713	1.081	1.702						
		(ZH)	1.003	1.634	2.692				0.011	0.017	0.027
		(ZL)	1.209	1.857	2.937				0.013	0.018	0.025
	BS1 → Y0	(HH)	0.816	1.321	2.210				0.011	0.017	0.027
		(LL)	1.061	1.650	2.615				0.013	0.018	0.025
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033			
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.458	2.141	3.383						
		(LZ)	0.798	1.228	1.961						
		(ZH)	1.089	1.771	2.913				0.011	0.017	0.027
		(ZL)	1.295	1.999	3.158				0.013	0.018	0.025
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BKD5BB	A → Y0	(HH)	0.815	1.318	2.207				0.011	0.017	0.027
		(LL)	1.059	1.649	2.606				0.013	0.018	0.025
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033			
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0	(HZ)	1.455	2.139	3.381						
		(LZ)	0.793	1.225	1.963						
		(ZH)	1.085	1.768	2.913				0.011	0.017	0.027
		(ZL)	1.293	1.996	3.155				0.013	0.018	0.025
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.880	1.424	2.374				0.011	0.017	0.027
		(HL)	1.124	1.743	2.743				0.013	0.018	0.025
		(LH)	0.865	1.410	2.358				0.011	0.017	0.027
		(LL)	1.121	1.747	2.763				0.013	0.018	0.025

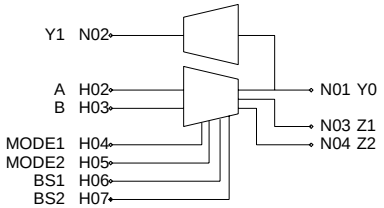
Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(HZ)	1.521	2.246	3.547						
		(LZ)	0.861	1.328	2.117						
		(ZH)	1.137	1.877	3.079				0.011	0.017	0.027
		(ZL)	1.344	2.100	3.322				0.013	0.018	0.026
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033			
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.375	1.998	3.122						
		(LZ)	0.713	1.081	1.702						
		(ZH)	1.003	1.634	2.692				0.011	0.017	0.027
		(ZL)	1.209	1.857	2.937				0.013	0.018	0.025
	BS1 → Y0	(HH)	0.816	1.321	2.210				0.011	0.017	0.027
		(LL)	1.061	1.650	2.615				0.013	0.018	0.025
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033			
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.458	2.141	3.383						
		(LZ)	0.798	1.228	1.961						
		(ZH)	1.089	1.771	2.913				0.011	0.017	0.027
		(ZL)	1.295	1.999	3.158				0.013	0.018	0.025
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BKIFBB	A → Y0	(HH)	0.837	1.345	2.243				0.011	0.016	0.026
		(LL)	1.062	1.662	2.633				0.012	0.016	0.023
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033			
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0	(HZ)	1.458	2.141	3.381						
		(LZ)	0.870	1.336	2.141						
		(ZH)	1.086	1.768	2.909				0.011	0.017	0.027
		(ZL)	1.300	1.999	3.155				0.012	0.016	0.023
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.903	1.452	2.408				0.011	0.016	0.026
		(HL)	1.129	1.757	2.769				0.012	0.016	0.023
		(LH)	0.889	1.438	2.392				0.011	0.016	0.026
		(LL)	1.125	1.763	2.788				0.012	0.016	0.023
		(HZ)	1.521	2.244	3.540						
		(LZ)	0.938	1.439	2.298						
		(ZH)	1.137	1.878	3.079				0.011	0.017	0.027
		(ZL)	1.348	2.105	3.325				0.012	0.016	0.023
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033			
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.375	1.996	3.121						
		(LZ)	0.789	1.193	1.883						

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(ZH)	1.002	1.634	2.691				0.011	0.017	0.027
		(ZL)	1.214	1.864	2.937				0.012	0.016	0.023
	BS1 → Y0	(HH)	0.840	1.348	2.245				0.011	0.016	0.026
		(LL)	1.066	1.665	2.638				0.012	0.016	0.023
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033			
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.460	2.150	3.383						
		(LZ)	0.875	1.339	2.142						
		(ZH)	1.089	1.771	2.914				0.011	0.017	0.027
		(ZL)	1.300	2.001	3.161				0.012	0.016	0.023
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BKDFBB	A → Y0	(HH)	0.837	1.345	2.243				0.011	0.016	0.026
		(LL)	1.062	1.662	2.633				0.012	0.016	0.023
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033			
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0	(HZ)	1.458	2.141	3.381						
		(LZ)	0.870	1.336	2.141						
		(ZH)	1.086	1.768	2.909				0.011	0.017	0.027
		(ZL)	1.300	1.999	3.155				0.012	0.016	0.023
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.903	1.452	2.408				0.011	0.016	0.026
		(HL)	1.129	1.757	2.769				0.012	0.016	0.023
		(LH)	0.889	1.438	2.392				0.011	0.016	0.026
		(LL)	1.125	1.763	2.788				0.012	0.016	0.023
		(HZ)	1.521	2.244	3.540						
		(LZ)	0.938	1.439	2.298						
		(ZH)	1.137	1.878	3.079				0.011	0.017	0.027
		(ZL)	1.348	2.105	3.325				0.012	0.016	0.023
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033			
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.375	1.996	3.121						
		(LZ)	0.789	1.193	1.883						
		(ZH)	1.002	1.634	2.691				0.011	0.017	0.027
		(ZL)	1.214	1.864	2.937				0.012	0.016	0.023
	BS1 → Y0	(HH)	0.840	1.348	2.245				0.011	0.016	0.026
		(LL)	1.066	1.665	2.638				0.012	0.016	0.023
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033			
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.460	2.150	3.383						
		(LZ)	0.875	1.339	2.142						
		(ZH)	1.089	1.771	2.914				0.011	0.017	0.027
		(ZL)	1.300	2.001	3.161				0.012	0.016	0.023
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			

[MEMO]

Function	Low-noise Schmitt I/O Buffer				TTL 5V	
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA						
6mA						
9mA						
12mA	BZI1BB	BZD1BB			1	52
18mA	BZI5BB	BZD5BB			1	52
24mA	BZIFBB	BZDFBB			1	52

Logic Diagram



Truth Table

A	B	BS1	BS2	*1	*2	Y0	Z1	Z2	
A	1	X	X	0	0	A	A	1	
A	0	X	X	0	0	Z	A	0	
X	X	A	1	1	0	A	A	1	
X	X	A	0	1	0	Z	A	0	
A	B	X	X	0	1	Z	A	B	
X	X	A	B	1	1	Z	A	B	← Prohibition

*1:MODE1 , *2:MODE2

X:Irrelevant

Z:High Impedance

Y0	Y1
0	0
1	1

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
BZI1BB to BZD1BB	A	2.4	Y1	227
	B	2.4	Z1	36
	MODE1	2.5	Z2	35
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		
BZI5BB to BZDFBB	A	2.4	Y1	227
	B	2.4	Z1	36
	MODE1	2.5	Z2	35
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
BZI1BB	A → Y0	(HH)	1.729	2.971	5.288				0.015	0.023	0.037	
		(LL)	1.923	3.206	5.220				0.019	0.027	0.039	
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034				
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025				
	B → Y0	(HZ)	2.737	3.794	5.846							
		(LZ)	2.129	3.194	5.128							
		(ZH)	1.560	2.731	4.851				0.015	0.023	0.040	
		(ZL)	1.995	3.360	5.442				0.019	0.028	0.040	
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034				
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025				
	MODE1 → Y0	(HH)	1.798	3.080	5.453				0.015	0.023	0.037	
		(HL)	1.991	3.299	5.341				0.019	0.027	0.040	
		(LH)	1.781	3.059	5.430				0.015	0.023	0.037	
		(LL)	1.988	3.308	5.374				0.019	0.027	0.040	
		(HZ)	2.802	3.893	6.007							
		(LZ)	2.193	3.293	5.283							
		(ZH)	1.613	2.840	5.016				0.015	0.023	0.040	
		(ZL)	2.043	3.475	5.603				0.020	0.028	0.040	
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034				
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025				
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034				
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025				
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034				
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025				
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034				
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025				
	MODE2 → Y0	(HZ)	2.666	3.651	5.565							
		(LZ)	2.061	3.049	4.843							
		(ZH)	1.471	2.591	4.623				0.015	0.024	0.040	
		(ZL)	1.910	3.228	5.221				0.019	0.028	0.040	
	BS1 → Y0	(HH)	1.732	2.974	5.288				0.015	0.023	0.037	
		(LL)	1.930	3.209	5.216				0.019	0.027	0.040	
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034				
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025				
	BS2 → Y0	(HZ)	2.741	3.795	5.848							
		(LZ)	2.133	3.197	5.128							
		(ZH)	1.563	2.733	4.844				0.015	0.024	0.040	
		(ZL)	1.994	3.369	5.446				0.020	0.027	0.040	
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034				
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025				
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004				
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007				
BZD1BB	A → Y0	(HH)	1.729	2.971	5.288				0.015	0.023	0.037	
		(LL)	1.923	3.206	5.220				0.019	0.027	0.039	
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034				
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025				
	B → Y0	(HZ)	2.737	3.794	5.846							
		(LZ)	2.129	3.194	5.128							
		(ZH)	1.560	2.731	4.851				0.015	0.023	0.040	
		(ZL)	1.995	3.360	5.442				0.019	0.028	0.040	
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034				
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025				
	MODE1 → Y0	(HH)	1.798	3.080	5.453				0.015	0.023	0.037	
		(HL)	1.991	3.299	5.341				0.019	0.027	0.040	
		(LH)	1.781	3.059	5.430				0.015	0.023	0.037	
		(LL)	1.988	3.308	5.374				0.019	0.027	0.040	

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(HZ)	2.802	3.893	6.007						
		(LZ)	2.193	3.293	5.283						
		(ZH)	1.613	2.840	5.016				0.015	0.023	0.040
		(ZL)	2.043	3.475	5.603				0.020	0.028	0.040
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	2.666	3.651	5.565						
		(LZ)	2.061	3.049	4.843						
		(ZH)	1.471	2.591	4.623				0.015	0.024	0.040
		(ZL)	1.910	3.228	5.221				0.019	0.028	0.040
	BS1 → Y0	(HH)	1.732	2.974	5.288				0.015	0.023	0.037
		(LL)	1.930	3.209	5.216				0.019	0.027	0.040
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	2.741	3.795	5.848						
		(LZ)	2.133	3.197	5.128						
		(ZH)	1.563	2.733	4.844				0.015	0.024	0.040
		(ZL)	1.994	3.369	5.446				0.020	0.027	0.040
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BZI5BB	A → Y0	(HH)	1.762	3.032	5.401				0.015	0.023	0.038
		(LL)	2.017	3.398	5.556				0.017	0.025	0.037
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	2.810	3.891	5.991						
		(LZ)	2.550	3.824	6.141						
		(ZH)	1.591	2.790	4.953				0.015	0.024	0.040
		(ZL)	2.080	3.534	5.767				0.018	0.025	0.037
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.832	3.140	5.571				0.015	0.023	0.038
		(HL)	2.080	3.485	5.675				0.018	0.025	0.037
		(LH)	1.813	3.117	5.541				0.015	0.023	0.038
		(LL)	2.079	3.500	5.712				0.018	0.025	0.037
		(HZ)	2.875	3.996	6.148						
		(LZ)	2.614	3.927	6.304						
		(ZH)	1.642	2.900	5.122				0.015	0.024	0.040
		(ZL)	2.130	3.640	5.931				0.018	0.025	0.037
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	2.741	3.746	5.707						
		(LZ)	2.480	3.677	5.854						

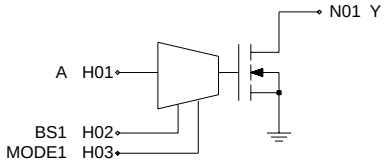
Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(ZH)	1.501	2.652	4.732				0.015	0.024	0.040
		(ZL)	1.989	3.394	5.545				0.018	0.025	0.037
	BS1 → Y0	(HH)	1.765	3.033	5.406				0.015	0.023	0.038
		(LL)	2.020	3.400	5.559				0.017	0.025	0.037
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	2.812	3.891	5.992						
		(LZ)	2.553	3.830	6.146						
		(ZH)	1.594	2.794	4.958				0.015	0.024	0.040
		(ZL)	2.080	3.532	5.774				0.018	0.025	0.037
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BZD5BB	A → Y0	(HH)	1.762	3.032	5.401				0.015	0.023	0.038
		(LL)	2.017	3.398	5.556				0.017	0.025	0.037
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	2.810	3.891	5.991						
		(LZ)	2.550	3.824	6.141						
		(ZH)	1.591	2.790	4.953				0.015	0.024	0.040
		(ZL)	2.080	3.534	5.767				0.018	0.025	0.037
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.832	3.140	5.571				0.015	0.023	0.038
		(HL)	2.080	3.485	5.675				0.018	0.025	0.037
		(LH)	1.813	3.117	5.541				0.015	0.023	0.038
		(LL)	2.079	3.500	5.712				0.018	0.025	0.037
		(HZ)	2.875	3.996	6.148						
		(LZ)	2.614	3.927	6.304						
		(ZH)	1.642	2.900	5.122				0.015	0.024	0.040
		(ZL)	2.130	3.640	5.931				0.018	0.025	0.037
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	2.741	3.746	5.707						
		(LZ)	2.480	3.677	5.854						
		(ZH)	1.501	2.652	4.732				0.015	0.024	0.040
		(ZL)	1.989	3.394	5.545				0.018	0.025	0.037
	BS1 → Y0	(HH)	1.765	3.033	5.406				0.015	0.023	0.038
		(LL)	2.020	3.400	5.559				0.017	0.025	0.037
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	2.812	3.891	5.992						
		(LZ)	2.553	3.830	6.146						
		(ZH)	1.594	2.794	4.958				0.015	0.024	0.040
		(ZL)	2.080	3.532	5.774				0.018	0.025	0.037
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BZIFBB	A → Y0	(HH)	1.770	3.031	5.401				0.015	0.023	0.038
		(LL)	2.084	3.543	5.814				0.016	0.023	0.035
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	2.807	3.894	5.991						
		(LZ)	3.047	4.578	7.387						
		(ZH)	1.591	2.789	4.951				0.015	0.024	0.040
		(ZL)	2.130	3.663	6.004				0.016	0.023	0.035
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.839	3.142	5.569				0.015	0.023	0.038
		(HL)	2.149	3.630	5.936				0.016	0.023	0.034
		(LH)	1.820	3.121	5.546				0.015	0.023	0.038
		(LL)	2.147	3.645	5.973				0.016	0.023	0.034
		(HZ)	2.873	3.995	6.147						
		(LZ)	3.113	4.690	7.534						
		(ZH)	1.642	2.899	5.122				0.015	0.024	0.040
		(ZL)	2.180	3.767	6.169				0.016	0.023	0.035
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	2.736	3.747	5.707						
		(LZ)	2.974	4.434	7.093						
		(ZH)	1.502	2.651	4.730				0.015	0.024	0.040
		(ZL)	2.044	3.527	5.782				0.016	0.023	0.035
	BS1 → Y0	(HH)	1.774	3.034	5.404				0.015	0.023	0.038
		(LL)	2.086	3.544	5.821				0.016	0.023	0.034
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	2.813	3.893	5.987						
		(LZ)	3.050	4.577	7.387						
		(ZH)	1.594	2.793	4.960				0.015	0.024	0.040
		(ZL)	2.130	3.661	6.007				0.016	0.023	0.035
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			
BZDFBB	A → Y0	(HH)	1.770	3.031	5.401				0.015	0.023	0.038
		(LL)	2.084	3.543	5.814				0.016	0.023	0.035
	A → Z1	(HH)	0.159	0.240	0.373	0.013	0.021	0.034			
		(LL)	0.176	0.289	0.462	0.010	0.016	0.025			
	B → Y0	(HZ)	2.807	3.894	5.991						
		(LZ)	3.047	4.578	7.387						
		(ZH)	1.591	2.789	4.951				0.015	0.024	0.040
		(ZL)	2.130	3.663	6.004				0.016	0.023	0.035
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	1.839	3.142	5.569				0.015	0.023	0.038
		(HL)	2.149	3.630	5.936				0.016	0.023	0.034
		(LH)	1.820	3.121	5.546				0.015	0.023	0.038
		(LL)	2.147	3.645	5.973				0.016	0.023	0.034

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
		(HZ)	2.873	3.995	6.147						
		(LZ)	3.113	4.690	7.534						
		(ZH)	1.642	2.899	5.122				0.015	0.024	0.040
		(ZL)	2.180	3.767	6.169				0.016	0.023	0.035
	MODE1 → Z1	(HH)	0.227	0.347	0.542	0.013	0.021	0.034			
		(HL)	0.244	0.383	0.596	0.010	0.016	0.025			
		(LH)	0.210	0.329	0.523	0.013	0.021	0.034			
		(LL)	0.240	0.390	0.621	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	2.736	3.747	5.707						
		(LZ)	2.974	4.434	7.093						
		(ZH)	1.502	2.651	4.730				0.015	0.024	0.040
		(ZL)	2.044	3.527	5.782				0.016	0.023	0.035
	BS1 → Y0	(HH)	1.774	3.034	5.404				0.015	0.023	0.038
		(LL)	2.086	3.544	5.821				0.016	0.023	0.034
	BS1 → Z1	(HH)	0.162	0.243	0.381	0.013	0.021	0.034			
		(LL)	0.179	0.293	0.470	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	2.813	3.893	5.987						
		(LZ)	3.050	4.577	7.387						
		(ZH)	1.594	2.793	4.960				0.015	0.024	0.040
		(ZL)	2.130	3.661	6.007				0.016	0.023	0.035
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.483	0.746	1.231	0.002	0.003	0.004			
		(LL)	0.504	0.772	1.211	0.003	0.004	0.007			

Function	N-ch Open drain Buffer				TTL 5V	
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA	EVTTB2				1	13
2mA	EVTKB2				1	13
3mA	EVTHB2				1	13
6mA	EVTJB2				1	13
9mA	EVT1B2				1	25
12mA	EVT9B2				1	25
18mA	EVT5B2				1	25
24mA	EVTDB2				1	25

Logic Diagram



Truth Table

A	BS1	MODE1	Y
1	X	0	Z
0	X	0	0
X	1	1	Z
X	0	1	0

X:Irrelevant

Z:High Impedance

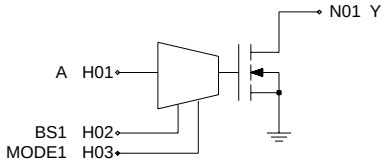
Connect a pull-up resistor to get a high level

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
EVTTB2 to EVTHB2	A	2.4	Y	-
	BS1	2.4		
	MODE1	1.3		
EVTJB2	A	2.4	Y	-
	BS1	2.4		
	MODE1	1.3		
EVT1B2 to EVT9B2	A	2.4	Y	-
	BS1	2.4		
	MODE1	1.3		
EVT5B2 to EVTDB2	A	2.4	Y	-
	BS1	2.4		
	MODE1	1.3		

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
EVTTB2	A → Y	(LZ)	0.359	0.543	0.849							
		(ZL)	3.157	4.592	7.036				0.138	0.202	0.312	
	BS1 → Y	(LZ)	0.362	0.546	0.853							
		(ZL)	3.158	4.595	7.040				0.138	0.202	0.312	
	MODE1 → Y	(LZ)	0.410	0.651	1.018							
		(ZL)	3.218	4.693	7.190				0.138	0.202	0.312	
EVTKB2	A → Y	(LZ)	0.359	0.542	0.849							
		(ZL)	2.241	3.310	5.048				0.104	0.154	0.233	
	BS1 → Y	(LZ)	0.362	0.545	0.853							
		(ZL)	2.245	3.314	5.042				0.104	0.154	0.233	
	MODE1 → Y	(LZ)	0.409	0.651	1.018							
		(ZL)	2.305	3.410	5.197				0.104	0.154	0.233	
EVTHB2	A → Y	(LZ)	0.361	0.543	0.850							
		(ZL)	2.100	2.979	4.314				0.089	0.126	0.181	
	BS1 → Y	(LZ)	0.363	0.546	0.854							
		(ZL)	2.096	2.982	4.316				0.089	0.126	0.181	
	MODE1 → Y	(LZ)	0.410	0.651	1.019							
		(ZL)	2.155	3.081	4.468				0.089	0.126	0.181	
EVTJB2	A → Y	(LZ)	0.485	0.734	1.158							
		(ZL)	1.025	1.520	2.294				0.031	0.044	0.062	
	BS1 → Y	(LZ)	0.489	0.738	1.162							
		(ZL)	1.030	1.523	2.297				0.031	0.044	0.062	
	MODE1 → Y	(LZ)	0.537	0.842	1.327							
		(ZL)	1.088	1.620	2.450				0.031	0.044	0.062	
EVT1B2	A → Y	(LZ)	0.518	0.783	1.245							
		(ZL)	0.864	1.315	2.022				0.024	0.033	0.047	
	BS1 → Y	(LZ)	0.520	0.785	1.248							
		(ZL)	0.866	1.316	2.027				0.024	0.033	0.047	
	MODE1 → Y	(LZ)	0.570	0.888	1.409							
		(ZL)	0.923	1.412	2.175				0.024	0.033	0.047	
EVT9B2	A → Y	(LZ)	0.559	0.842	1.340							
		(ZL)	0.665	1.043	1.649				0.013	0.018	0.025	
	BS1 → Y	(LZ)	0.560	0.845	1.344							
		(ZL)	0.670	1.045	1.654				0.013	0.018	0.025	
	MODE1 → Y	(LZ)	0.611	0.946	1.504							
		(ZL)	0.727	1.139	1.800				0.013	0.018	0.025	
EVT5B2	A → Y	(LZ)	0.591	0.888	1.417							
		(ZL)	0.621	0.986	1.576				0.010	0.014	0.020	
	BS1 → Y	(LZ)	0.595	0.892	1.420							
		(ZL)	0.624	0.989	1.582				0.010	0.014	0.020	
	MODE1 → Y	(LZ)	0.644	0.994	1.580							
		(ZL)	0.681	1.082	1.728				0.010	0.014	0.020	
EVTDB2	A → Y	(LZ)	0.641	0.959	1.530							
		(ZL)	0.586	0.942	1.523				0.008	0.011	0.015	
	BS1 → Y	(LZ)	0.644	0.963	1.533							
		(ZL)	0.590	0.945	1.529				0.008	0.011	0.015	
	MODE1 → Y	(LZ)	0.694	1.065	1.693							
		(ZL)	0.647	1.038	1.676				0.008	0.011	0.015	

Function	Low-noise N-ch Open drain Buffer					TTL 5V
Block type						
Drivability	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
1mA						
2mA						
3mA						
6mA						
9mA						
12mA	EYT9B2				1	10
18mA	EYT5B2				1	10
24mA	EYTDB2				1	10

Logic Diagram



Truth Table

A	BS1	MODE1	Y
1	X	0	Z
0	X	0	0
X	1	1	Z
X	0	1	0

X:Irrelevant

Z:High Impedance

Connect a pull-up resistor to get a high level

Block type	Input		Output	
	Symbol	Fan-in	Symbol	Fan-out
EYT9B2	A	2.4	Y	-
	BS1	2.4		
	MODE1	1.3		
EYT5B2 to EYTDB2	A	2.4	Y	-
	BS1	2.4		
	MODE1	1.3		

Block type	Switching speed											
	Path			t_{LD0} (ns)			t_1			T		
	IN → OUT			MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
EYT9B2	A → Y		(LZ)	0.739	1.098	1.739						
			(ZL)	1.975	3.258	5.268				0.021	0.030	0.044
	BS1 → Y		(LZ)	0.742	1.099	1.743						
			(ZL)	1.975	3.254	5.262				0.021	0.030	0.044
	MODE1 → Y		(LZ)	0.789	1.206	1.909						
			(ZL)	2.039	3.363	5.428				0.021	0.030	0.044
EYT5B2	A → Y		(LZ)	0.736	1.097	1.742						
			(ZL)	2.045	3.415	5.559				0.016	0.024	0.034
	BS1 → Y		(LZ)	0.738	1.100	1.745						
			(ZL)	2.052	3.421	5.557				0.016	0.024	0.034
	MODE1 → Y		(LZ)	0.787	1.205	1.912						
			(ZL)	2.111	3.517	5.712				0.016	0.024	0.035
EYTDB2	A → Y		(LZ)	0.846	1.261	2.007						
			(ZL)	2.102	3.544	5.784				0.015	0.022	0.033
	BS1 → Y		(LZ)	0.849	1.264	2.009						
			(ZL)	2.102	3.553	5.793				0.015	0.021	0.033
	MODE1 → Y		(LZ)	0.897	1.369	2.176						
			(ZL)	2.163	3.644	5.943				0.015	0.022	0.032

[MEMO]

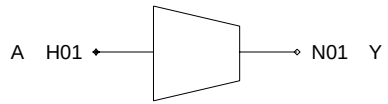
[MEMO]

4.3 PCI

[MEMO]

Function	3V PCI Input Buffer					
Block type						
Function	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
Normal	BP3IBI				1	7
Fail safe						
-						

Logic Diagram



Block type	Input		Output	
	Symbol	Fan-In	Symbol	Fan-Out
BP3IBI	A	-	Y	358

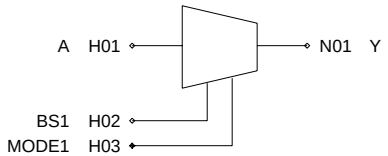
Truth Table

A	Yn
1	1
0	0

Block type	Switching speed								
	Path	t_{LD0} (ns)			t_1			T		
	IN → OUT	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BP3IBI	A → Y (HH)	0.113	0.162	0.227	0.001	0.002	0.003			
	(LL)	0.160	0.239	0.357	0.001	0.002	0.003			

Function	3V PCI Output Buffer					
Block type						
Function	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
Normal	BP3OB2				1	25
Fail safe						
-						

Logic Diagram



Block type	Input		Output	
	Symbol	Fan-In	Symbol	Fan-Out
BP3OB2	A	2.4	Y	-
	BS1	2.4		
	MODE1	1.3		

Truth Table

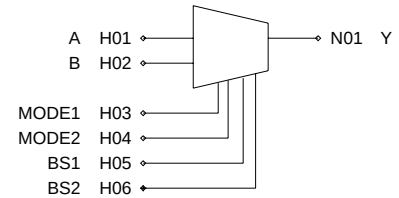
A	BS1	MODE1	Y
A	X	0	A
X	B	1	B

X:Irrelevant

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BP3OB2	A → Y	(HH)	0.689	1.097	1.789				0.015	0.023	0.037
		(LL)	0.569	0.930	1.512				0.013	0.019	0.028
	BS1 → Y	(HH)	0.691	1.099	1.792				0.015	0.023	0.037
		(LL)	0.572	0.934	1.516				0.013	0.019	0.028
	MODE1 → Y	(HH)	0.753	1.201	1.951				0.015	0.023	0.037
		(HL)	0.634	1.027	1.650				0.013	0.019	0.028
		(LH)	0.741	1.190	1.942				0.015	0.023	0.037
		(LL)	0.629	1.027	1.664				0.013	0.019	0.028

Function	3V PCI 3-State Buffer					
Block type						
Function	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
Normal	BP3TB3				1	32
Fail safe						
-						

Logic Diagram



Block type	Input		Output	
	Symbol	Fan-In	Symbol	Fan-Out
BP3TB3	A	2.4	Y	-
	B	2.4		
	MODE1	2.5		
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		

Truth Table

A	B	BS1	BS2	*1	*2	Y	
A	1	X	X	0	0	A	
A	0	X	X	0	0	Z	
X	X	A	1	1	0	A	
X	X	A	0	1	0	Z	
X	X	X	X	0	1	Z	
X	X	X	X	1	1	Z	← Prohibition

*1:MODE1 , *2:MODE2

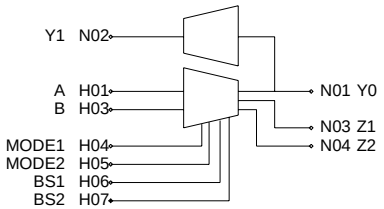
X:Irrelevant

Z:High Impedance

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BP3TB3	A → Y	(HH)	0.696	1.139	1.890				0.015	0.024	0.038
		(LL)	0.674	1.149	1.927				0.015	0.022	0.032
	B → Y	(HZ)	0.774	1.114	1.747						
		(LZ)	0.701	1.090	1.750						
		(ZH)	0.730	1.192	1.955				0.015	0.023	0.037
		(ZL)	0.814	1.342	2.192				0.014	0.021	0.031
	MODE1 → Y	(HH)	0.761	1.245	2.056				0.015	0.023	0.038
		(HL)	0.740	1.243	2.067				0.015	0.022	0.032
		(LH)	0.747	1.230	2.040				0.015	0.023	0.038
		(LL)	0.736	1.246	2.086				0.015	0.022	0.032
		(HZ)	0.837	1.216	1.902						
		(LZ)	0.764	1.191	1.908						
		(ZH)	0.781	1.301	2.124				0.015	0.023	0.037
		(ZL)	0.866	1.451	2.359				0.014	0.021	0.031
	MODE2 → Y	(HZ)	0.705	0.966	1.459						
		(LZ)	0.628	0.945	1.466						
		(ZH)	0.640	1.051	1.733				0.015	0.023	0.037
		(ZL)	0.724	1.200	1.966				0.014	0.021	0.032
	BS1 → Y	(HH)	0.697	1.140	1.893				0.015	0.024	0.038
		(LL)	0.677	1.152	1.934				0.015	0.022	0.032
	BS2 → Y	(HZ)	0.776	1.111	1.751						
		(LZ)	0.704	1.093	1.754						
		(ZH)	0.731	1.195	1.960				0.015	0.023	0.037
		(ZL)	0.816	1.344	2.192				0.014	0.021	0.032

Function	3V PCI I/O Buffer					
Block type						
Function	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
Normal	BP3BBB				1	41
Fail safe						
-						

Logic Diagram



Block type	Input		Output	
	Symbol	Fan-In	Symbol	Fan-Out
BP3BBB	A	2.4	Y1	358
	B	2.4	Z1	35
	MODE1	2.5	Z2	35
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		

Truth Table

A	B	BS1	BS2	*1	*2	Y0	Z1	Z2
A	1	X	X	0	0	A	A	1
A	0	X	X	0	0	Z	A	0
X	X	A	1	1	0	A	A	1
X	X	A	0	1	0	Z	A	0
A	B	X	X	0	1	Z	A	B
X	X	A	B	1	1	Z	A	B

← Prohibition

Y0	Y1
0	0
1	1

*1:MODE1 , *2:MODE2

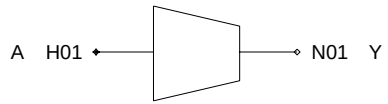
X:Irrelevant

Z:High Impedance

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BP3BBB	A → Y0	(HH)	0.696	1.139	1.890				0.015	0.024	0.038
		(LL)	0.674	1.149	1.927				0.015	0.022	0.032
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033			
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0	(HZ)	0.774	1.114	1.747						
		(LZ)	0.701	1.090	1.750						
		(ZH)	0.730	1.192	1.955				0.015	0.023	0.037
		(ZL)	0.814	1.342	2.192				0.014	0.021	0.031
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.761	1.245	2.056				0.015	0.023	0.038
		(HL)	0.740	1.243	2.067				0.015	0.022	0.032
		(LH)	0.747	1.230	2.040				0.015	0.023	0.038
		(LL)	0.736	1.246	2.086				0.015	0.022	0.032
		(HZ)	0.837	1.216	1.902						
		(LZ)	0.764	1.191	1.908						
		(ZH)	0.781	1.301	2.124				0.015	0.023	0.037
		(ZL)	0.866	1.451	2.359				0.014	0.021	0.031
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033			
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	0.705	0.966	1.459						
		(LZ)	0.628	0.945	1.466						
		(ZH)	0.640	1.051	1.733				0.015	0.023	0.037
		(ZL)	0.724	1.200	1.966				0.014	0.021	0.032
	BS1 → Y0	(HH)	0.697	1.140	1.893				0.015	0.024	0.038
		(LL)	0.677	1.152	1.934				0.015	0.022	0.032
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033			
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	0.776	1.111	1.751						
		(LZ)	0.704	1.093	1.754						
		(ZH)	0.731	1.195	1.960				0.015	0.023	0.037
		(ZL)	0.816	1.344	2.192				0.014	0.021	0.032
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.113	0.162	0.227	0.001	0.002	0.003			
		(LL)	0.160	0.239	0.357	0.001	0.002	0.003			

Function	5V PCI Input Buffer					
Block type						
Function	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
Normal	BP5IBI				1	7
Fail safe						
-						

Logic Diagram



Block type	Input		Output	
	Symbol	Fan-In	Symbol	Fan-Out
BP5IBI	A	-	Y	367

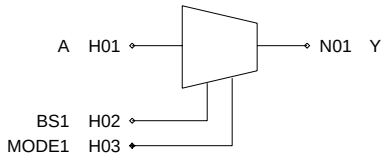
Truth Table

A	Yn
1	1
0	0

Block type	Switching speed									
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BP5IBI	A → Y	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			

Function	5V PCI Output Buffer					
Block type						
Function	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
Normal	BP5OB2				1	25
Fail safe						
-						

Logic Diagram



Block type	Input		Output	
	Symbol	Fan-In	Symbol	Fan-Out
BP5OB2	A	2.4	Y	-
	BS1	2.4		
	MODE1	1.3		

Truth Table

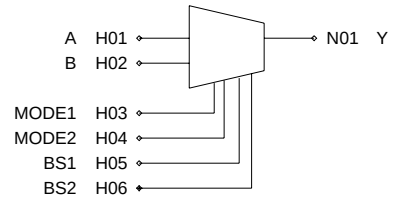
A	BS1	MODE1	Y
A	X	0	A
X	B	1	B

X:Irrelevant

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T			
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
BP5OB2	A → Y	(HH)	0.940	1.488	2.434				0.010	0.016	0.026	
		(LL)	0.665	1.080	1.761				0.007	0.010	0.015	
	BS1 → Y	(HH)	0.942	1.491	2.440				0.010	0.016	0.026	
		(LL)	0.668	1.083	1.765				0.007	0.010	0.015	
	MODE1 → Y	(HH)	1.003	1.593	2.598				0.010	0.016	0.026	
		(HL)	0.730	1.177	1.899				0.007	0.010	0.015	
		(LH)	0.992	1.582	2.589				0.010	0.016	0.026	
		(LL)	0.725	1.176	1.914				0.007	0.010	0.015	

Function	5V PCI 3-State Buffer					
Block type						
Function	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
Normal	BP5TB3				1	54
Fail safe						
-						

Logic Diagram



Block type	Input		Output	
	Symbol	Fan-In	Symbol	Fan-Out
BP5TB3	A	2.4	Y	-
	B	2.4		
	MODE1	2.5		
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		

Truth Table

A	B	BS1	BS2	*1	*2	Y	
A	1	X	X	0	0	A	
A	0	X	X	0	0	Z	
X	X	A	1	1	0	A	
X	X	A	0	1	0	Z	
X	X	X	X	0	1	Z	
X	X	X	X	1	1	Z	← Prohibition

*1:MODE1 , *2:MODE2

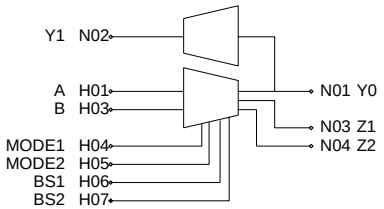
X:Irrelevant

Z:High Impedance

Block type	Switching speed											
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BP5TB3	A → Y	(HH)	0.839	1.346	2.244				0.010	0.016	0.026
		(LL)	0.965	1.537	2.474				0.013	0.018	0.026
	B → Y	(HZ)	1.438	2.122	3.354						
		(LZ)	0.859	1.324	2.124						
		(ZH)	1.091	1.778	2.933				0.010	0.016	0.026
		(ZL)	1.202	1.866	2.975				0.014	0.019	0.029
	MODE1 → Y	(HH)	0.905	1.453	2.412				0.010	0.016	0.026
		(HL)	1.030	1.633	2.612				0.013	0.018	0.026
		(LH)	0.890	1.438	2.394				0.010	0.016	0.026
		(LL)	1.027	1.638	2.631				0.013	0.018	0.026
		(HZ)	1.503	2.221	3.516						
		(LZ)	0.924	1.426	2.281						
		(ZH)	1.142	1.888	3.100				0.010	0.016	0.026
		(ZL)	1.250	1.970	3.146				0.014	0.019	0.028
	MODE2 → Y	(HZ)	1.357	1.975	3.094						
		(LZ)	0.778	1.180	1.866						
		(ZH)	1.007	1.644	2.715				0.010	0.016	0.026
		(ZL)	1.116	1.731	2.760				0.014	0.020	0.029
	BS1 → Y	(HH)	0.841	1.349	2.248				0.010	0.016	0.026
		(LL)	0.968	1.541	2.480				0.013	0.018	0.026
	BS2 → Y	(HZ)	1.441	2.126	3.359						
		(LZ)	0.863	1.326	2.126						
		(ZH)	1.093	1.781	2.936				0.010	0.016	0.026
		(ZL)	1.204	1.870	2.983				0.014	0.020	0.029

Function	5V PCI I/O Buffer					
Block type						
Function	no resistor	with 50 kΩ P/D	with 50 kΩ P/U	with 5 kΩ P/U	I/O cells	int. cells
Normal	BP5BBB				1	63
Fail safe						
-						

Logic Diagram



Block type	Input		Output	
	Symbol	Fan-In	Symbol	Fan-Out
BP5BBB	A	2.4	Y1	367
	B	2.4	Z1	35
	MODE1	2.5	Z2	35
	MODE2	2.4		
	BS1	2.4		
	BS2	2.4		

Truth Table

A	B	BS1	BS2	*1	*2	Y0	Z1	Z2
A	1	X	X	0	0	A	A	1
A	0	X	X	0	0	Z	A	0
X	X	A	1	1	0	A	A	1
X	X	A	0	1	0	Z	A	0
A	B	X	X	0	1	Z	A	B
X	X	A	B	1	1	Z	A	B

← Prohibition

Y0	Y1
0	0
1	1

*1:MODE1 , *2:MODE2

X:Irrelevant

Z:High Impedance

Block type	Switching speed										
	Path		t_{LD0} (ns)			t_1			T		
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
BP5BBB	A → Y0	(HH)	0.839	1.346	2.244				0.010	0.016	0.026
		(LL)	0.965	1.537	2.474				0.013	0.018	0.026
	A → Z1	(HH)	0.196	0.301	0.480	0.013	0.021	0.033			
		(LL)	0.232	0.381	0.617	0.010	0.016	0.025			
	B → Y0	(HZ)	1.438	2.122	3.354						
		(LZ)	0.859	1.324	2.124						
		(ZH)	1.091	1.778	2.933				0.010	0.016	0.026
		(ZL)	1.202	1.866	2.975				0.014	0.019	0.029
	B → Z2	(HH)	0.158	0.241	0.379	0.013	0.021	0.034			
		(LL)	0.179	0.292	0.469	0.010	0.016	0.025			
	MODE1 → Y0	(HH)	0.905	1.453	2.412				0.010	0.016	0.026
		(HL)	1.030	1.633	2.612				0.013	0.018	0.026
		(LH)	0.890	1.438	2.394				0.010	0.016	0.026
		(LL)	1.027	1.638	2.631				0.013	0.018	0.026
		(HZ)	1.503	2.221	3.516						
		(LZ)	0.924	1.426	2.281						
		(ZH)	1.142	1.888	3.100				0.010	0.016	0.026
		(ZL)	1.250	1.970	3.146				0.014	0.019	0.028
	MODE1 → Z1	(HH)	0.261	0.407	0.643	0.013	0.021	0.033			
		(HL)	0.298	0.477	0.756	0.010	0.016	0.025			
		(LH)	0.246	0.393	0.631	0.013	0.021	0.033			
		(LL)	0.293	0.480	0.771	0.010	0.016	0.025			
	MODE1 → Z2	(HH)	0.225	0.348	0.545	0.013	0.021	0.034			
		(HL)	0.245	0.386	0.602	0.010	0.016	0.025			
		(LH)	0.209	0.332	0.526	0.013	0.021	0.034			
		(LL)	0.242	0.393	0.627	0.010	0.016	0.025			
	MODE2 → Y0	(HZ)	1.357	1.975	3.094						
		(LZ)	0.778	1.180	1.866						
		(ZH)	1.007	1.644	2.715				0.010	0.016	0.026
		(ZL)	1.116	1.731	2.760				0.014	0.020	0.029
	BS1 → Y0	(HH)	0.841	1.349	2.248				0.010	0.016	0.026
		(LL)	0.968	1.541	2.480				0.013	0.018	0.026
	BS1 → Z1	(HH)	0.198	0.303	0.484	0.013	0.021	0.033			
		(LL)	0.234	0.384	0.622	0.010	0.016	0.025			
	BS2 → Y0	(HZ)	1.441	2.126	3.359						
		(LZ)	0.863	1.326	2.126						
		(ZH)	1.093	1.781	2.936				0.010	0.016	0.026
		(ZL)	1.204	1.870	2.983				0.014	0.020	0.029
	BS2 → Z2	(HH)	0.160	0.244	0.383	0.013	0.021	0.034			
		(LL)	0.181	0.296	0.475	0.010	0.016	0.025			
	Y0 → Y1	(HH)	0.141	0.211	0.325	0.001	0.002	0.003			
		(LL)	0.185	0.282	0.435	0.001	0.002	0.003			

[MEMO]

[MEMO]

Chapter 5

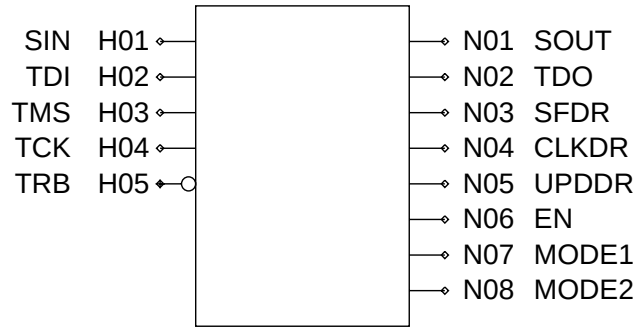
Boundary Scan Block (Function)

5.1 TAP Macro

[MEMO]

Function	TAP MACRO					SSI Family	
Block type	Standard type						
	-		-				
Drivability	Name	cells	Name	cells			
-	SBC4						
-							

Logic Diagram

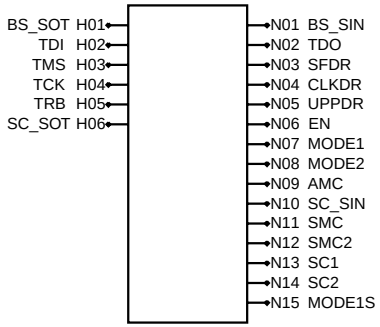


Equivalent Circuit

[MEMO]

Function	TAP Macro with NEC Scan					SSI Family	
Block type	Standard type						
	-		-				
Drivability	Name	cells	Name	cells			
-	SBCL						
-							

Logic Diagram



Equivalent Circuit

[MEMO]

[MEMO]

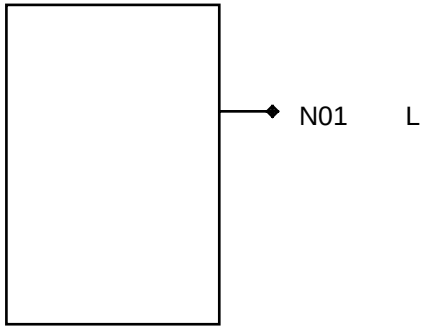
[MEMO]

5.2 Level Generator

[MEMO]

Function	Level Generator(CLANP)					SSI Family	
Block type	Standard type						
	-		-				
Drivability	Name	cells	Name	cells			
-	SBZ1	0					
-							

Logic Diagram



Truth Table

L
0

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
SBZ1											L	15000

[MEMO]

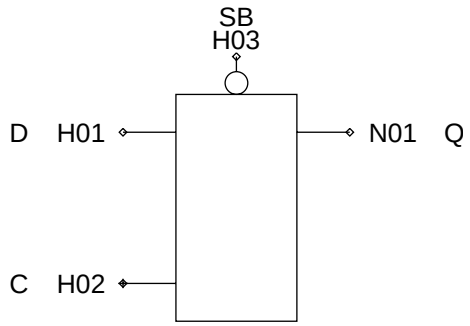
[MEMO]

5.3 D-Latch

[MEMO]

Function	D-Latch with SB Q Out (Low Power) for Boundary Scan Block										SSI Family	
Block type	Standard type											
	-		-									
Drivability	Name	cells	Name	cells								
-	L606	5										
-												

Logic Diagram



Truth Table

D	C	SB	Q
1	0	1	1
0	0	1	0
X	1	1	Latch
X	X	0	1

X:Irrelevant

Block type	Switching speed								Input		Output	
	Path		t LD0 (ns)			t 1						
	IN → OUT		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	Symbol	Fanin	Symbol	Fanout
L606	D → Q	(HH)	0.147	0.235	0.355	0.013	0.021	0.034	D	3.8	Q	35
		(LL)	0.225	0.350	0.551	0.010	0.016	0.026	C	1.3		
	C → Q	(HH)	0.222	0.339	0.519	0.013	0.021	0.034	SB	1.3		
		(HL)	0.320	0.504	0.789	0.010	0.016	0.026				
	SB → Q	(HL)	0.250	0.400	0.627	0.010	0.016	0.026				
		(LH)	0.153	0.248	0.389	0.013	0.021	0.034				
	Set up time	D	0.190		0.260							
	Hold time	D	0.070		0.010							
	Release time	SB	0.150		0.250							
	Removal time	SB	0.060		0.000							
	Min Pulse	C	0.361		0.872							
	Min Pulse	SB	0.308		0.782							

Index

Block	Function	Cells (I/O)	Page
B001	I/O Buffer 12mA	25 (1)	1-28
B001BB	I/O Buffer 12mA	38 (1)	4-34
B003	I/O Buffer 9mA	25 (1)	1-28
B003BB	I/O Buffer 9mA	38 (1)	4-34
B005	I/O Buffer 18mA	27 (1)	1-28
B005BB	I/O Buffer 18mA	41 (1)	4-34
B007	3-State Buffer 12mA	18 (1)	1-16
B007B3	3-State Buffer 12mA	29 (1)	4-12
B008	3-State Buffer 9mA	18 (1)	1-16
B008B3	3-State Buffer 9mA	29 (1)	4-12
B009	3-State Buffer 18mA	20 (1)	1-16
B009B3	3-State Buffer 18mA	32 (1)	4-12
B00C	I/O Buffer 6mA	25 (1)	1-28
B00CBB	I/O Buffer 6mA	38 (1)	4-34
B00E	3-State Buffer 6mA	18 (1)	1-16
B00EB3	3-State Buffer 6mA	29 (1)	4-12
B00F	I/O Buffer 24mA	27 (1)	1-28
B00FBB	I/O Buffer 24mA	41 (1)	4-34
B00H	3-State Buffer 24mA	20 (1)	1-16
B00HB3	3-State Buffer 24mA	32 (1)	4-12
B00T	3-State Buffer 3mA	18 (1)	1-16
B00TB3	3-State Buffer 3mA	29 (1)	4-12
B00U	I/O Buffer 3mA	25 (1)	1-28
B00UBB	I/O Buffer 3mA	38 (1)	4-34
B0D1	I/O Buffer 12mA 50kΩ Pull-down	25 (1)	1-28
B0D1BB	I/O Buffer 12mA 50kΩ Pull-down	38 (1)	4-34
B0D3	I/O Buffer 9mA 50kΩ Pull-down	25 (1)	1-28
B0D3BB	I/O Buffer 9mA 50kΩ Pull-down	38 (1)	4-34
B0D5	I/O Buffer 18mA 50kΩ Pull-down	27 (1)	1-28
B0D5BB	I/O Buffer 18mA 50kΩ Pull-down	41 (1)	4-34
B0D7	3-State Buffer 12mA 50kΩ Pull-down	18 (1)	1-16
B0D7B3	3-State Buffer 12mA 50kΩ Pull-down	29 (1)	4-12
B0D8	3-State Buffer 9mA 50kΩ Pull-down	18 (1)	1-16
B0D8B3	3-State Buffer 9mA 50kΩ Pull-down	29 (1)	4-12
B0D9	3-State Buffer 18mA 50kΩ Pull-down	20 (1)	1-16
B0D9B3	3-State Buffer 18mA 50kΩ Pull-down	32 (1)	4-12
B0DC	I/O Buffer 6mA 50kΩ Pull-down	25 (1)	1-28
B0DCBB	I/O Buffer 6mA 50kΩ Pull-down	38 (1)	4-34
B0DE	3-State Buffer 6mA 50kΩ Pull-down	18 (1)	1-16

Block	Function	Cells (I/O)	Page
B0DEB3	3-State Buffer 6mA 50kΩ Pull-down	29 (1)	4-12
B0DF	I/O Buffer 24mA 50kΩ Pull-down	27 (1)	1-28
B0DFBB	I/O Buffer 24mA 50kΩ Pull-down	41 (1)	4-34
B0DH	3-State Buffer 24mA 50kΩ Pull-down	20 (1)	1-16
B0DHB3	3-State Buffer 24mA 50kΩ Pull-down	32 (1)	4-12
B0DT	3-State Buffer 3mA 50kΩ Pull-down	18 (1)	1-16
B0DTB3	3-State Buffer 3mA 50kΩ Pull-down	29 (1)	4-12
B0DU	I/O Buffer 3mA 50kΩ Pull-down	25 (1)	1-28
B0DUBB	I/O Buffer 3mA 50kΩ Pull-down	38 (1)	4-34
B0U1	I/O Buffer 12mA 50kΩ Pull-up	25 (1)	1-28
B0U1BB	I/O Buffer 12mA 50kΩ Pull-up	38 (1)	4-34
B0U3	I/O Buffer 9mA 50kΩ Pull-up	25 (1)	1-28
B0U3BB	I/O Buffer 9mA 50kΩ Pull-up	38 (1)	4-34
B0U5	I/O Buffer 18mA 50kΩ Pull-up	27 (1)	1-28
B0U5BB	I/O Buffer 18mA 50kΩ Pull-up	41 (1)	4-34
B0U7	3-State Buffer 12mA 50kΩ Pull-up	18 (1)	1-16
B0U7B3	3-State Buffer 12mA 50kΩ Pull-up	29 (1)	4-12
B0U8	3-State Buffer 9mA 50kΩ Pull-up	18 (1)	1-16
B0U8B3	3-State Buffer 9mA 50kΩ Pull-up	29 (1)	4-12
B0U9	3-State Buffer 18mA 50kΩ Pull-up	20 (1)	1-16
B0U9B3	3-State Buffer 18mA 50kΩ Pull-up	32 (1)	4-12
B0UC	I/O Buffer 6mA 50kΩ Pull-up	25 (1)	1-28
B0UCBB	I/O Buffer 6mA 50kΩ Pull-up	38 (1)	4-34
B0UE	3-State Buffer 6mA 50kΩ Pull-up	18 (1)	1-16
B0UEB3	3-State Buffer 6mA 50kΩ Pull-up	29 (1)	4-12
B0UF	I/O Buffer 24mA 50kΩ Pull-up	27 (1)	1-28
B0UFBB	I/O Buffer 24mA 50kΩ Pull-up	41 (1)	4-34
B0UH	3-State Buffer 24mA 50kΩ Pull-up	20 (1)	1-16
B0UHB3	3-State Buffer 24mA 50kΩ Pull-up	32 (1)	4-12
B0UT	3-State Buffer 3mA 50kΩ Pull-up	18 (1)	1-16
B0UTB3	3-State Buffer 3mA 50kΩ Pull-up	29 (1)	4-12
B0UU	I/O Buffer 3mA 50kΩ Pull-up	25 (1)	1-28
B0UUBB	I/O Buffer 3mA 50kΩ Pull-up	38 (1)	4-34
B0W1	I/O Buffer 12mA 5kΩ Pull-up	25 (1)	1-28
B0W1BB	I/O Buffer 12mA 5kΩ Pull-up	38 (1)	4-34
B0W3	I/O Buffer 9mA 5kΩ Pull-up	25 (1)	1-28
B0W3BB	I/O Buffer 9mA 5kΩ Pull-up	38 (1)	4-34
B0W5	I/O Buffer 18mA 5kΩ Pull-up	27 (1)	1-28
B0W5BB	I/O Buffer 18mA 5kΩ Pull-up	41 (1)	4-34
B0W7	3-State Buffer 12mA 5kΩ Pull-up	18 (1)	1-16
B0W7B3	3-State Buffer 12mA 5kΩ Pull-up	29 (1)	4-12
B0W8	3-State Buffer 9mA 5kΩ Pull-up	18 (1)	1-16
B0W8B3	3-State Buffer 9mA 5kΩ Pull-up	29 (1)	4-12

Block	Function	Cells (I/O)	Page
B0W9	3-State Buffer 18mA 5kΩ Pull-up	20 (1)	1-16
B0W9B3	3-State Buffer 18mA 5kΩ Pull-up	32 (1)	4-12
B0WC	I/O Buffer 6mA 5kΩ Pull-up	25 (1)	1-28
B0WCBB	I/O Buffer 6mA 5kΩ Pull-up	38 (1)	4-34
B0WE	3-State Buffer 6mA 5kΩ Pull-up	18 (1)	1-16
B0WEB3	3-State Buffer 6mA 5kΩ Pull-up	29 (1)	4-12
B0WF	I/O Buffer 24mA 5kΩ Pull-up	27 (1)	1-28
B0WFBB	I/O Buffer 24mA 5kΩ Pull-up	41 (1)	4-34
B0WH	3-State Buffer 24mA 5kΩ Pull-up	20 (1)	1-16
B0WHB3	3-State Buffer 24mA 5kΩ Pull-up	32 (1)	4-12
B0WT	3-State Buffer 3mA 5kΩ Pull-up	18 (1)	1-16
B0WTB3	3-State Buffer 3mA 5kΩ Pull-up	29 (1)	4-12
B0WU	I/O Buffer 3mA 5kΩ Pull-up	25 (1)	1-28
B0WUBB	I/O Buffer 3mA 5kΩ Pull-up	38 (1)	4-34
BD07	3-State Buffer 12mA	47 (1)	1-70
BD07B3	3-State Buffer 12mA	60 (1)	4-124
BD08	3-State Buffer 9mA	47 (1)	1-70
BD08B3	3-State Buffer 9mA	60 (1)	4-124
BD09	3-State Buffer 18mA	47 (1)	1-70
BD09B3	3-State Buffer 18mA	60 (1)	4-124
BD0E	3-State Buffer 6mA	45 (1)	1-70
BD0EB3	3-State Buffer 6mA	57 (1)	4-124
BD0H	3-State Buffer 24mA	47 (1)	1-70
BD0HB3	3-State Buffer 24mA	60 (1)	4-124
BD0T	3-State Buffer 3mA	45 (1)	1-70
BD0TB3	3-State Buffer 3mA	57 (1)	4-124
BE01	Low-noise I/O Buffer 12mA	18 (1)	1-34
BE01BB	Low-noise I/O Buffer 12mA	31 (1)	4-54
BE03	Low-noise I/O Buffer 9mA	18 (1)	1-34
BE03BB	Low-noise I/O Buffer 9mA	31 (1)	4-54
BE05	Low-noise I/O Buffer 18mA	18 (1)	1-34
BE05BB	Low-noise I/O Buffer 18mA	31 (1)	4-54
BE07	Low-noise 3-State Buffer 12mA	11 (1)	1-20
BE07B3	Low-noise 3-State Buffer 12mA	22 (1)	4-24
BE08	Low-noise 3-State Buffer 9mA	11 (1)	1-20
BE08B3	Low-noise 3-State Buffer 9mA	22 (1)	4-24
BE09	Low-noise 3-State Buffer 18mA	11 (1)	1-20
BE09B3	Low-noise 3-State Buffer 18mA	22 (1)	4-24
BE0C	Low-noise I/O Buffer 6mA	18 (1)	1-34
BE0CBB	Low-noise I/O Buffer 6mA	31 (1)	4-54
BE0E	Low-noise 3-State Buffer 6mA	11 (1)	1-20
BE0EB3	Low-noise 3-State Buffer 6mA	22 (1)	4-24
BE0F	Low-noise I/O Buffer 24mA	18 (1)	1-34

Block	Function	Cells (I/O)	Page
BE0FBB	Low-noise I/O Buffer 24mA	31 (1)	4-54
BE0H	Low-noise 3-State Buffer 24mA	11 (1)	1-20
BE0HB3	Low-noise 3-State Buffer 24mA	22 (1)	4-24
BED1	Low-noise I/O Buffer 12mA 50kΩ Pull-down	18 (1)	1-34
BED1BB	Low-noise I/O Buffer 12mA 50kΩ Pull-down	31 (1)	4-54
BED3	Low-noise I/O Buffer 9mA 50kΩ Pull-down	18 (1)	1-34
BED3BB	Low-noise I/O Buffer 9mA 50kΩ Pull-down	31 (1)	4-54
BED5	Low-noise I/O Buffer 18mA 50kΩ Pull-down	18 (1)	1-34
BED5BB	Low-noise I/O Buffer 18mA 50kΩ Pull-down	31 (1)	4-54
BED7	Low-noise 3-State Buffer 12mA 50kΩ Pull-down	11 (1)	1-20
BED7B3	Low-noise 3-State Buffer 12mA 50kΩ Pull-down	22 (1)	4-24
BED8	Low-noise 3-State Buffer 9mA 50kΩ Pull-down	11 (1)	1-20
BED8B3	Low-noise 3-State Buffer 9mA 50kΩ Pull-down	22 (1)	4-24
BED9	Low-noise 3-State Buffer 18mA 50kΩ Pull-down	11 (1)	1-20
BED9B3	Low-noise 3-State Buffer 18mA 50kΩ Pull-down	22 (1)	4-24
BEDC	Low-noise I/O Buffer 6mA 50kΩ Pull-down	18 (1)	1-34
BEDCBB	Low-noise I/O Buffer 6mA 50kΩ Pull-down	31 (1)	4-54
BEDE	Low-noise 3-State Buffer 6mA 50kΩ Pull-down	11 (1)	1-20
BEDEB3	Low-noise 3-State Buffer 6mA 50kΩ Pull-down	22 (1)	4-24
BEDF	Low-noise I/O Buffer 24mA 50kΩ Pull-down	18 (1)	1-34
BEDFBB	Low-noise I/O Buffer 24mA 50kΩ Pull-down	31 (1)	4-54
BEDH	Low-noise 3-State Buffer 24mA 50kΩ Pull-down	11 (1)	1-20
BEDHB3	Low-noise 3-State Buffer 24mA 50kΩ Pull-down	22 (1)	4-24
BEU1	Low-noise I/O Buffer 12mA 50kΩ Pull-up	18 (1)	1-34
BEU1BB	Low-noise I/O Buffer 12mA 50kΩ Pull-up	31 (1)	4-54
BEU3	Low-noise I/O Buffer 9mA 50kΩ Pull-up	18 (1)	1-34
BEU3BB	Low-noise I/O Buffer 9mA 50kΩ Pull-up	31 (1)	4-54
BEU5	Low-noise I/O Buffer 18mA 50kΩ Pull-up	18 (1)	1-34
BEU5BB	Low-noise I/O Buffer 18mA 50kΩ Pull-up	31 (1)	4-54
BEU7	Low-noise 3-State Buffer 12mA 50kΩ Pull-up	11 (1)	1-20
BEU7B3	Low-noise 3-State Buffer 12mA 50kΩ Pull-up	22 (1)	4-24
BEU8	Low-noise 3-State Buffer 9mA 50kΩ Pull-up	11 (1)	1-20
BEU8B3	Low-noise 3-State Buffer 9mA 50kΩ Pull-up	22 (1)	4-24
BEU9	Low-noise 3-State Buffer 18mA 50kΩ Pull-up	11 (1)	1-20
BEU9B3	Low-noise 3-State Buffer 18mA 50kΩ Pull-up	22 (1)	4-24
BEUC	Low-noise I/O Buffer 6mA 50kΩ Pull-up	18 (1)	1-34
BEUCBB	Low-noise I/O Buffer 6mA 50kΩ Pull-up	31 (1)	4-54
BEUE	Low-noise 3-State Buffer 6mA 50kΩ Pull-up	11 (1)	1-20
BEUEB3	Low-noise 3-State Buffer 6mA 50kΩ Pull-up	22 (1)	4-24
BEUF	Low-noise I/O Buffer 24mA 50kΩ Pull-up	18 (1)	1-34
BEUFBB	Low-noise I/O Buffer 24mA 50kΩ Pull-up	31 (1)	4-54
BEUH	Low-noise 3-State Buffer 24mA 50kΩ Pull-up	11 (1)	1-20
BEUHB3	Low-noise 3-State Buffer 24mA 50kΩ Pull-up	22 (1)	4-24

Block	Function	Cells (I/O)	Page
BEW1	Low-noise I/O Buffer 12mA 5kΩ Pull-up	18 (1)	1-34
BEW1BB	Low-noise I/O Buffer 12mA 5kΩ Pull-up	31 (1)	4-54
BEW3	Low-noise I/O Buffer 9mA 5kΩ Pull-up	18 (1)	1-34
BEW3BB	Low-noise I/O Buffer 9mA 5kΩ Pull-up	31 (1)	4-54
BEW5	Low-noise I/O Buffer 18mA 5kΩ Pull-up	18 (1)	1-34
BEW5BB	Low-noise I/O Buffer 18mA 5kΩ Pull-up	31 (1)	4-54
BEW7	Low-noise 3-State Buffer 12mA 5kΩ Pull-up	11 (1)	1-20
BEW7B3	Low-noise 3-State Buffer 12mA 5kΩ Pull-up	22 (1)	4-24
BEW8	Low-noise 3-State Buffer 9mA 5kΩ Pull-up	11 (1)	1-20
BEW8B3	Low-noise 3-State Buffer 9mA 5kΩ Pull-up	22 (1)	4-24
BEW9	Low-noise 3-State Buffer 18mA 5kΩ Pull-up	11 (1)	1-20
BEW9B3	Low-noise 3-State Buffer 18mA 5kΩ Pull-up	22 (1)	4-24
BEWC	Low-noise I/O Buffer 6mA 5kΩ Pull-up	18 (1)	1-34
BEWCBB	Low-noise I/O Buffer 6mA 5kΩ Pull-up	31 (1)	4-54
BEWE	Low-noise 3-State Buffer 6mA 5kΩ Pull-up	11 (1)	1-20
BEWEB3	Low-noise 3-State Buffer 6mA 5kΩ Pull-up	22 (1)	4-24
BEWF	Low-noise I/O Buffer 24mA 5kΩ Pull-up	18 (1)	1-34
BEWFBB	Low-noise I/O Buffer 24mA 5kΩ Pull-up	31 (1)	4-54
BEWH	Low-noise 3-State Buffer 24mA 5kΩ Pull-up	11 (1)	1-20
BEWHB3	Low-noise 3-State Buffer 24mA 5kΩ Pull-up	22 (1)	4-24
BFD1	Low-noise Schmitt I/O Buffer 12mA 50kΩ Pull-down	22 (1)	1-44
BFD1BB	Low-noise Schmitt I/O Buffer 12mA 50kΩ Pull-down	35 (1)	4-90
BFD3	Low-noise Schmitt I/O Buffer 9mA 50kΩ Pull-down	22 (1)	1-44
BFD3BB	Low-noise Schmitt I/O Buffer 9mA 50kΩ Pull-down	35 (1)	4-90
BFD5	Low-noise Schmitt I/O Buffer 18mA 50kΩ Pull-down	22 (1)	1-44
BFD5BB	Low-noise Schmitt I/O Buffer 18mA 50kΩ Pull-down	35 (1)	4-90
BFDC	Low-noise Schmitt I/O Buffer 6mA 50kΩ Pull-down	22 (1)	1-44
BFDCBB	Low-noise Schmitt I/O Buffer 6mA 50kΩ Pull-down	35 (1)	4-90
BFDF	Low-noise Schmitt I/O Buffer 24mA 50kΩ Pull-down	22 (1)	1-44
BFDFBB	Low-noise Schmitt I/O Buffer 24mA 50kΩ Pull-down	35 (1)	4-90
BFI1	Low-noise Schmitt I/O Buffer 12mA	22 (1)	1-44
BFI1BB	Low-noise Schmitt I/O Buffer 12mA	35 (1)	4-90
BFI3	Low-noise Schmitt I/O Buffer 9mA	22 (1)	1-44
BFI3BB	Low-noise Schmitt I/O Buffer 9mA	35 (1)	4-90
BFI5	Low-noise Schmitt I/O Buffer 18mA	22 (1)	1-44
BFI5BB	Low-noise Schmitt I/O Buffer 18mA	35 (1)	4-90
BFIC	Low-noise Schmitt I/O Buffer 6mA	22 (1)	1-44
BFICBB	Low-noise Schmitt I/O Buffer 6mA	35 (1)	4-90
BFIF	Low-noise Schmitt I/O Buffer 24mA	22 (1)	1-44
BFIFBB	Low-noise Schmitt I/O Buffer 24mA	35 (1)	4-90
BFU1	Low-noise Schmitt I/O Buffer 12mA 50kΩ Pull-up	22 (1)	1-44
BFU1BB	Low-noise Schmitt I/O Buffer 12mA 50kΩ Pull-up	35 (1)	4-90
BFU3	Low-noise Schmitt I/O Buffer 9mA 50kΩ Pull-up	22 (1)	1-44

Block	Function	Cells (I/O)	Page
BFU3BB	Low-noise Schmitt I/O Buffer 9mA 50kΩ Pull-up	35 (1)	4-90
BFU5	Low-noise Schmitt I/O Buffer 18mA 50kΩ Pull-up	22 (1)	1-44
BFU5BB	Low-noise Schmitt I/O Buffer 18mA 50kΩ Pull-up	35 (1)	4-90
BFUC	Low-noise Schmitt I/O Buffer 6mA 50kΩ Pull-up	22 (1)	1-44
BFUCBB	Low-noise Schmitt I/O Buffer 6mA 50kΩ Pull-up	35 (1)	4-90
BFUF	Low-noise Schmitt I/O Buffer 24mA 50kΩ Pull-up	22 (1)	1-44
BFUFBB	Low-noise Schmitt I/O Buffer 24mA 50kΩ Pull-up	35 (1)	4-90
BFW1	Low-noise Schmitt I/O Buffer 12mA 5kΩ Pull-up	22 (1)	1-44
BFW1BB	Low-noise Schmitt I/O Buffer 12mA 5kΩ Pull-up	35 (1)	4-90
BFW3	Low-noise Schmitt I/O Buffer 9mA 5kΩ Pull-up	22 (1)	1-44
BFW3BB	Low-noise Schmitt I/O Buffer 9mA 5kΩ Pull-up	35 (1)	4-90
BFW5	Low-noise Schmitt I/O Buffer 18mA 5kΩ Pull-up	22 (1)	1-44
BFW5BB	Low-noise Schmitt I/O Buffer 18mA 5kΩ Pull-up	35 (1)	4-90
BFWC	Low-noise Schmitt I/O Buffer 6mA 5kΩ Pull-up	22 (1)	1-44
BFWCBB	Low-noise Schmitt I/O Buffer 6mA 5kΩ Pull-up	35 (1)	4-90
BFWF	Low-noise Schmitt I/O Buffer 24mA 5kΩ Pull-up	22 (1)	1-44
BFWFBB	Low-noise Schmitt I/O Buffer 24mA 5kΩ Pull-up	35 (1)	4-90
BJ07	Low-noise 3-State Buffer 12mA	40 (1)	1-72
BJ07B3	Low-noise 3-State Buffer 12mA	51 (1)	4-128
BJ09	Low-noise 3-State Buffer 18mA	40 (1)	1-72
BJ09B3	Low-noise 3-State Buffer 18mA	51 (1)	4-128
BJ0H	Low-noise 3-State Buffer 24mA	40 (1)	1-72
BJ0HB3	Low-noise 3-State Buffer 24mA	51 (1)	4-128
BKD1	Schmitt I/O Buffer 12mA 50kΩ Pull-down	53 (1)	1-110
BKD1BB	Schmitt I/O Buffer 12mA 50kΩ Pull-down	67 (1)	4-190
BKD3	Schmitt I/O Buffer 9mA 50kΩ Pull-down	53 (1)	1-110
BKD3BB	Schmitt I/O Buffer 9mA 50kΩ Pull-down	67 (1)	4-190
BKD5	Schmitt I/O Buffer 18mA 50kΩ Pull-down	53 (1)	1-110
BKD5BB	Schmitt I/O Buffer 18mA 50kΩ Pull-down	67 (1)	4-190
BKDC	Schmitt I/O Buffer 6mA 50kΩ Pull-down	51 (1)	1-110
BKDCBB	Schmitt I/O Buffer 6mA 50kΩ Pull-down	65 (1)	4-190
BKDF	Schmitt I/O Buffer 24mA 50kΩ Pull-down	53 (1)	1-110
BKDFBB	Schmitt I/O Buffer 24mA 50kΩ Pull-down	67 (1)	4-190
BKDK	Schmitt I/O Buffer 2mA 50kΩ Pull-down	51 (1)	1-110
BKDKBB	Schmitt I/O Buffer 2mA 50kΩ Pull-down	65 (1)	4-190
BKDU	Schmitt I/O Buffer 3mA 50kΩ Pull-down	51 (1)	1-110
BKDUBB	Schmitt I/O Buffer 3mA 50kΩ Pull-down	65 (1)	4-190
BKDX	Schmitt I/O Buffer 1mA 50kΩ Pull-down	51 (1)	1-110
BKDXBB	Schmitt I/O Buffer 1mA 50kΩ Pull-down	65 (1)	4-190
BKI1	Schmitt I/O Buffer 12mA	53 (1)	1-110
BKI1BB	Schmitt I/O Buffer 12mA	67 (1)	4-190
BKI3	Schmitt I/O Buffer 9mA	53 (1)	1-110
BKI3BB	Schmitt I/O Buffer 9mA	67 (1)	4-190

Block	Function	Cells (I/O)	Page
BKI5	Schmitt I/O Buffer 18mA	53 (1)	1-110
BKI5BB	Schmitt I/O Buffer 18mA	67 (1)	4-190
BKIC	Schmitt I/O Buffer 6mA	51 (1)	1-110
BKICBB	Schmitt I/O Buffer 6mA	65 (1)	4-190
BKIF	Schmitt I/O Buffer 24mA	53 (1)	1-110
BKIFBB	Schmitt I/O Buffer 24mA	67 (1)	4-190
BKIK	Schmitt I/O Buffer 2mA	51 (1)	1-110
BKIKBB	Schmitt I/O Buffer 2mA	65 (1)	4-190
BKIU	Schmitt I/O Buffer 3mA	51 (1)	1-110
BKIUBB	Schmitt I/O Buffer 3mA	65 (1)	4-190
BKIX	Schmitt I/O Buffer 1mA	51 (1)	1-110
BKIXBB	Schmitt I/O Buffer 1mA	65 (1)	4-190
BL0W	GTL+ I/O Buffer	25 (1)	1-178
BM01	I/O Buffer 12mA	54 (1)	1-74
BM01BB	I/O Buffer 12mA	69 (1)	4-132
BM03	I/O Buffer 9mA	54 (1)	1-74
BM03BB	I/O Buffer 9mA	69 (1)	4-132
BM05	I/O Buffer 18mA	54 (1)	1-74
BM05BB	I/O Buffer 18mA	69 (1)	4-132
BM0C	I/O Buffer 6mA	52 (1)	1-74
BM0CBB	I/O Buffer 6mA	66 (1)	4-132
BM0F	I/O Buffer 24mA	54 (1)	1-74
BM0FBB	I/O Buffer 24mA	69 (1)	4-132
BM0U	I/O Buffer 3mA	52 (1)	1-74
BM0UBB	I/O Buffer 3mA	66 (1)	4-132
BN21	I/O Buffer with EN(AND) 12mA	26 (1)	1-48
BN23	I/O Buffer with EN(AND) 9mA	26 (1)	1-48
BN25	I/O Buffer with EN(AND) 18mA	28 (1)	1-48
BN2C	I/O Buffer with EN(AND) 6mA	26 (1)	1-48
BN2F	I/O Buffer with EN(AND) 24mA	28 (1)	1-48
BN2U	I/O Buffer with EN(AND) 3mA	26 (1)	1-48
BN31	I/O Buffer with EN(OR) 12mA	26 (1)	1-52
BN33	I/O Buffer with EN(OR) 9mA	26 (1)	1-52
BN35	I/O Buffer with EN(OR) 18mA	28 (1)	1-52
BN3C	I/O Buffer with EN(OR) 6mA	26 (1)	1-52
BN3F	I/O Buffer with EN(OR) 24mA	28 (1)	1-52
BN3U	I/O Buffer with EN(OR) 3mA	26 (1)	1-52
BN41	I/O Buffer with EN(AND) 12mA 50kΩ Pull-down	26 (1)	1-48
BN43	I/O Buffer with EN(AND) 9mA 50kΩ Pull-down	26 (1)	1-48
BN45	I/O Buffer with EN(AND) 18mA 50kΩ Pull-down	28 (1)	1-48
BN4C	I/O Buffer with EN(AND) 6mA 50kΩ Pull-down	26 (1)	1-48
BN4F	I/O Buffer with EN(AND) 24mA 50kΩ Pull-down	28 (1)	1-48
BN4U	I/O Buffer with EN(AND) 3mA 50kΩ Pull-down	26 (1)	1-48

Block	Function	Cells (I/O)	Page
BN51	I/O Buffer with EN(OR) 12mA 50kΩ Pull-down	26 (1)	1-52
BN53	I/O Buffer with EN(OR) 9mA 50kΩ Pull-down	26 (1)	1-52
BN55	I/O Buffer with EN(OR) 18mA 50kΩ Pull-down	28 (1)	1-52
BN5C	I/O Buffer with EN(OR) 6mA 50kΩ Pull-down	26 (1)	1-52
BN5F	I/O Buffer with EN(OR) 24mA 50kΩ Pull-down	28 (1)	1-52
BN5U	I/O Buffer with EN(OR) 3mA 50kΩ Pull-down	26 (1)	1-52
BNM135	I/O Buffer with EN(OR) 12mA	55 (1)	1-86
BNM235	I/O Buffer with EN(OR) 12mA	50 (1)	1-120
BNM335	I/O Buffer with EN(OR) 9mA	55 (1)	1-86
BNM435	I/O Buffer with EN(OR) 9mA	50 (1)	1-120
BNM535	I/O Buffer with EN(OR) 18mA	55 (1)	1-86
BNM635	I/O Buffer with EN(OR) 18mA	50 (1)	1-120
BNMC35	I/O Buffer with EN(OR) 6mA	53 (1)	1-86
BNMD35	I/O Buffer with EN(OR) 6mA	48 (1)	1-120
BNMF35	I/O Buffer with EN(OR) 24mA	55 (1)	1-86
BNMG35	I/O Buffer with EN(OR) 24mA	50 (1)	1-120
BNMU35	I/O Buffer with EN(OR) 3mA	53 (1)	1-86
BNMV35	I/O Buffer with EN(OR) 3mA	48 (1)	1-120
BNV235	I/O Buffer with EN(OR) 12mA 50kΩ Pull-down	50 (1)	1-120
BNV435	I/O Buffer with EN(OR) 9mA 50kΩ Pull-down	50 (1)	1-120
BNV635	I/O Buffer with EN(OR) 18mA 50kΩ Pull-down	50 (1)	1-120
BNVD35	I/O Buffer with EN(OR) 6mA 50kΩ Pull-down	48 (1)	1-120
BNVG35	I/O Buffer with EN(OR) 24mA 50kΩ Pull-down	50 (1)	1-120
BNVV35	I/O Buffer with EN(OR) 3mA 50kΩ Pull-down	48 (1)	1-120
BNX135	I/O Buffer with EN(AND) 12mA	55 (1)	1-82
BNX235	I/O Buffer with EN(AND) 12mA	50 (1)	1-116
BNX335	I/O Buffer with EN(AND) 9mA	55 (1)	1-82
BNX435	I/O Buffer with EN(AND) 9mA	50 (1)	1-116
BNX535	I/O Buffer with EN(AND) 18mA	55 (1)	1-82
BNX635	I/O Buffer with EN(AND) 18mA	50 (1)	1-116
BNXC35	I/O Buffer with EN(AND) 6mA	53 (1)	1-82
BNXD35	I/O Buffer with EN(AND) 6mA	48 (1)	1-116
BNXF35	I/O Buffer with EN(AND) 24mA	55 (1)	1-82
BNXG35	I/O Buffer with EN(AND) 24mA	50 (1)	1-116
BNXU35	I/O Buffer with EN(AND) 3mA	53 (1)	1-82
BNXV35	I/O Buffer with EN(AND) 3mA	48 (1)	1-116
BNY235	I/O Buffer with EN(AND) 12mA 50kΩ Pull-down	50 (1)	1-116
BNY435	I/O Buffer with EN(AND) 9mA 50kΩ Pull-down	50 (1)	1-116
BNY635	I/O Buffer with EN(AND) 18mA 50kΩ Pull-down	50 (1)	1-116
BNYD35	I/O Buffer with EN(AND) 6mA 50kΩ Pull-down	48 (1)	1-116
BNYG35	I/O Buffer with EN(AND) 24mA 50kΩ Pull-down	50 (1)	1-116
BNYV35	I/O Buffer with EN(AND) 3mA 50kΩ Pull-down	48 (1)	1-116
BP01	Low-noise I/O Buffer 12mA	47 (1)	1-76

Block	Function	Cells (I/O)	Page
BP01BB	Low-noise I/O Buffer 12mA	60 (1)	4-138
BP05	Low-noise I/O Buffer 18mA	47 (1)	1-76
BP05BB	Low-noise I/O Buffer 18mA	60 (1)	4-138
BP0F	Low-noise I/O Buffer 24mA	47 (1)	1-76
BP0FBB	Low-noise I/O Buffer 24mA	60 (1)	4-138
BP3B	3V PCI I/O Buffer	27 (1)	1-154
BP3BBB	3V PCI I/O Buffer	41 (1)	4-224
BP3I	3V PCI Input Buffer	7 (1)	1-148
BP3IBI	3V PCI Input Buffer	7 (1)	4-218
BP3O	3V PCI Output Buffer	18 (1)	1-150
BP3OB2	3V PCI Output Buffer	25 (1)	4-220
BP3T	3V PCI 3-State Buffer	20 (1)	1-152
BP3TB3	3V PCI 3-State Buffer	32 (1)	4-222
BP5B	5V PCI I/O Buffer	49 (1)	1-162
BP5BBB	5V PCI I/O Buffer	63 (1)	4-232
BP5I	5V PCI Input Buffer	7 (1)	1-156
BP5IBI	5V PCI Input Buffer	7 (1)	4-226
BP5O	5V PCI Output Buffer	18 (1)	1-158
BP5OB2	5V PCI Output Buffer	25 (1)	4-228
BP5T	5V PCI 3-State Buffer	42 (1)	1-160
BP5TB3	5V PCI 3-State Buffer	54 (1)	4-230
BQI1	Schmitt I/O Buffer 12mA	58 (1)	1-78
BQI1BB	Schmitt I/O Buffer 12mA	73 (1)	4-142
BQI3	Schmitt I/O Buffer 9mA	58 (1)	1-78
BQI3BB	Schmitt I/O Buffer 9mA	73 (1)	4-142
BQI5	Schmitt I/O Buffer 18mA	58 (1)	1-78
BQI5BB	Schmitt I/O Buffer 18mA	73 (1)	4-142
BQIC	Schmitt I/O Buffer 6mA	56 (1)	1-78
BQICBB	Schmitt I/O Buffer 6mA	70 (1)	4-142
BQIF	Schmitt I/O Buffer 24mA	58 (1)	1-78
BQIFBB	Schmitt I/O Buffer 24mA	73 (1)	4-142
BQIU	Schmitt I/O Buffer 3mA	56 (1)	1-78
BQIUBB	Schmitt I/O Buffer 3mA	70 (1)	4-142
BSD1	Schmitt I/O Buffer 12mA 50kΩ Pull-down	29 (1)	1-38
BSD1BB	Schmitt I/O Buffer 12mA 50kΩ Pull-down	42 (1)	4-70
BSD3	Schmitt I/O Buffer 9mA 50kΩ Pull-down	29 (1)	1-38
BSD3BB	Schmitt I/O Buffer 9mA 50kΩ Pull-down	42 (1)	4-70
BSD5	Schmitt I/O Buffer 18mA 50kΩ Pull-down	31 (1)	1-38
BSD5BB	Schmitt I/O Buffer 18mA 50kΩ Pull-down	45 (1)	4-70
BSDC	Schmitt I/O Buffer 6mA 50kΩ Pull-down	29 (1)	1-38
BSDCBB	Schmitt I/O Buffer 6mA 50kΩ Pull-down	42 (1)	4-70
BSDF	Schmitt I/O Buffer 24mA 50kΩ Pull-down	31 (1)	1-38
BSDFBB	Schmitt I/O Buffer 24mA 50kΩ Pull-down	45 (1)	4-70

Block	Function	Cells (I/O)	Page
BSDU	Schmitt I/O Buffer 3mA 50kΩ Pull-down	29 (1)	1-38
BSDUBB	Schmitt I/O Buffer 3mA 50kΩ Pull-down	42 (1)	4-70
BSI1	Schmitt I/O Buffer 12mA	29 (1)	1-38
BSI1BB	Schmitt I/O Buffer 12mA	42 (1)	4-70
BSI3	Schmitt I/O Buffer 9mA	29 (1)	1-38
BSI3BB	Schmitt I/O Buffer 9mA	42 (1)	4-70
BSI5	Schmitt I/O Buffer 18mA	31 (1)	1-38
BSI5BB	Schmitt I/O Buffer 18mA	45 (1)	4-70
BSIC	Schmitt I/O Buffer 6mA	29 (1)	1-38
BSICBB	Schmitt I/O Buffer 6mA	42 (1)	4-70
BSIF	Schmitt I/O Buffer 24mA	31 (1)	1-38
BSIFBB	Schmitt I/O Buffer 24mA	45 (1)	4-70
BSIU	Schmitt I/O Buffer 3mA	29 (1)	1-38
BSIUBB	Schmitt I/O Buffer 3mA	42 (1)	4-70
BSU1	Schmitt I/O Buffer 12mA 50kΩ Pull-up	29 (1)	1-38
BSU1BB	Schmitt I/O Buffer 12mA 50kΩ Pull-up	42 (1)	4-70
BSU3	Schmitt I/O Buffer 9mA 50kΩ Pull-up	29 (1)	1-38
BSU3BB	Schmitt I/O Buffer 9mA 50kΩ Pull-up	42 (1)	4-70
BSU5	Schmitt I/O Buffer 18mA 50kΩ Pull-up	31 (1)	1-38
BSU5BB	Schmitt I/O Buffer 18mA 50kΩ Pull-up	45 (1)	4-70
BSUC	Schmitt I/O Buffer 6mA 50kΩ Pull-up	29 (1)	1-38
BSUCBB	Schmitt I/O Buffer 6mA 50kΩ Pull-up	42 (1)	4-70
BSUF	Schmitt I/O Buffer 24mA 50kΩ Pull-up	31 (1)	1-38
BSUFBB	Schmitt I/O Buffer 24mA 50kΩ Pull-up	45 (1)	4-70
BSUU	Schmitt I/O Buffer 3mA 50kΩ Pull-up	29 (1)	1-38
BSUUBB	Schmitt I/O Buffer 3mA 50kΩ Pull-up	42 (1)	4-70
BSW1	Schmitt I/O Buffer 12mA 5kΩ Pull-up	29 (1)	1-38
BSW1BB	Schmitt I/O Buffer 12mA 5kΩ Pull-up	42 (1)	4-70
BSW3	Schmitt I/O Buffer 9mA 5kΩ Pull-up	29 (1)	1-38
BSW3BB	Schmitt I/O Buffer 9mA 5kΩ Pull-up	42 (1)	4-70
BSW5	Schmitt I/O Buffer 18mA 5kΩ Pull-up	31 (1)	1-38
BSW5BB	Schmitt I/O Buffer 18mA 5kΩ Pull-up	45 (1)	4-70
BSWC	Schmitt I/O Buffer 6mA 5kΩ Pull-up	29 (1)	1-38
BSWCBB	Schmitt I/O Buffer 6mA 5kΩ Pull-up	42 (1)	4-70
BSWF	Schmitt I/O Buffer 24mA 5kΩ Pull-up	31 (1)	1-38
BSWFBB	Schmitt I/O Buffer 24mA 5kΩ Pull-up	45 (1)	4-70
BSWU	Schmitt I/O Buffer 3mA 5kΩ Pull-up	29 (1)	1-38
BSWUBB	Schmitt I/O Buffer 3mA 5kΩ Pull-up	42 (1)	4-70
BUI1	Low-noise Schmitt I/O Buffer 12mA	51 (1)	1-80
BUI1BB	Low-noise Schmitt I/O Buffer 12mA	64 (1)	4-148
BUI5	Low-noise Schmitt I/O Buffer 18mA	51 (1)	1-80
BUI5BB	Low-noise Schmitt I/O Buffer 18mA	64 (1)	4-148
BUIF	Low-noise Schmitt I/O Buffer 24mA	51 (1)	1-80

Block	Function	Cells (I/O)	Page
BUIFBB	Low-noise Schmitt I/O Buffer 24mA	64 (1)	4-148
BV07	3-State Buffer 12mA	42 (1)	1-94
BV07B3	3-State Buffer 12mA	54 (1)	4-158
BV08	3-State Buffer 9mA	42 (1)	1-94
BV08B3	3-State Buffer 9mA	54 (1)	4-158
BV09	3-State Buffer 18mA	42 (1)	1-94
BV09B3	3-State Buffer 18mA	54 (1)	4-158
BV0E	3-State Buffer 6mA	40 (1)	1-94
BV0EB3	3-State Buffer 6mA	52 (1)	4-158
BV0H	3-State Buffer 24mA	42 (1)	1-94
BV0HB3	3-State Buffer 24mA	54 (1)	4-158
BV0M	3-State Buffer 2mA	40 (1)	1-94
BV0MB3	3-State Buffer 2mA	52 (1)	4-158
BV0Q	3-State Buffer 1mA	40 (1)	1-94
BV0QB3	3-State Buffer 1mA	52 (1)	4-158
BV0T	3-State Buffer 3mA	40 (1)	1-94
BV0TB3	3-State Buffer 3mA	52 (1)	4-158
BVD7	3-State Buffer 12mA 50kΩ Pull-down	42 (1)	1-94
BVD7B3	3-State Buffer 12mA 50kΩ Pull-down	54 (1)	4-158
BVD8	3-State Buffer 9mA 50kΩ Pull-down	42 (1)	1-94
BVD8B3	3-State Buffer 9mA 50kΩ Pull-down	54 (1)	4-158
BVD9	3-State Buffer 18mA 50kΩ Pull-down	42 (1)	1-94
BVD9B3	3-State Buffer 18mA 50kΩ Pull-down	54 (1)	4-158
BVDE	3-State Buffer 6mA 50kΩ Pull-down	40 (1)	1-94
BVDEB3	3-State Buffer 6mA 50kΩ Pull-down	52 (1)	4-158
BVDH	3-State Buffer 24mA 50kΩ Pull-down	42 (1)	1-94
BVDHB3	3-State Buffer 24mA 50kΩ Pull-down	54 (1)	4-158
BVDM	3-State Buffer 2mA 50kΩ Pull-down	40 (1)	1-94
BVDMB3	3-State Buffer 2mA 50kΩ Pull-down	52 (1)	4-158
BVDQ	3-State Buffer 1mA 50kΩ Pull-down	40 (1)	1-94
BVDQB3	3-State Buffer 1mA 50kΩ Pull-down	52 (1)	4-158
BVDT	3-State Buffer 3mA 50kΩ Pull-down	40 (1)	1-94
BVDTB3	3-State Buffer 3mA 50kΩ Pull-down	52 (1)	4-158
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BW03	I/O Buffer 9mA	49 (1)	1-104
BW03BB	I/O Buffer 9mA	63 (1)	4-170
BW05	I/O Buffer 18mA	49 (1)	1-104
BW05BB	I/O Buffer 18mA	63 (1)	4-170
BW0C	I/O Buffer 6mA	47 (1)	1-104
BW0CBB	I/O Buffer 6mA	61 (1)	4-170
BW0F	I/O Buffer 24mA	49 (1)	1-104
BW0FBB	I/O Buffer 24mA	63 (1)	4-170

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BW0KBB	I/O Buffer 2mA	61 (1)	4-170
BW0U	I/O Buffer 3mA	47 (1)	1-104
BW0UBB	I/O Buffer 3mA	61 (1)	4-170
BW0X	I/O Buffer 1mA	47 (1)	1-104
BW0XBB	I/O Buffer 1mA	61 (1)	4-170
BWD1	I/O Buffer 12mA 50kΩ Pull-down	49 (1)	1-104
BWD1BB	I/O Buffer 12mA 50kΩ Pull-down	63 (1)	4-170
BWD3	I/O Buffer 9mA 50kΩ Pull-down	49 (1)	1-104
BWD3BB	I/O Buffer 9mA 50kΩ Pull-down	63 (1)	4-170
BWD5	I/O Buffer 18mA 50kΩ Pull-down	49 (1)	1-104
BWD5BB	I/O Buffer 18mA 50kΩ Pull-down	63 (1)	4-170
BWDC	I/O Buffer 6mA 50kΩ Pull-down	47 (1)	1-104
BWDCBB	I/O Buffer 6mA 50kΩ Pull-down	61 (1)	4-170
BWDF	I/O Buffer 24mA 50kΩ Pull-down	49 (1)	1-104
BWDFBB	I/O Buffer 24mA 50kΩ Pull-down	63 (1)	4-170
BWDK	I/O Buffer 2mA 50kΩ Pull-down	47 (1)	1-104
BWDKBB	I/O Buffer 2mA 50kΩ Pull-down	61 (1)	4-170
BWDU	I/O Buffer 3mA 50kΩ Pull-down	47 (1)	1-104
BWDUBB	I/O Buffer 3mA 50kΩ Pull-down	61 (1)	4-170
BWDX	I/O Buffer 1mA 50kΩ Pull-down	47 (1)	1-104
BWDXBB	I/O Buffer 1mA 50kΩ Pull-down	61 (1)	4-170
BX01	Low-noise I/O Buffer 12mA	35 (1)	1-108
BX01BB	Low-noise I/O Buffer 12mA	48 (1)	4-184
BX05	Low-noise I/O Buffer 18mA	35 (1)	1-108
BX05BB	Low-noise I/O Buffer 18mA	48 (1)	4-184
BX0F	Low-noise I/O Buffer 24mA	35 (1)	1-108
BX0FBB	Low-noise I/O Buffer 24mA	48 (1)	4-184
BXD1	Low-noise I/O Buffer 12mA 50kΩ Pull-down	35 (1)	1-108
BXD1BB	Low-noise I/O Buffer 12mA 50kΩ Pull-down	48 (1)	4-184
BXD5	Low-noise I/O Buffer 18mA 50kΩ Pull-down	35 (1)	1-108
BXD5BB	Low-noise I/O Buffer 18mA 50kΩ Pull-down	48 (1)	4-184
BXDF	Low-noise I/O Buffer 24mA 50kΩ Pull-down	35 (1)	1-108
BXDFBB	Low-noise I/O Buffer 24mA 50kΩ Pull-down	48 (1)	4-184
BY07	Low-noise 3-State Buffer 12mA	28 (1)	1-98
BY07B3	Low-noise 3-State Buffer 12mA	39 (1)	4-166
BY09	Low-noise 3-State Buffer 18mA	28 (1)	1-98
BY09B3	Low-noise 3-State Buffer 18mA	39 (1)	4-166
BY0H	Low-noise 3-State Buffer 24mA	28 (1)	1-98
BY0HB3	Low-noise 3-State Buffer 24mA	39 (1)	4-166
BYD7	Low-noise 3-State Buffer 12mA 50kΩ Pull-down	28 (1)	1-98
BYD7B3	Low-noise 3-State Buffer 12mA 50kΩ Pull-down	39 (1)	4-166
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BYDH	Low-noise 3-State Buffer 24mA 50kΩ Pull-down	28 (1)	1-98
BYDHB3	Low-noise 3-State Buffer 24mA 50kΩ Pull-down	39 (1)	4-166
BZD1	Low-noise Schmitt I/O Buffer 12mA 50kΩ Pull-down	39 (1)	1-114
BZD1BB	Low-noise Schmitt I/O Buffer 12mA 50kΩ Pull-down	52 (1)	4-204
BZD5	Low-noise Schmitt I/O Buffer 18mA 50kΩ Pull-down	39 (1)	1-114
BZD5BB	Low-noise Schmitt I/O Buffer 18mA 50kΩ Pull-down	52 (1)	4-204
BZDF	Low-noise Schmitt I/O Buffer 24mA 50kΩ Pull-down	39 (1)	1-114
BZDFBB	Low-noise Schmitt I/O Buffer 24mA 50kΩ Pull-down	52 (1)	4-204
BZI1	Low-noise Schmitt I/O Buffer 12mA	39 (1)	1-114
BZI1BB	Low-noise Schmitt I/O Buffer 12mA	52 (1)	4-204
BZI5	Low-noise Schmitt I/O Buffer 18mA	39 (1)	1-114
BZI5BB	Low-noise Schmitt I/O Buffer 18mA	52 (1)	4-204
BZIF	Low-noise Schmitt I/O Buffer 24mA	39 (1)	1-114
BZIFBB	Low-noise Schmitt I/O Buffer 24mA	52 (1)	4-204
EET1	Low-noise N-ch Open drain Buffer 9mA	5 (1)	1-26
EET1B2	Low-noise N-ch Open drain Buffer 9mA	10 (1)	4-110
EET3	Low-noise N-ch Open drain Buffer 9mA 50kΩ Pull-up	5 (1)	1-26
EET3B2	Low-noise N-ch Open drain Buffer 9mA 50kΩ Pull-up	10 (1)	4-110
EET5	Low-noise N-ch Open drain Buffer 18mA	5 (1)	1-26
EET5B2	Low-noise N-ch Open drain Buffer 18mA	10 (1)	4-110
EET7	Low-noise N-ch Open drain Buffer 18mA 50kΩ Pull-up	5 (1)	1-26
EET7B2	Low-noise N-ch Open drain Buffer 18mA 50kΩ Pull-up	10 (1)	4-110
EET9	Low-noise N-ch Open drain Buffer 12mA	5 (1)	1-26
EET9B2	Low-noise N-ch Open drain Buffer 12mA	10 (1)	4-110
EETB	Low-noise N-ch Open drain Buffer 12mA 50kΩ Pull-up	5 (1)	1-26
EETBB2	Low-noise N-ch Open drain Buffer 12mA 50kΩ Pull-up	10 (1)	4-110
EETD	Low-noise N-ch Open drain Buffer 24mA	5 (1)	1-26
EETDB2	Low-noise N-ch Open drain Buffer 24mA	10 (1)	4-110
EETF	Low-noise N-ch Open drain Buffer 24mA 50kΩ Pull-up	5 (1)	1-26
EETFB2	Low-noise N-ch Open drain Buffer 24mA 50kΩ Pull-up	10 (1)	4-110
EETJ	Low-noise N-ch Open drain Buffer 6mA	5 (1)	1-26
EETJB2	Low-noise N-ch Open drain Buffer 6mA	10 (1)	4-110
EEUJ	Low-noise N-ch Open drain Buffer 6mA 50kΩ Pull-up	5 (1)	1-26
EEUJB2	Low-noise N-ch Open drain Buffer 6mA 50kΩ Pull-up	10 (1)	4-110
EEW3	Low-noise N-ch Open drain Buffer 9mA 5KΩ Pull-up	5 (1)	1-26
EEW3B2	Low-noise N-ch Open drain Buffer 9mA 5KΩ Pull-up	10 (1)	4-110
EEW7	Low-noise N-ch Open drain Buffer 18mA 5kΩ Pull-up	5 (1)	1-26
EEW7B2	Low-noise N-ch Open drain Buffer 18mA 5kΩ Pull-up	10 (1)	4-110
EEWB	Low-noise N-ch Open drain Buffer 12mA 5kΩ Pull-up	5 (1)	1-26
EEWBB2	Low-noise N-ch Open drain Buffer 12mA 5kΩ Pull-up	10 (1)	4-110
EEWF	Low-noise N-ch Open drain Buffer 24mA 5kΩ Pull-up	5 (1)	1-26
EEWFB2	Low-noise N-ch Open drain Buffer 24mA 5kΩ Pull-up	10 (1)	4-110

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EEWJB2	Low-noise N-ch Open drain Buffer 6mA 5kΩ Pull-up	10 (1)	4-110
ELTL	GTL+ Output Buffer with ENB	6 (1)	1-176
EVT1	N-ch Open drain Buffer 9mA	18 (1)	1-100
EVT1B2	N-ch Open drain Buffer 9mA	25 (1)	4-210
EVT5	N-ch Open drain Buffer 18mA	18 (1)	1-100
EVT5B2	N-ch Open drain Buffer 18mA	25 (1)	4-210
EVT9	N-ch Open drain Buffer 12mA	18 (1)	1-100
EVT9B2	N-ch Open drain Buffer 12mA	25 (1)	4-210
EVTD	N-ch Open drain Buffer 24mA	18 (1)	1-100
EVTDB2	N-ch Open drain Buffer 24mA	25 (1)	4-210
EVTH	N-ch Open drain Buffer 3mA	8 (1)	1-100
EVTHB2	N-ch Open drain Buffer 3mA	13 (1)	4-210
EVTJ	N-ch Open drain Buffer 6mA	8 (1)	1-100
EVTJB2	N-ch Open drain Buffer 6mA	13 (1)	4-210
EVTK	N-ch Open drain Buffer 2mA	8 (1)	1-100
EVTKB2	N-ch Open drain Buffer 2mA	13 (1)	4-210
EVTT	N-ch Open drain Buffer 1mA	8 (1)	1-100
EVTTB2	N-ch Open drain Buffer 1mA	13 (1)	4-210
EXT1	N-ch Open drain Buffer 9mA	8 (1)	1-24
EXT1B2	N-ch Open drain Buffer 9mA	13 (1)	4-106
EXT3	N-ch Open drain Buffer 9mA 50kΩ Pull-up	8 (1)	1-24
EXT3B2	N-ch Open drain Buffer 9mA 50kΩ Pull-up	13 (1)	4-106
EXT5	N-ch Open drain Buffer 18mA	18 (1)	1-24
EXT5B2	N-ch Open drain Buffer 18mA	25 (1)	4-106
EXT7	N-ch Open drain Buffer 18mA 50kΩ Pull-up	18 (1)	1-24
EXT7B2	N-ch Open drain Buffer 18mA 50kΩ Pull-up	25 (1)	4-106
EXT9	N-ch Open drain Buffer 12mA	8 (1)	1-24
EXT9B2	N-ch Open drain Buffer 12mA	13 (1)	4-106
EXTB	N-ch Open drain Buffer 12mA 50kΩ Pull-up	8 (1)	1-24
EXTBB2	N-ch Open drain Buffer 12mA 50kΩ Pull-up	13 (1)	4-106
EXTD	N-ch Open drain Buffer 24mA	18 (1)	1-24
EXTDB2	N-ch Open drain Buffer 24mA	25 (1)	4-106
EXTF	N-ch Open drain Buffer 24mA 50kΩ Pull-up	18 (1)	1-24
EXTFB2	N-ch Open drain Buffer 24mA 50kΩ Pull-up	25 (1)	4-106
EXTH	N-ch Open drain Buffer 3mA	8 (1)	1-24
EXTHB2	N-ch Open drain Buffer 3mA	13 (1)	4-106
EXTJ	N-ch Open drain Buffer 6mA	8 (1)	1-24
EXTJB2	N-ch Open drain Buffer 6mA	13 (1)	4-106
EXUH	N-ch Open drain Buffer 3mA 50kΩ Pull-up	8 (1)	1-24
EXUHB2	N-ch Open drain Buffer 3mA 50kΩ Pull-up	13 (1)	4-106
EXUJ	N-ch Open drain Buffer 6mA 50kΩ Pull-up	8 (1)	1-24
EXUJB2	N-ch Open drain Buffer 6mA 50kΩ Pull-up	13 (1)	4-106

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EXW3B2	N-ch Open drain Buffer 9mA 5kΩ Pull-up	13 (1)	4-106
EXW7	N-ch Open drain Buffer 18mA 5kΩ Pull-up	18 (1)	1-24
EXW7B2	N-ch Open drain Buffer 18mA 5kΩ Pull-up	25 (1)	4-106
EXWB	N-ch Open drain Buffer 12mA 5kΩ Pull-up	8 (1)	1-24
EXWBB2	N-ch Open drain Buffer 12mA 5kΩ Pull-up	13 (1)	4-106
EXWF	N-ch Open drain Buffer 24mA 5kΩ Pull-up	18 (1)	1-24
EXWFB2	N-ch Open drain Buffer 24mA 5kΩ Pull-up	25 (1)	4-106
EXWH	N-ch Open drain Buffer 3mA 5kΩ Pull-up	8 (1)	1-24
EXWHB2	N-ch Open drain Buffer 3mA 5kΩ Pull-up	13 (1)	4-106
EXWJ	N-ch Open drain Buffer 6mA 5kΩ Pull-up	8 (1)	1-24
EXWJB2	N-ch Open drain Buffer 6mA 5kΩ Pull-up	13 (1)	4-106
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EYT5B2	Low-noise N-ch Open drain Buffer 18mA	10 (1)	4-212
EYT9	Low-noise N-ch Open drain Buffer 12mA	5 (1)	1-102
EYT9B2	Low-noise N-ch Open drain Buffer 12mA	10 (1)	4-212
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F101	Inverter Single Out	1 (-)	2-10
F102	Inverter Single Out (X2 Drive)	2 (-)	2-10
F111	Buffer Single Out	2 (-)	2-12
F112	Buffer Single Out (X2 Drive)	3 (-)	2-12
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F132	Delay Gate	10 (-)	2-18
F137	Delay Gate	18 (-)	2-18
F138	Delay Gate	34 (-)	2-18
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F144K	Inverter Single Out (X4 Drive)	4 (-)	2-10
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F154K	Buffer Single Out (X4 Drive)	5 (-)	2-12
F158BR	Buffer Single Out (X8 Drive)	11 (-)	2-12
F158K	Buffer Single Out (X8 Drive)	11 (-)	2-12
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F204N1	4-Input NOR 1-Input Inverter	5 (-)	2-30
F204N2	4-Input NOR 2-Input Inverter	5 (-)	2-30
F205	5-Input NOR	5 (-)	2-34
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F205N2	5-Input NOR 2-Input Inverter	6 (-)	2-34
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F208N3	8-Input NOR 3-Input Inverter	9 (-)	2-42
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F212	2-Input OR	2 (-)	2-48
F213	3-Input OR	3 (-)	2-50
F214	4-Input OR	3 (-)	2-52
F214N1	4-Input OR 1-Input Inverter	4 (-)	2-52
F215	5-Input OR	5 (-)	2-54
F215N1	5-Input OR 1-Input Inverter	5 (-)	2-54
F216	6-Input OR	5 (-)	2-58
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F216N2	6-Input OR 2-Input Inverter	6 (-)	2-58
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F223	3-Input NOR (X2 Drive)	6 (-)	2-26
F223N1	3-Input NOR 1-Input Inverter (X2 Drive)	7 (-)	2-26
F223N2	3-Input NOR 2-Input Inverter (X2 Drive)	7 (-)	2-26
F224	4-Input NOR (X2 Drive)	8 (-)	2-30
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F224N2	4-Input NOR 2-Input Inverter (X2 Drive)	9 (-)	2-30
F225	5-Input NOR (X2 Drive)	6 (-)	2-34
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F226N2	6-Input NOR 2-Input Inverter (X2 Drive)	7 (-)	2-38
F226N3	6-Input NOR 3-Input Inverter (X2 Drive)	8 (-)	2-38
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F234	4-Input OR (X2 Drive)	4 (-)	2-52
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F235	5-Input OR (X2 Drive)	7 (-)	2-54
F235N1	5-Input OR 1-Input Inverter (X2 Drive)	8 (-)	2-54
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F308N1	8-Input NAND 1-Input Inverter	7 (-)	2-86
F308N2	8-Input NAND 2-Input Inverter	7 (-)	2-86
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F314	4-Input AND	3 (-)	2-96
F314N1	4-Input AND 1-Input Inverter	4 (-)	2-96
F315	5-Input AND	5 (-)	2-100
F315N1	5-Input AND 1-Input Inverter	5 (-)	2-100
F316	6-Input AND	5 (-)	2-104
F316N1	6-Input AND 1-Input Inverter	6 (-)	2-104
F316N2	6-Input AND 2-Input Inverter	6 (-)	2-104
F318	8-Input AND	6 (-)	2-108
F318N1	8-Input AND 1-Input Inverter	7 (-)	2-108
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F423NFT	1-3-Input AND-NOR (X4 Drive)	20 (-)	2-128
F423NG	1-3-Input AND-NOR	6 (-)	2-128
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F423NGT	1-3-Input AND-NOR (X4 Drive)	22 (-)	2-128
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F424NC	2-2-Input AND-NOR	6 (-)	2-134
F424NCP	2-2-Input AND-NOR (X2 Drive)	7 (-)	2-134
F424NCT	2-2-Input AND-NOR (X4 Drive)	10 (-)	2-134
F424ND	2-2-Input AND-NOR	5 (-)	2-134
F424NDP	2-2-Input AND-NOR (X2 Drive)	6 (-)	2-134
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F424NE	2-2-Input AND-NOR	6 (-)	2-134
F424NEP	2-2-Input AND-NOR (X2 Drive)	7 (-)	2-134
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F431NBP	1-2-Input OR-NAND (X2 Drive)	6 (-)	2-190
F431NBT	1-2-Input OR-NAND (X4 Drive)	16 (-)	2-190
F431NC	1-2-Input OR-NAND	5 (-)	2-190
F431NCP	1-2-Input OR-NAND (X2 Drive)	6 (-)	2-190
F431NCT	1-2-Input OR-NAND (X4 Drive)	14 (-)	2-190
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F431NEP	1-2-Input OR-NAND (X2 Drive)	6 (-)	2-190
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F432NDT	1-1-2-Input OR-NAND (X4 Drive)	20 (-)	2-194
F432NE	1-1-2-Input OR-NAND	5 (-)	2-194
F432NEP	1-1-2-Input OR-NAND (X2 Drive)	6 (-)	2-194
F432NET	1-1-2-Input OR-NAND (X4 Drive)	20 (-)	2-194
F432NF	1-1-2-Input OR-NAND	6 (-)	2-194
F432NFP	1-1-2-Input OR-NAND (X2 Drive)	7 (-)	2-194
F432NFT	1-1-2-Input OR-NAND (X4 Drive)	18 (-)	2-194
F432NG	1-1-2-Input OR-NAND	5 (-)	2-194
F432NGP	1-1-2-Input OR-NAND (X2 Drive)	6 (-)	2-194
F432NGT	1-1-2-Input OR-NAND (X4 Drive)	18 (-)	2-194
F432NH	1-1-2-Input OR-NAND	5 (-)	2-194
F432NHP	1-1-2-Input OR-NAND (X2 Drive)	6 (-)	2-194
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F433NAP	1-3-Input OR-NAND (X2 Drive)	6 (-)	2-202
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F433NBP	1-3-Input OR-NAND (X2 Drive)	6 (-)	2-202
F433NBT	1-3-Input OR-NAND (X4 Drive)	20 (-)	2-202
F433NC	1-3-Input OR-NAND	6 (-)	2-202
F433NCP	1-3-Input OR-NAND (X2 Drive)	7 (-)	2-202
F433NCT	1-3-Input OR-NAND (X4 Drive)	18 (-)	2-202
F433ND	1-3-Input OR-NAND	6 (-)	2-202
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F433NE	1-3-Input OR-NAND	5 (-)	2-202
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F433NG	1-3-Input OR-NAND	6 (-)	2-202
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F434NC	2-2-Input OR-NAND	6 (-)	2-208
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F434NDP	2-2-Input OR-NAND (X2 Drive)	6 (-)	2-208
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F434NE	2-2-Input OR-NAND	6 (-)	2-208
F434NEP	2-2-Input OR-NAND (X2 Drive)	7 (-)	2-208
F434NET	2-2-Input OR-NAND (X4 Drive)	18 (-)	2-208
F434NP	2-2-Input OR-NAND (X2 Drive)	5 (-)	2-208
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F435NP	2-3-Input OR-NAND (X2 Drive)	9 (-)	2-214
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F450NP	2-4-Input OR-NAND (X2 Drive)	8 (-)	2-224
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F451NP	4-4-Input OR-NAND (X2 Drive)	10 (-)	2-226
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F458NP	1-1-1-2-Input OR-NAND (X2 Drive)	5 (-)	2-236
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F459NP	1-1-1-3-Input OR-NAND (X2 Drive)	6 (-)	2-238
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F601NL	D-Latch (Low Power)	5 (-)	2-350
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F602NQL	D-Latch with R Q Out (Low Power)	5 (-)	2-356
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F603NBL	D-Latch with RB QB Out (Low Power)	5 (-)	2-362
F603NBP	D-Latch with RB QB Out (X2 Drive)	7 (-)	2-362
F603NL	D-Latch with RB (Low Power)	5 (-)	2-362
F603NP	D-Latch with RB (X2 Drive)	8 (-)	2-362
F603NQ	D-Latch with RB Q Out	5 (-)	2-362
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F604	D-Latch (GB)	6 (-)	2-376
F604NB	D-Latch (GB) QB Out	5 (-)	2-376
F604NBL	D-Latch (GB) QB Out (Low Power)	4 (-)	2-376
F604NBP	D-Latch (GB) QB Out (X2 Drive)	6 (-)	2-376
F604NL	D-Latch (GB) (Low Power)	5 (-)	2-376
F604NP	D-Latch (GB) (X2 Drive)	8 (-)	2-376
F604NQ	D-Latch (GB) Q Out	5 (-)	2-376
F604NQL	D-Latch (GB) Q Out (Low Power)	4 (-)	2-376
F604NQP	D-Latch (GB) Q Out (X2 Drive)	6 (-)	2-376
F605	D-Latch (GB) with RB	7 (-)	2-382
F605NB	D-Latch (GB) with RB QB Out	6 (-)	2-382
F605NBL	D-Latch (GB) with RB QB Out (Low Power)	5 (-)	2-382
F605NBP	D-Latch (GB) with RB QB Out (X2 Drive)	7 (-)	2-382
F605NL	D-Latch (GB) with RB (Low Power)	5 (-)	2-382
F605NP	D-Latch (GB) with RB (X2 Drive)	8 (-)	2-382
F605NQ	D-Latch (GB) with RB Q Out	5 (-)	2-382
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F60JNBP	D-Latch with RB,SB QB Out (X2 Drive)	7 (-)	2-372
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F60JNP	D-Latch with RB,SB (X2 Drive)	9 (-)	2-372
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F60JNQP	D-Latch with RB,SB Q Out (X2 Drive)	7 (-)	2-372
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F60KNB	D-Latch with SB QB Out	5 (-)	2-368
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F60KNP	D-Latch with SB (X2 Drive)	9 (-)	2-368
F60KNQ	D-Latch with SB Q Out	6 (-)	2-368
F60KNQL	D-Latch with SB Q Out (Low Power)	5 (-)	2-368
F60KNQP	D-Latch with SB Q Out (X2 Drive)	7 (-)	2-368
F611	D-F/F	8 (-)	2-392
F611NBT	D-F/F QB Out (X4 Drive)	10 (-)	2-392
F611NQT	D-F/F Q Out (X4 Drive)	10 (-)	2-392
F611NT	D-F/F (X4 Drive)	14 (-)	2-392
F611SBT	D-F/F with 2 to 1 Selector QB Out (X4 Drive)	13 (-)	2-450
F611SQT	D-F/F with 2 to 1 Selector Q Out (X4 Drive)	13 (-)	2-450
F611ST	D-F/F with 2 to 1 Selector (X4 Drive)	17 (-)	2-450
F612NBT	D-F/F with R QB Out (X4 Drive)	12 (-)	2-396
F612NQT	D-F/F with R Q Out (X4 Drive)	11 (-)	2-396
F612SBT	D-F/F with R,2 to 1 Selector QB Out (X4 Drive)	14 (-)	2-456
F612SQT	D-F/F with R,2 to 1 Selector Q Out (X4 Drive)	14 (-)	2-456
F613NBT	D-F/F with S QB Out (X4 Drive)	11 (-)	2-402
F613NQT	D-F/F with S Q Out (X4 Drive)	12 (-)	2-402
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F613SQT	D-F/F with S,2 to 1 Selector Q Out (X4 Drive)	14 (-)	2-462
F614	D-F/F with R,S	10 (-)	2-408
F614NBT	D-F/F with R,S QB Out (X4 Drive)	13 (-)	2-408
F614NQT	D-F/F with R,S Q Out (X4 Drive)	13 (-)	2-408
F614SBT	D-F/F with R,S,2 to 1 Selector QB Out (X4 Drive)	15 (-)	2-468
F614SQT	D-F/F with R,S,2 to 1 Selector Q Out (X4 Drive)	15 (-)	2-468
F615	D-F/F with RB	9 (-)	2-414
F615H	D-F/F with RB,Hold	11 (-)	2-514
F615HB	D-F/F with RB,Hold QB Out	10 (-)	2-514
F615HBP	D-F/F with RB,Hold QB Out (X2 Drive)	11 (-)	2-514
F615HL	D-F/F with RB,Hold (Low Power)	10 (-)	2-514
F615HP	D-F/F with RB,Hold (X2 Drive)	13 (-)	2-514
F615HQ	D-F/F with RB,Hold Q Out	10 (-)	2-514
F615HQP	D-F/F with RB,Hold Q Out (X2 Drive)	11 (-)	2-514
F615NB	D-F/F with RB QB Out	8 (-)	2-414
F615NBL	D-F/F with RB QB Out (Low Power)	8 (-)	2-414
F615NBP	D-F/F with RB QB Out (X2 Drive)	9 (-)	2-414
F615NBT	D-F/F with RB QB Out (X4 Drive)	11 (-)	2-414
F615NL	D-F/F with RB (Low Power)	8 (-)	2-414
F615NP	D-F/F with RB (X2 Drive)	11 (-)	2-414
F615NQ	D-F/F with RB Q Out	8 (-)	2-414
F615NQL	D-F/F with RB Q Out (Low Power)	8 (-)	2-414
F615NQP	D-F/F with RB Q Out (X2 Drive)	9 (-)	2-414
F615NQT	D-F/F with RB Q Out (X4 Drive)	12 (-)	2-414

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F615SB	D-F/F with RB,2 to 1 Selector QB Out	10 (-)	2-474
F615SBP	D-F/F with RB,2 to 1 Selector QB Out (X2 Drive)	11 (-)	2-474
F615SBT	D-F/F with RB,2 to 1 Selector QB Out (X4 Drive)	14 (-)	2-474
F615SL	D-F/F with RB,2 to 1 Selector (Low Power)	10 (-)	2-474
F615SP	D-F/F with RB,2 to 1 Selector (X2 Drive)	13 (-)	2-474
F615SQ	D-F/F with RB,2 to 1 Selector Q Out	10 (-)	2-474
F615SQP	D-F/F with RB,2 to 1 Selector Q Out (X2 Drive)	11 (-)	2-474
F615SQT	D-F/F with RB,2 to 1 Selector Q Out (X4 Drive)	14 (-)	2-474
F615ST	D-F/F with RB,2 to 1 Selector (X4 Drive)	18 (-)	2-474
F616	D-F/F with SB	9 (-)	2-418
F616H	D-F/F with SB,Hold	11 (-)	2-518
F616HB	D-F/F with SB,Hold QB Out	10 (-)	2-518
F616HBP	D-F/F with SB,Hold QB Out (X2 Drive)	11 (-)	2-518
F616HL	D-F/F with SB,Hold (Low Power)	10 (-)	2-518
F616HP	D-F/F with SB,Hold (X2 Drive)	13 (-)	2-518
F616HQ	D-F/F with SB,Hold Q Out	10 (-)	2-518
F616HQP	D-F/F with SB,Hold Q Out (X2 Drive)	11 (-)	2-518
F616NB	D-F/F with SB QB Out	8 (-)	2-418
F616NBL	D-F/F with SB QB Out (Low Power)	8 (-)	2-418
F616NBP	D-F/F with SB QB Out (X2 Drive)	9 (-)	2-418
F616NBT	D-F/F with SB QB Out (X4 Drive)	12 (-)	2-418
F616NL	D-F/F with SB (Low Power)	8 (-)	2-418
F616NP	D-F/F with SB (X2 Drive)	11 (-)	2-418
F616NQ	D-F/F with SB Q Out	8 (-)	2-418
F616NQL	D-F/F with SB Q Out (Low Power)	8 (-)	2-418
F616NQP	D-F/F with SB Q Out (X2 Drive)	9 (-)	2-418
F616NQT	D-F/F with SB Q Out (X4 Drive)	11 (-)	2-418
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F616SB	D-F/F with SB,2 to 1 Selector QB Out	10 (-)	2-478
F616SBP	D-F/F with SB,2 to 1 Selector QB Out (X2 Drive)	11 (-)	2-478
F616SBT	D-F/F with SB,2 to 1 Selector QB Out (X4 Drive)	14 (-)	2-478
F616SL	D-F/F with SB,2 to 1 Selector (Low Power)	10 (-)	2-478
F616SP	D-F/F with SB,2 to 1 Selector (X2 Drive)	13 (-)	2-478
F616SQ	D-F/F with SB,2 to 1 Selector Q Out	10 (-)	2-478
F616SQP	D-F/F with SB,2 to 1 Selector Q Out (X2 Drive)	11 (-)	2-478
F616SQT	D-F/F with SB,2 to 1 Selector Q Out (X4 Drive)	14 (-)	2-478
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F617NBT	D-F/F with RB,SB QB Out (X4 Drive)	13 (-)	2-422
F617NQT	D-F/F with RB,SB Q Out (X4 Drive)	13 (-)	2-422
F617SBT	D-F/F with RB,SB,2 to 1 Selector QB Out (X4 Drive)	15 (-)	2-482
F617SQT	D-F/F with RB,SB,2 to 1 Selector Q Out (X4 Drive)	15 (-)	2-482

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F631NQT	D-F/F (CB) Q Out (X4 Drive)	10 (-)	2-428
F631NT	D-F/F (CB) (X4 Drive)	14 (-)	2-428
F631SBT	D-F/F (CB) with 2 to 1 Selector QB Out (X4 Drive)	13 (-)	2-488
F631SQT	D-F/F (CB) with 2 to 1 Selector Q Out (X4 Drive)	13 (-)	2-488
F631ST	D-F/F (CB) with 2 to 1 Selector (X4 Drive)	17 (-)	2-488
F635NBT	D-F/F (CB) with RB QB Out (X4 Drive)	11 (-)	2-432
F635NQT	D-F/F (CB) with RB Q Out (X4 Drive)	12 (-)	2-432
F635SBT	D-F/F (CB) with RB,2 to 1 Selector QB Out (X4 Drive)	14 (-)	2-494
F635SQT	D-F/F (CB) with RB,2 to 1 Selector Q Out (X4 Drive)	14 (-)	2-494
F635ST	D-F/F (CB) with RB,2 to 1 Selector (X4 Drive)	18 (-)	2-494
F636NBT	D-F/F (CB) with SB QB Out (X4 Drive)	12 (-)	2-438
F636NQT	D-F/F (CB) with SB Q Out (X4 Drive)	11 (-)	2-438
F636SBT	D-F/F (CB) with SB,2 to 1 Selector QB Out (X4 Drive)	14 (-)	2-500
F636ST	D-F/F (CB) with SB,2 to 1 Selector (X4 Drive)	18 (-)	2-500
F637	D-F/F (CB) with RB,SB	10 (-)	2-444
F637NBT	D-F/F (CB) with RB,SB QB Out (X4 Drive)	13 (-)	2-444
F637NQT	D-F/F (CB) with RB,SB Q Out (X4 Drive)	13 (-)	2-444
F637SBT	D-F/F (CB) with RB,SB,2 to 1 Selector QB Out (X4 Drive)	15 (-)	2-506
F637SQT	D-F/F (CB) with RB,SB,2 to 1 Selector Q Out (X4 Drive)	15 (-)	2-506
F641	D-F/F	8 (-)	2-394
F641H	D-F/F with Hold	10 (-)	2-512
F641HB	D-F/F with Hold QB Out	9 (-)	2-512
F641HBP	D-F/F with Hold QB Out (X2 Drive)	10 (-)	2-512
F641HL	D-F/F with Hold (Low Power)	9 (-)	2-512
F641HP	D-F/F with Hold (X2 Drive)	12 (-)	2-512
F641HQ	D-F/F with Hold Q Out	9 (-)	2-512
F641HQP	D-F/F with Hold Q Out (X2 Drive)	10 (-)	2-512
F641NB	D-F/F QB Out	7 (-)	2-394
F641NBL	D-F/F QB Out (Low Power)	7 (-)	2-394
F641NBP	D-F/F QB Out (X2 Drive)	8 (-)	2-394
F641NL	D-F/F (Low Power)	7 (-)	2-394
F641NP	D-F/F (X2 Drive)	10 (-)	2-394
F641NQ	D-F/F Q Out	7 (-)	2-394
F641NQL	D-F/F Q Out (Low Power)	7 (-)	2-394
F641NQP	D-F/F Q Out (X2 Drive)	8 (-)	2-394
F641S	D-F/F with 2 to 1 Selector	10 (-)	2-452
F641SB	D-F/F with 2 to 1 Selector QB Out	9 (-)	2-452
F641SBP	D-F/F with 2 to 1 Selector QB Out (X2 Drive)	10 (-)	2-452
F641SL	D-F/F with 2 to 1 Selector (Low Power)	9 (-)	2-452
F641SP	D-F/F with 2 to 1 Selector (X2 Drive)	12 (-)	2-452
F641SQ	D-F/F with 2 to 1 Selector Q Out	9 (-)	2-452

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F642	D-F/F with R	9 (-)	2-398
F642NB	D-F/F with R QB Out	8 (-)	2-398
F642NBL	D-F/F with R QB Out (Low Power)	8 (-)	2-398
F642NBP	D-F/F with R QB Out (X2 Drive)	9 (-)	2-398
F642NL	D-F/F with R (Low Power)	8 (-)	2-398
F642NP	D-F/F with R (X2 Drive)	11 (-)	2-398
F642NQ	D-F/F with R Q Out	8 (-)	2-398
F642NQL	D-F/F with R Q Out (Low Power)	8 (-)	2-398
F642NQP	D-F/F with R Q Out (X2 Drive)	9 (-)	2-398
F642S	D-F/F with R,2 to 1 Selector	11 (-)	2-458
F642SB	D-F/F with R,2 to 1 Selector QB Out	10 (-)	2-458
F642SBP	D-F/F with R,2 to 1 Selector QB Out (X2 Drive)	11 (-)	2-458
F642SL	D-F/F with R,2 to 1 Selector (Low Power)	10 (-)	2-458
F642SP	D-F/F with R,2 to 1 Selector (X2 Drive)	13 (-)	2-458
F642SQ	D-F/F with R,2 to 1 Selector Q Out	10 (-)	2-458
F642SQP	D-F/F with R,2 to 1 Selector Q Out (X2 Drive)	11 (-)	2-458
F643	D-F/F with S	9 (-)	2-404
F643NB	D-F/F with S QB Out	8 (-)	2-404
F643NBL	D-F/F with S QB Out (Low Power)	7 (-)	2-404
F643NBP	D-F/F with S QB Out (X2 Drive)	9 (-)	2-404
F643NL	D-F/F with S (Low Power)	8 (-)	2-404
F643NP	D-F/F with S (X2 Drive)	11 (-)	2-404
F643NQ	D-F/F with S Q Out	8 (-)	2-404
F643NQL	D-F/F with S Q Out (Low Power)	7 (-)	2-404
F643NQP	D-F/F with S Q Out (X2 Drive)	9 (-)	2-404
F643S	D-F/F with S,2 to 1 Selector	11 (-)	2-464
F643SB	D-F/F with S,2 to 1 Selector QB Out	10 (-)	2-464
F643SBP	D-F/F with S,2 to 1 Selector QB Out (X2 Drive)	11 (-)	2-464
F643SL	D-F/F with S,2 to 1 Selector (Low Power)	10 (-)	2-464
F643SP	D-F/F with S,2 to 1 Selector (X2 Drive)	13 (-)	2-464
F643SQ	D-F/F with S,2 to 1 Selector Q Out	10 (-)	2-464
F643SQP	D-F/F with S,2 to 1 Selector Q Out (X2 Drive)	11 (-)	2-464
F644	D-F/F with R,S	10 (-)	2-410
F644NB	D-F/F with R,S QB Out	9 (-)	2-410
F644NBL	D-F/F with R,S QB Out (Low Power)	9 (-)	2-410
F644NBP	D-F/F with R,S QB Out (X2 Drive)	10 (-)	2-410
F644NL	D-F/F with R,S (Low Power)	9 (-)	2-410
F644NP	D-F/F with R,S (X2 Drive)	12 (-)	2-410
F644NQ	D-F/F with R,S Q Out	9 (-)	2-410
F644NQL	D-F/F with R,S Q Out (Low Power)	9 (-)	2-410
F644NQP	D-F/F with R,S Q Out (X2 Drive)	10 (-)	2-410
F644S	D-F/F with R,S,2 to 1 Selector	12 (-)	2-470

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F644SBP	D-F/F with R,S,2 to 1 Selector QB Out (X2 Drive)	12 (-)	2-470
F644SL	D-F/F with R,S,2 to 1 Selector (Low Power)	11 (-)	2-470
F644SP	D-F/F with R,S,2 to 1 Selector (X2 Drive)	14 (-)	2-470
F644SQ	D-F/F with R,S,2 to 1 Selector Q Out	11 (-)	2-470
F644SQP	D-F/F with R,S,2 to 1 Selector Q Out (X2 Drive)	12 (-)	2-470
F647	D-F/F with RB,SB	10 (-)	2-424
F647H	D-F/F with RB,SB,Hold	12 (-)	2-522
F647HB	D-F/F with RB,SB,Hold QB Out	11 (-)	2-522
F647HBP	D-F/F with RB,SB,Hold QB Out (X2 Drive)	12 (-)	2-522
F647HL	D-F/F with RB,SB,Hold (Low Power)	11 (-)	2-522
F647HP	D-F/F with RB,SB,Hold (X2 Drive)	14 (-)	2-522
F647HQ	D-F/F with RB,SB,Hold Q Out	11 (-)	2-522
F647HQP	D-F/F with RB,SB,Hold Q Out (X2 Drive)	12 (-)	2-522
F647NB	D-F/F with RB,SB QB Out	9 (-)	2-424
F647NBL	D-F/F with RB,SB QB Out (Low Power)	9 (-)	2-424
F647NBP	D-F/F with RB,SB QB Out (X2 Drive)	10 (-)	2-424
F647NL	D-F/F with RB,SB (Low Power)	9 (-)	2-424
F647NP	D-F/F with RB,SB (X2 Drive)	12 (-)	2-424
F647NQ	D-F/F with RB,SB Q Out	9 (-)	2-424
F647NQL	D-F/F with RB,SB Q Out (Low Power)	9 (-)	2-424
F647NQP	D-F/F with RB,SB Q Out (X2 Drive)	10 (-)	2-424
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F647SB	D-F/F with RB,SB,2 to 1 Selector QB Out	11 (-)	2-484
F647SBP	D-F/F with RB,SB,2 to 1 Selector QB Out (X2 Drive)	12 (-)	2-484
F647SL	D-F/F with RB,SB,2 to 1 Selector (Low Power)	11 (-)	2-484
F647SP	D-F/F with RB,SB,2 to 1 Selector (X2 Drive)	14 (-)	2-484
F647SQ	D-F/F with RB,SB,2 to 1 Selector Q Out	11 (-)	2-484
F647SQP	D-F/F with RB,SB,2 to 1 Selector Q Out (X2 Drive)	12 (-)	2-484
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F661NB	D-F/F (CB) QB Out	7 (-)	2-430
F661NBL	D-F/F (CB) QB Out (Low Power)	7 (-)	2-430
F661NBP	D-F/F (CB) QB Out (X2 Drive)	8 (-)	2-430
F661NL	D-F/F (CB) (Low Power)	7 (-)	2-430
F661NP	D-F/F (CB) (X2 Drive)	10 (-)	2-430
F661NQ	D-F/F (CB) Q Out	7 (-)	2-430
F661NQL	D-F/F (CB) Q Out (Low Power)	7 (-)	2-430
F661NQP	D-F/F (CB) Q Out (X2 Drive)	8 (-)	2-430
F661S	D-F/F (CB) with 2 to 1 Selector	10 (-)	2-490
F661SB	D-F/F (CB) with 2 to 1 Selector QB Out	9 (-)	2-490
F661SBP	D-F/F (CB) with 2 to 1 Selector QB Out (X2 Drive)	10 (-)	2-490
F661SL	D-F/F (CB) with 2 to 1 Selector (Low Power)	9 (-)	2-490
F661SP	D-F/F (CB) with 2 to 1 Selector (X2 Drive)	12 (-)	2-490

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F661SQP	D-F/F (CB) with 2 to 1 Selector Q Out (X2 Drive)	10 (-)	2-490
F665	D-F/F (CB) with RB	9 (-)	2-434
F665NB	D-F/F (CB) with RB QB Out	8 (-)	2-434
F665NBL	D-F/F (CB) with RB QB Out (Low Power)	7 (-)	2-434
F665NBP	D-F/F (CB) with RB QB Out (X2 Drive)	9 (-)	2-434
F665NL	D-F/F (CB) with RB (Low Power)	8 (-)	2-434
F665NP	D-F/F (CB) with RB (X2 Drive)	11 (-)	2-434
F665NQ	D-F/F (CB) with RB Q Out	8 (-)	2-434
F665NQL	D-F/F (CB) with RB Q Out (Low Power)	7 (-)	2-434
F665NQP	D-F/F (CB) with RB Q Out (X2 Drive)	9 (-)	2-434
F665S	D-F/F (CB) with RB,2 to 1 Selector	11 (-)	2-496
F665SB	D-F/F (CB) with RB,2 to 1 Selector QB Out	10 (-)	2-496
F665SBP	D-F/F (CB) with RB,2 to 1 Selector QB Out (X2 Drive)	11 (-)	2-496
F665SL	D-F/F (CB) with RB,2 to 1 Selector (Low Power)	10 (-)	2-496
F665SP	D-F/F (CB) with RB,2 to 1 Selector (X2 Drive)	13 (-)	2-496
F665SQ	D-F/F (CB) with RB,2 to 1 Selector Q Out	10 (-)	2-496
F665SQP	D-F/F (CB) with RB,2 to 1 Selector Q Out (X2 Drive)	11 (-)	2-496
F666	D-F/F (CB) with SB	9 (-)	2-440
F666NB	D-F/F (CB) with SB QB Out	8 (-)	2-440
F666NBL	D-F/F (CB) with SB QB Out (Low Power)	7 (-)	2-440
F666NBP	D-F/F (CB) with SB QB Out (X2 Drive)	9 (-)	2-440
F666NL	D-F/F (CB) with SB (Low Power)	8 (-)	2-440
F666NP	D-F/F (CB) with SB (X2 Drive)	11 (-)	2-440
F666NQ	D-F/F (CB) with SB Q Out	8 (-)	2-440
F666NQL	D-F/F (CB) with SB Q Out (Low Power)	7 (-)	2-440
F666NQP	D-F/F (CB) with SB Q Out (X2 Drive)	9 (-)	2-440
F666S	D-F/F (CB) with SB,2 to 1 Selector	11 (-)	2-502
F666SB	D-F/F (CB) with SB,2 to 1 Selector QB Out	10 (-)	2-502
F666SBP	D-F/F (CB) with SB,2 to 1 Selector QB Out (X2 Drive)	11 (-)	2-502
F666SL	D-F/F (CB) with SB,2 to 1 Selector (Low Power)	10 (-)	2-502
F666SP	D-F/F (CB) with SB,2 to 1 Selector (X2 Drive)	13 (-)	2-502
F666SQ	D-F/F (CB) with SB,2 to 1 Selector Q Out	10 (-)	2-502
F666SQP	D-F/F (CB) with SB,2 to 1 Selector Q Out (X2 Drive)	11 (-)	2-502
F667	D-F/F (CB) with RB,SB	10 (-)	2-446
F667NB	D-F/F (CB) with RB,SB QB Out	9 (-)	2-446
F667NBL	D-F/F (CB) with RB,SB QB Out (Low Power)	9 (-)	2-446
F667NBP	D-F/F (CB) with RB,SB QB Out (X2 Drive)	10 (-)	2-446
F667NL	D-F/F (CB) with RB,SB (Low Power)	9 (-)	2-446
F667NP	D-F/F (CB) with RB,SB (X2 Drive)	12 (-)	2-446
F667NQ	D-F/F (CB) with RB,SB Q Out	9 (-)	2-446
F667NQL	D-F/F (CB) with RB,SB Q Out (Low Power)	9 (-)	2-446
F667NQP	D-F/F (CB) with RB,SB Q Out (X2 Drive)	10 (-)	2-446

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F667SB	D-F/F (CB) with RB,SB,2 to 1 Selector QB Out	11 (-)	2-508
F667SBP	D-F/F (CB) with RB,SB,2 to 1 Selector QB Out (X2 Drive)	12 (-)	2-508
F667SL	D-F/F (CB) with RB,SB,2 to 1 Selector (Low Power)	11 (-)	2-508
F667SP	D-F/F (CB) with RB,SB,2 to 1 Selector (X2 Drive)	14 (-)	2-508
F667SQ	D-F/F (CB) with RB,SB,2 to 1 Selector Q Out	11 (-)	2-508
F667SQP	D-F/F (CB) with RB,SB,2 to 1 Selector Q Out (X2 Drive)	12 (-)	2-508
F673	D-F/F (CB) with 2 to 1 Selector(2 CTRL),RB	11 (-)	2-526
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F6R9	D-Latch (GB) with RB (High Speed)	6 (-)	2-386
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F737	T-F/F (TB) with RB,SB	9 (-)	2-548
F744	T-F/F with R,S	9 (-)	2-534
F744NL	T-F/F with R,S (Low Power)	8 (-)	2-534
F744NP	T-F/F with R,S (X2 Drive)	11 (-)	2-534
F744NQ	T-F/F with R,S Q Out	8 (-)	2-534
F744NQP	T-F/F with R,S Q Out (X2 Drive)	9 (-)	2-534
F745	T-F/F with RB	8 (-)	2-538
F745NL	T-F/F with RB (Low Power)	7 (-)	2-538
F745NP	T-F/F with RB (X2 Drive)	10 (-)	2-538
F745NQ	T-F/F with RB Q Out	7 (-)	2-538
F745NQP	T-F/F with RB Q Out (X2 Drive)	8 (-)	2-538
F747	T-F/F with RB,SB	9 (-)	2-540
F747NL	T-F/F with RB,SB (Low Power)	8 (-)	2-540
F747NP	T-F/F with RB,SB (X2 Drive)	11 (-)	2-540
F747NQ	T-F/F with RB,SB Q Out	8 (-)	2-540
F747NQP	T-F/F with RB,SB Q Out (X2 Drive)	9 (-)	2-540
F765	T-F/F (TB) with RB	8 (-)	2-546
F765NL	T-F/F (TB) with RB (Low Power)	7 (-)	2-546
F765NP	T-F/F (TB) with RB (X2 Drive)	10 (-)	2-546
F765NQ	T-F/F (TB) with RB Q Out	7 (-)	2-546
F765NQP	T-F/F (TB) with RB Q Out (X2 Drive)	8 (-)	2-546
F767	T-F/F (TB) with RB,SB	9 (-)	2-548
F767NL	T-F/F (TB) with RB,SB (Low Power)	8 (-)	2-548
F767NP	T-F/F (TB) with RB,SB (X2 Drive)	11 (-)	2-548
F767NQ	T-F/F (TB) with RB,SB Q Out	8 (-)	2-548
F767NQP	T-F/F (TB) with RB,SB Q Out (X2 Drive)	9 (-)	2-548
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F771NBP	JK-F/F QB Out (X2 Drive)	10 (-)	2-552
F771NL	JK-F/F (Low Power)	9 (-)	2-552
F771NP	JK-F/F (X2 Drive)	12 (-)	2-552
F771NQ	JK-F/F Q Out	9 (-)	2-552
F771NQL	JK-F/F Q Out (Low Power)	9 (-)	2-552
F771NQP	JK-F/F Q Out (X2 Drive)	10 (-)	2-552
F774	JK-F/F with R,S	12 (-)	2-558
F774NB	JK-F/F with R,S QB Out	11 (-)	2-558
F774NBL	JK-F/F with R,S QB Out (Low Power)	11 (-)	2-558
F774NBP	JK-F/F with R,S QB Out (X2 Drive)	12 (-)	2-558
F774NL	JK-F/F with R,S (Low Power)	11 (-)	2-558
F774NP	JK-F/F with R,S (X2 Drive)	14 (-)	2-558
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F774NQL	JK-F/F with R,S Q Out (Low Power)	11 (-)	2-558
F774NQP	JK-F/F with R,S Q Out (X2 Drive)	12 (-)	2-558
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F775NB	JK-F/F with RB QB Out	10 (-)	2-562
F775NBL	JK-F/F with RB QB Out (Low Power)	10 (-)	2-562
F775NBP	JK-F/F with RB QB Out (X2 Drive)	11 (-)	2-562
F775NL	JK-F/F with RB (Low Power)	10 (-)	2-562
F775NP	JK-F/F with RB (X2 Drive)	13 (-)	2-562
F775NQ	JK-F/F with RB Q Out	10 (-)	2-562
F775NQL	JK-F/F with RB Q Out (Low Power)	10 (-)	2-562
F775NQP	JK-F/F with RB Q Out (X2 Drive)	11 (-)	2-562
F776	JK-F/F with SB	12 (-)	2-566
F776NB	JK-F/F with SB QB Out	11 (-)	2-566
F776NBL	JK-F/F with SB QB Out (Low Power)	11 (-)	2-566
F776NBP	JK-F/F with SB QB Out (X2 Drive)	12 (-)	2-566
F776NL	JK-F/F with SB (Low Power)	11 (-)	2-566
F776NP	JK-F/F with SB (X2 Drive)	14 (-)	2-566
F776NQ	JK-F/F with SB Q Out	11 (-)	2-566
F776NQL	JK-F/F with SB Q Out (Low Power)	11 (-)	2-566
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F777	JK-F/F with RB,SB	12 (-)	2-570
F777NB	JK-F/F with RB,SB QB Out	11 (-)	2-570
F777NBL	JK-F/F with RB,SB QB Out (Low Power)	11 (-)	2-570
F777NBP	JK-F/F with RB,SB QB Out (X2 Drive)	12 (-)	2-570
F777NL	JK-F/F with RB,SB (Low Power)	11 (-)	2-570
F777NP	JK-F/F with RB,SB (X2 Drive)	14 (-)	2-570
F777NQ	JK-F/F with RB,SB Q Out	11 (-)	2-570
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F781NBL	JK-F/F (CB) QB Out (Low Power)	9 (-)	2-574
F781NBP	JK-F/F (CB) QB Out (X2 Drive)	10 (-)	2-574
F781NL	JK-F/F (CB) (Low Power)	9 (-)	2-574
F781NP	JK-F/F (CB) (X2 Drive)	12 (-)	2-574
F781NQ	JK-F/F (CB) Q Out	9 (-)	2-574
F781NQL	JK-F/F (CB) Q Out (Low Power)	9 (-)	2-574
F781NQP	JK-F/F (CB) Q Out (X2 Drive)	10 (-)	2-574
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F787NBL	JK-F/F (CB) with RB,SB QB Out (Low Power)	11 (-)	2-580
F787NBP	JK-F/F (CB) with RB,SB QB Out (X2 Drive)	12 (-)	2-580
F787NL	JK-F/F (CB) with RB,SB (Low Power)	11 (-)	2-580
F787NP	JK-F/F (CB) with RB,SB (X2 Drive)	14 (-)	2-580
F787NQ	JK-F/F (CB) with RB,SB Q Out	11 (-)	2-580
F787NQL	JK-F/F (CB) with RB,SB Q Out (Low Power)	11 (-)	2-580
F787NQP	JK-F/F (CB) with RB,SB Q Out (X2 Drive)	12 (-)	2-580
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FDE1BI	Input Buffer with Failsafe Schmitt 50kΩ Pull-down	11 (1)	4-6
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SE641NP	D-F/F (X2 Drive)	14 (-)	3-112
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NEC Electronics Inc.
Corporate Communications Dept.
Fax: 1-800-729-9288
1-408-588-6130

Europe
NEC Electronics (Europe) GmbH
Technical Documentation Dept.
Fax: +49-211-6503-274

South America
NEC do Brasil S.A.
Fax: +55-11-6462-6829

Hong Kong, Philippines, Oceania
NEC Electronics Hong Kong Ltd.
Fax: +852-2886-9022/9044

Korea
NEC Electronics Hong Kong Ltd.
Seoul Branch
Fax: 02-528-4411

Taiwan
NEC Electronics Taiwan Ltd.
Fax: 02-2719-5951

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