

TOSHIBA FIELD EFFECT TRANSISTOR SILICON P CHANNEL MOS TYPE

HN1J02FU

HIGH SPEED SWITCHING APPLICATIONS

ANALOG SWITCH APPLICATIONS

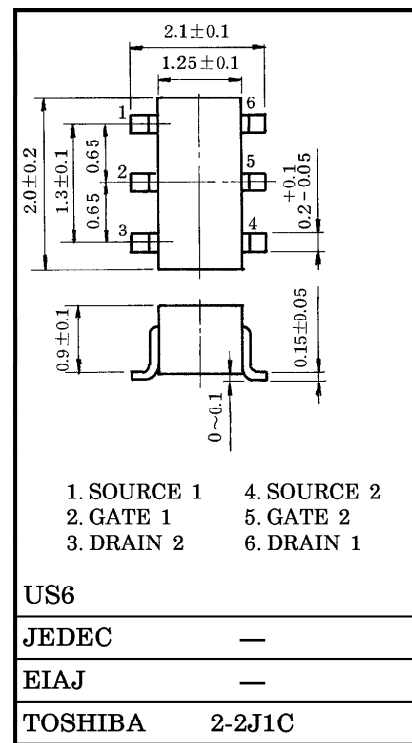
- High Input Impedance
- Low Threshold Voltage : $V_{th} = -0.5 \sim -1.5V$
- High Speed
- Small Package

MAXIMUM RATINGS ($T_a = 25^\circ C$) (Q1, Q2 COMMON)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Drain-Source Voltage	V_{DS}	-20	V
Gate-Source Voltage	V_{GSS}	-7	V
DC Drain Current	I_D	-50	mA
Drain Power Dissipation	P_D^*	200	mW
Channel Temperature	T_{ch}	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55 ~ 150	$^\circ C$

* Total Rating

Unit in mm



Weight : 6.8mg

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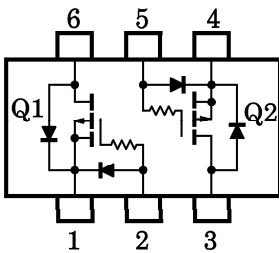
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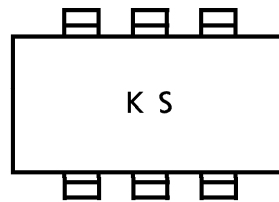
ELECTRICAL CHARACTERISTICS (Ta = 25°C) (Q1, Q2 COMMON)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT	
Gate Leakage Current	I _{GSS}	V _{GS} = -7V, V _{DS} = 0	—	—	-1	μA	
Drain-Source Breakdown Voltage	V _{(BR) DSS}	I _D = -100μA, V _{GS} = 0	-20	—	—	V	
Drain Cut-off Current	I _{DSS}	V _{DS} = -20V, V _{GS} = 0	—	—	-1	μA	
Gate Threshold Voltage	V _{th}	V _{DS} = -3V, I _D = -0.1mA	-0.5	—	-1.5	V	
Forward Transfer Admittance	Y _{fs}	V _{DS} = -3V, I _D = -10mA	15	—	—	mS	
Drain-Source ON Resistance	R _{DS (ON)}	I _D = -10mA, V _{GS} = -2.5V	—	20	40	Ω	
Input Capacitance	C _{iss}	V _{DS} = -3V, V _{GS} = 0, f = 1MHz	—	10.4	—	pF	
Reverse Transfer Capacitance	C _{rss}	V _{DS} = -3V, V _{GS} = 0, f = 1MHz	—	2.8	—	pF	
Output Capacitance	C _{oss}	V _{DS} = -3V, V _{GS} = 0, f = 1MHz	—	8.4	—	pF	
Switching Time	Turn-on Time	t _{on}	V _{DD} = -3V, I _D = -10mA, V _{GS} = 0 ~ -2.5V	—	0.15	—	μs
	Turn-off Time	t _{off}	V _{DD} = -3V, I _D = -10mA, V _{GS} = 0 ~ -2.5V	—	0.13	—	μs

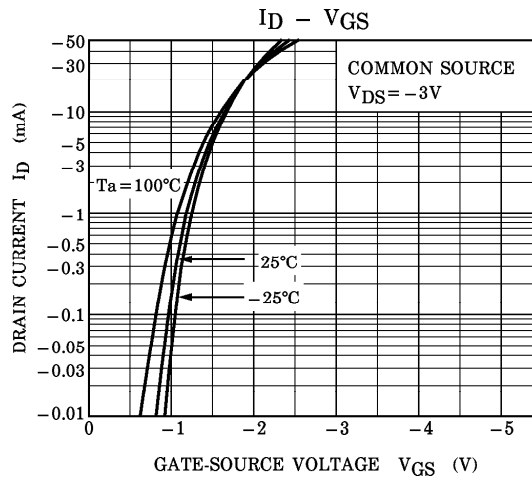
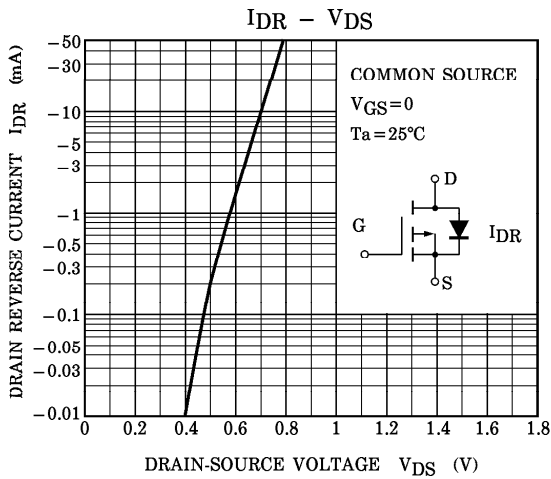
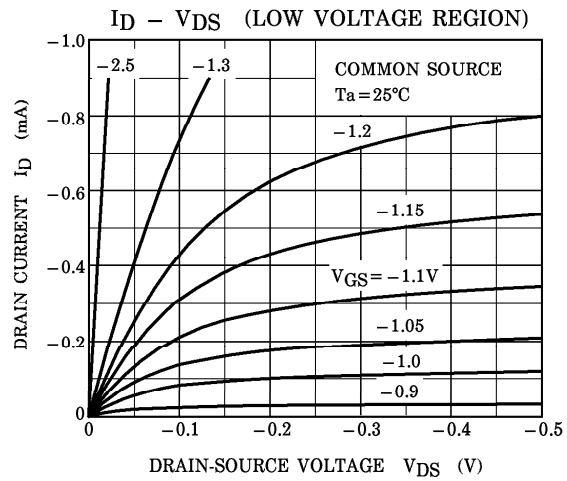
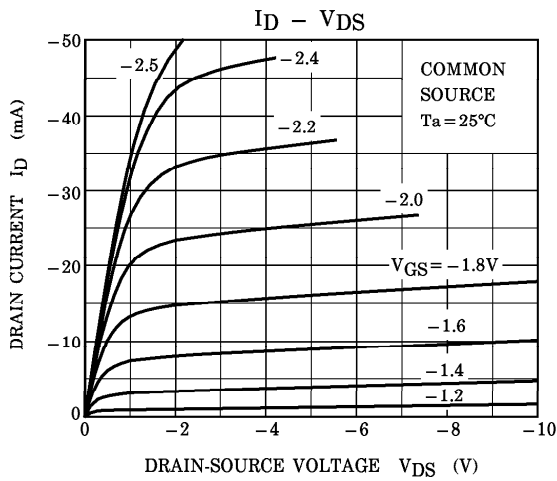
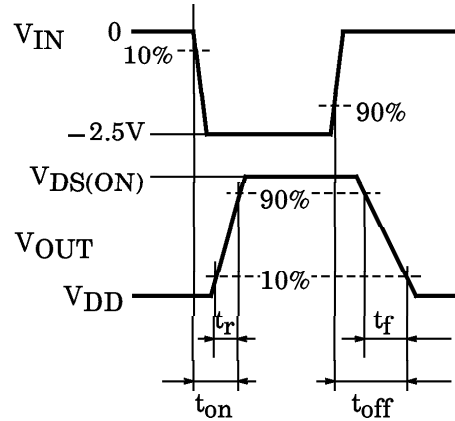
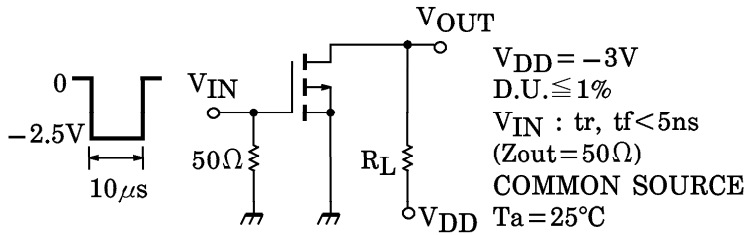
EQUIVALENT CIRCUIT (TOP VIEW)



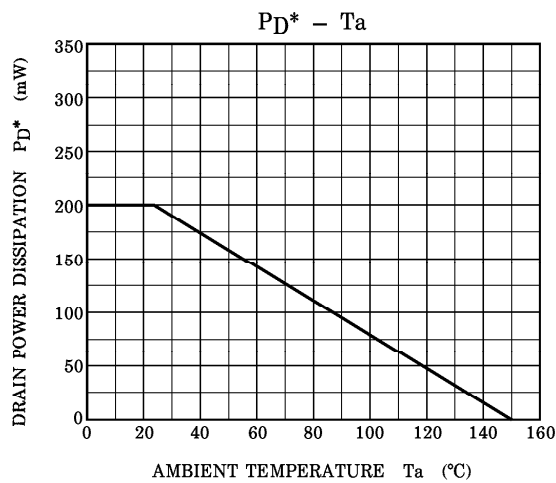
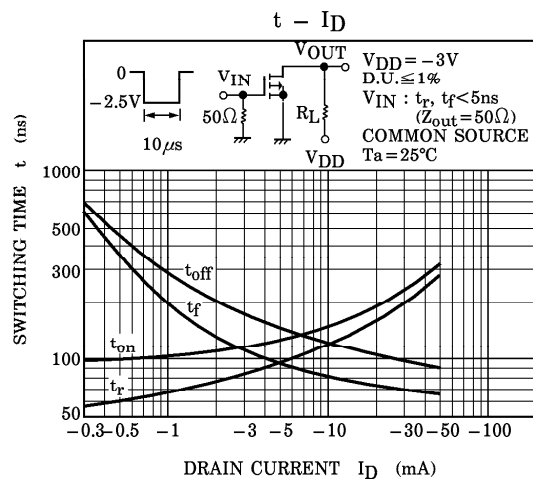
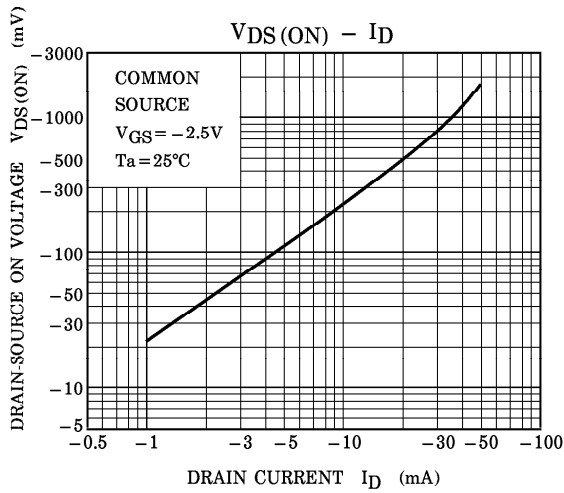
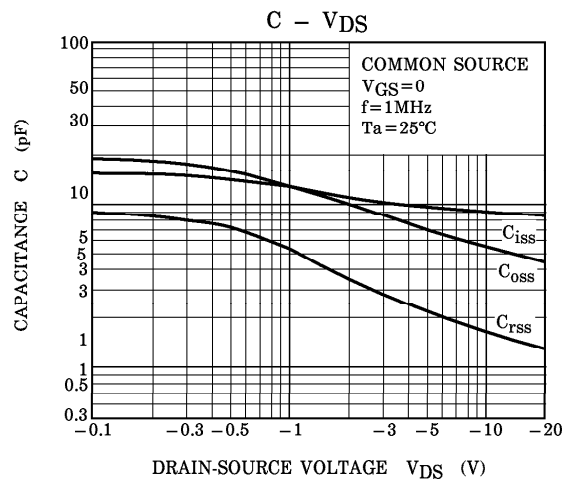
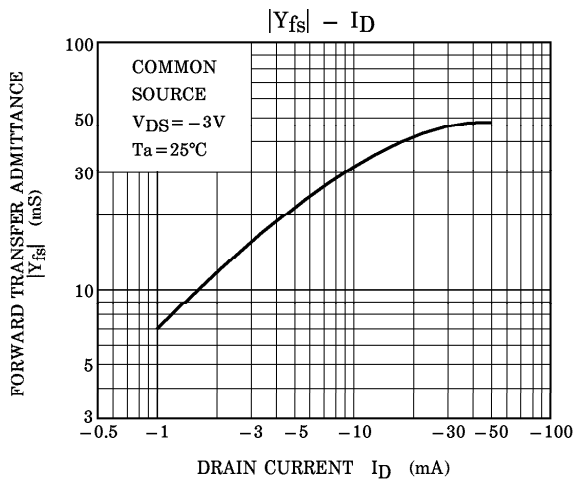
MARKING



(Q1, Q2 COMMON)
SWITCHING TIME TEST CIRCUIT



(Q1, Q2 COMMON)



* : Total Rating