

TOSHIBA FIELD EFFECT TRANSISTOR SILICON N CHANNEL TYPE

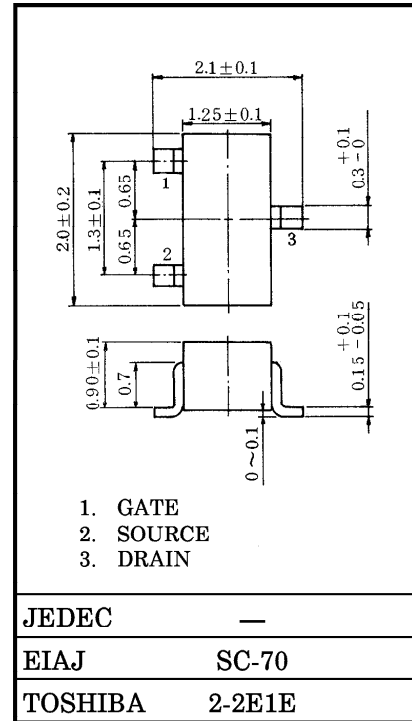
2SK2037

HIGH SPEED SWITCHING APPLICATIONS.

ANALOG SWITCHING APPLICATIONS.

- High Input Impedance.
- Low Gate Threshold Voltage : $V_{th} = 0.5 \sim 1.5V$
- Excellent Switching Times : $t_{on} = 0.28\mu s$ (Typ.)
 $t_{off} = 0.34\mu s$ (Typ.)
- Small Package.
- Enhancement-Mode

Unit in mm



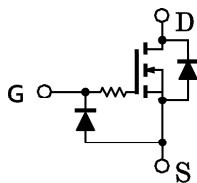
MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Drain-Source Voltage	V_{DS}	20	V
Gate-Source Voltage	V_{GS}	10	V
DC Drain Current	I_D	100	mA
Drain Power Dissipation	P_D	100	mW
Channel Temperature	T_{ch}	150	°C
Storage Temperature Range	T_{stg}	-55 ~ 150	°C

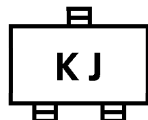
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

Weight : 0.006g

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current	I_{GSS}	$V_{GS} = 10V, V_{DS} = 0$	—	—	1	μA
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D = 100\mu A, V_{GS} = 0$	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} $	$V_{DS} = 3V, I_D = 10mA$	35	62	—	mS
Drain-Source ON Resistance	$R_{DS(ON)}$	$I_D = 10mA, V_{GS} = 2.5V$	—	3.5	6	Ω
Input Capacitance	C_{iss}	$V_{DS} = 3V, V_{GS} = 0, f = 1MHz$	—	14	—	pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS} = 3V, V_{GS} = 0, f = 1MHz$	—	5.3	—	pF
Output Capacitance	C_{oss}	$V_{DS} = 3V, V_{GS} = 0, f = 1MHz$	—	16	—	pF
Switching Time	Turn-on Time	t_{on} $V_{DD} = 3V, I_D = 10mA$ $V_{GS} = 0 \sim 2.5V$	—	0.28	—	μs
	Turn-off Time	t_{off} $V_{DD} = 3V, I_D = 10mA$ $V_{GS} = 0 \sim 2.5V$	—	0.34	—	μs



MARKING

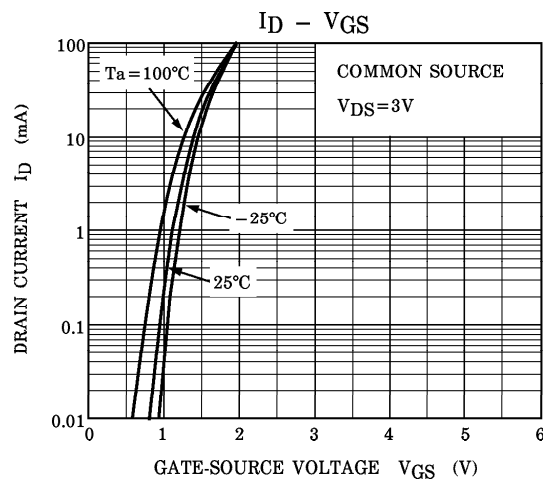
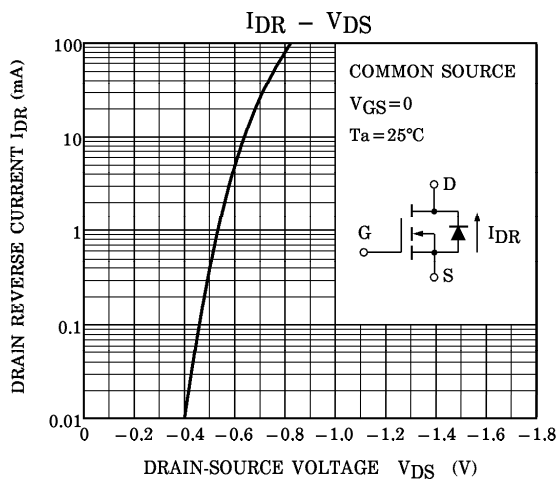
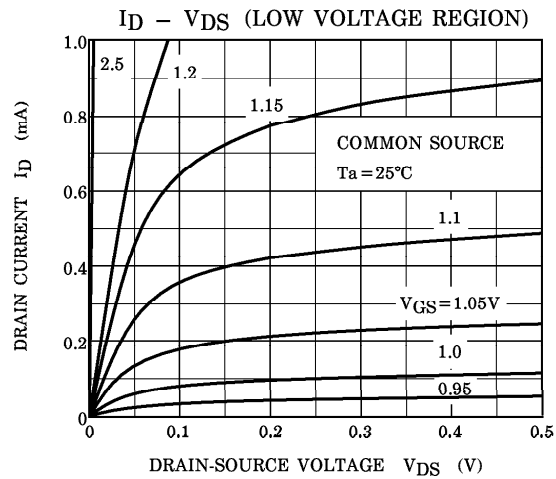
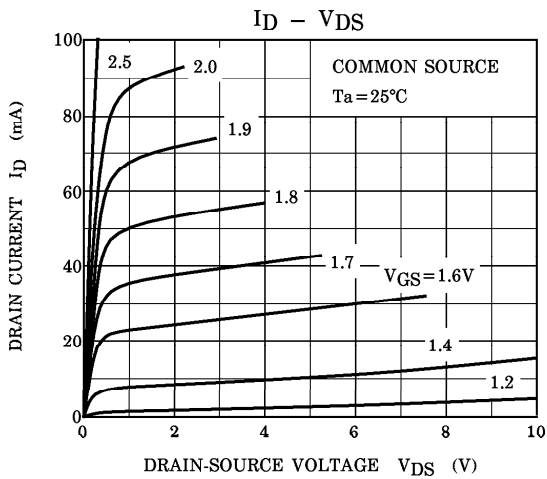
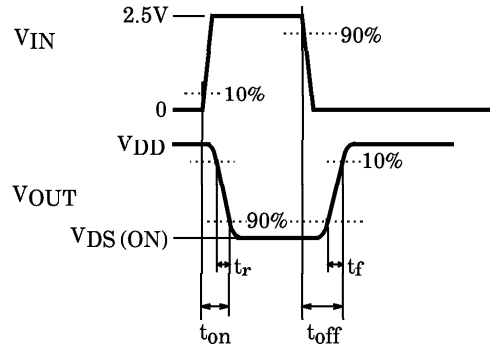
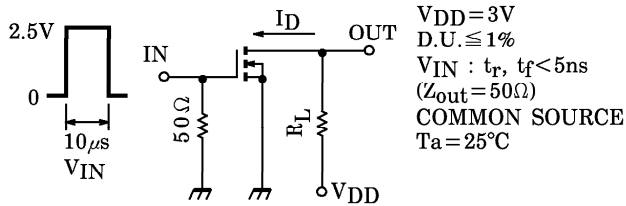


THIS TRANSISTOR ELECTROSTATIC SENSITIVE DEVICE. PLEASE HANDLE WITH CAUTION.

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SWITCHING TIME TEST CIRCUIT



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