

TOSHIBA FIELD EFFECT TRANSISTOR SILICON N CHANNEL MOS TYPE

2SK2033

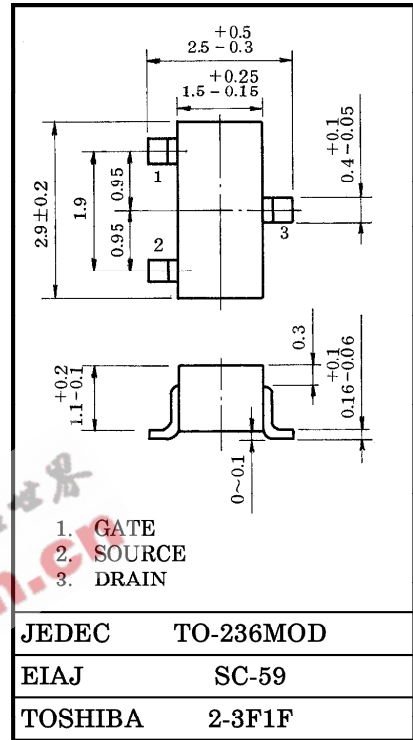
HIGH SPEED SWITCHING APPLICATIONS.
ANALOG SWITCH APPLICATIONS.

Unit in mm

- High Input Impedance.
- Low Gate Threshold Voltage : $V_{th}=0.5\sim 1.5V$
- Excellent Switching Times : $t_{on}=0.16\mu s$ (typ.)
 $t_{off}=0.15\mu s$ (typ.)
- Small Package.
- Enhancement-Mode

MAXIMUM RATINGS ($T_a = 25^\circ C$)

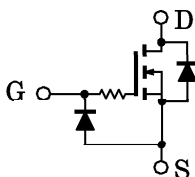
CHARACTERISTIC	SYMBOL	RATING	UNIT
Drain-Source Voltage	V_{DS}	20	V
Gate-Source Voltage	V_{GSS}	10	V
DC Drain Current	I_D	100	mA
Drain Power Dissipation	P_D	200	mW
Channel Temperature	T_{ch}	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55~150	$^\circ C$



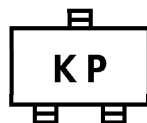
ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ C$)

Weight : 0.012g

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} $	$V_{DS}=3V, I_D=10mA$	25	50	—	mS	
Drain-Source ON Resistance	$R_{DS(ON)}$	$I_D=10mA, V_{GS}=2.5V$	—	8	12	Ω	
Input Capacitance	C_{iss}	$V_{DS}=3V, V_{GS}=0, f=1MHz$	—	8.5	—	pF	
Reverse Transfer Capacitance	C_{rss}	$V_{DS}=3V, V_{GS}=0, f=1MHz$	—	3.3	—	pF	
Output Capacitance	C_{oss}	$V_{DS}=3V, V_{GS}=0, f=1MHz$	—	9.3	—	pF	
Switching Time	Turn-on Time	t_{on}	$V_{DD}=3V, I_D=10mA$ $V_{GS}=0\sim 2.5V$	—	0.16	—	μs
	Turn-off Time	t_{off}	$V_{DD}=3V, I_D=10mA$ $V_{GS}=0\sim 2.5V$	—	0.15	—	μs



MARKING

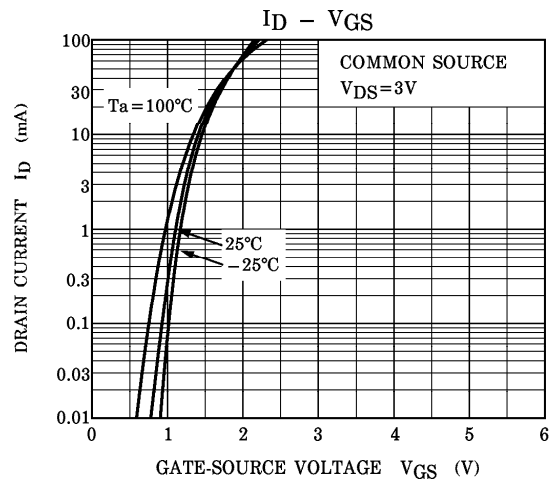
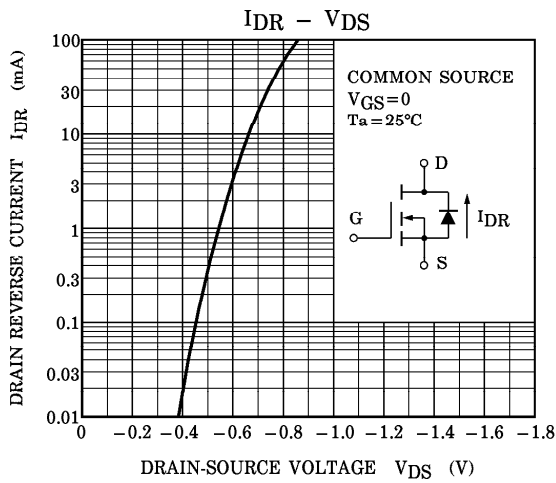
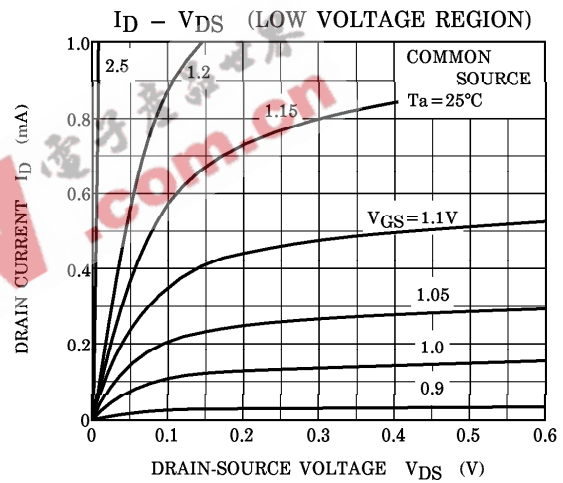
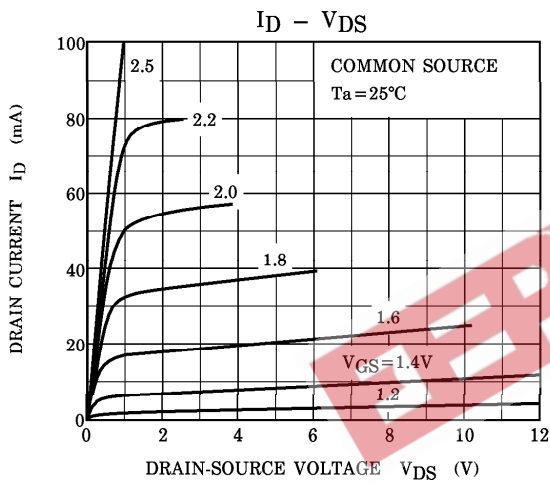
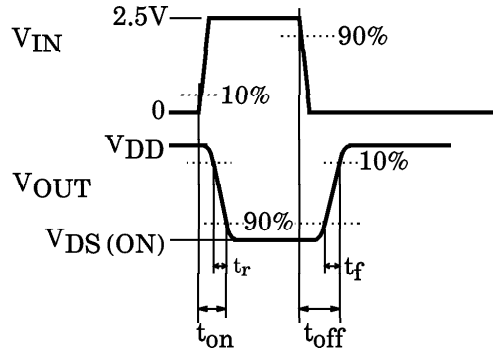
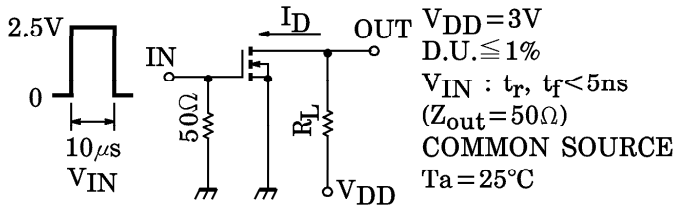


THIS TRANSISTOR ELECTROSTATIC SENSITIVE DEVICE. PLEASE HANDLE WITH CAUTION.

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SWITCHING TIME TEST CIRCUIT



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