

TOSHIBA FIELD EFFECT TRANSISTOR SILICON N CHANNEL MOS TYPE

# 2SK2036

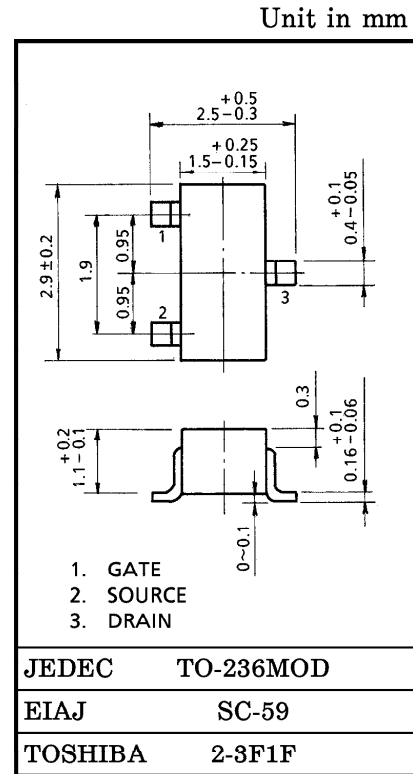
HIGH SPEED SWITCHING APPLICATIONS.

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

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
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	$^\circ C$



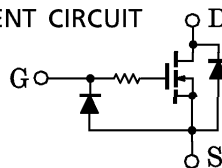
ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ C$ )

Weight : 0.012g

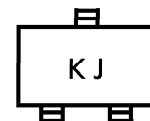
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current	$I_{GSS}$	$V_{GS} = 10V, V_{DS} = 0$	—	—	1	$\mu A$
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D = 100\mu A, V_{GS} = 0$	20	—	—	V
Drain Cut-off Current	$I_{DSS}$	$V_{DS} = 20V, V_{GS} = 0$	—	—	1	$\mu A$
Gate Threshold Voltage	$V_{th}$	$V_{DS} = 3V, I_D = 0.1mA$	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	$\Omega$
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	$t_{on}$	—	0.28	—	$\mu s$
	Turn-off Time	$t_{off}$	—	0.34	—	$\mu s$

This transistor is electrostatic sensitive device. Please handle with caution.

EQUIVALENT CIRCUIT



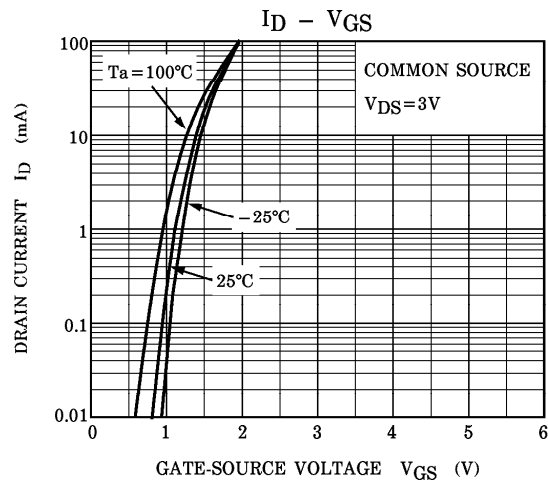
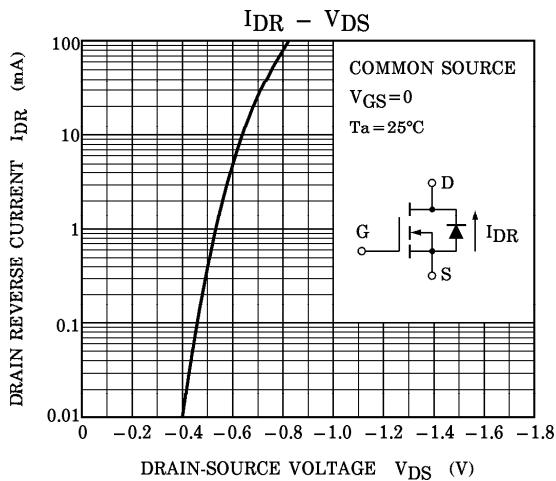
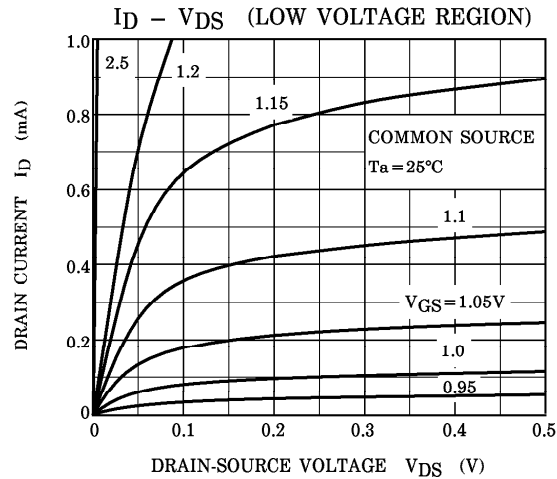
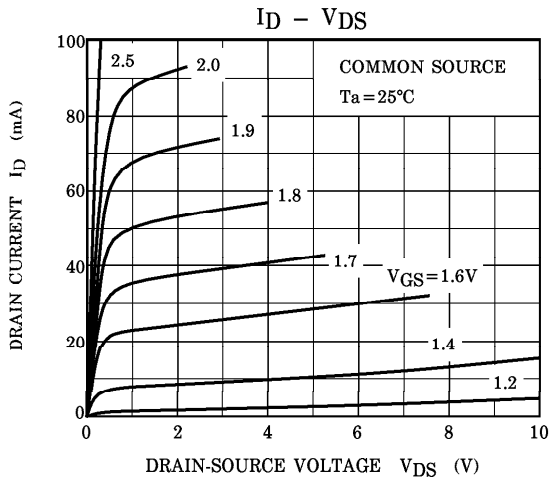
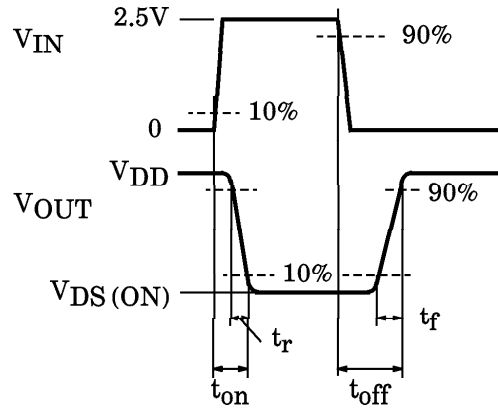
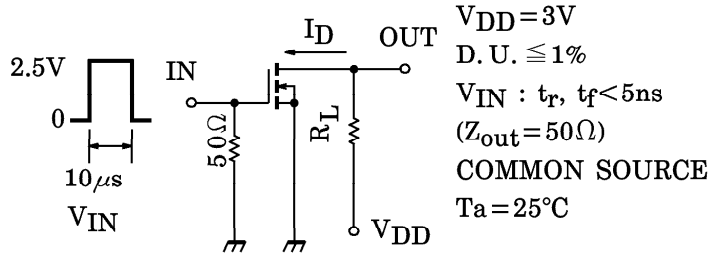
MARKING



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SWITCHING TIME TEST CIRCUIT



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