

TOSHIBA FIELD EFFECT TRANSISTOR SILICON P CHANNEL MOS TYPE

2SJ167

HIGH SPEED SWITCHING APPLICATIONS

ANALOG SWITCH APPLICATIONS

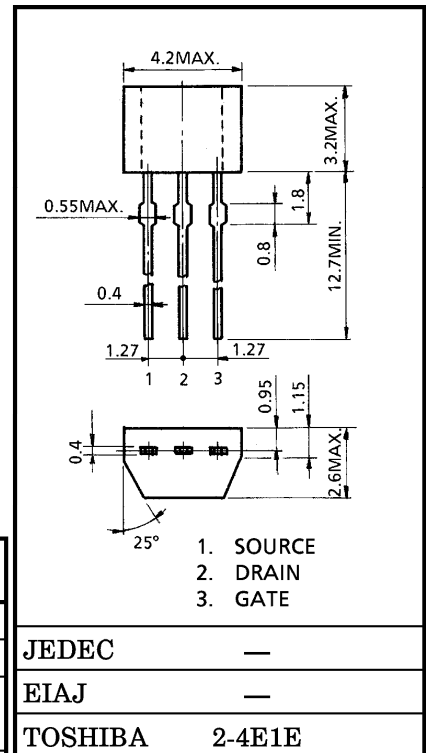
INTERFACE APPLICATIONS

- Excellent Switching Time : $t_{on} = 14 \text{ ns (Typ.)}$
- High Forward Transfer Admittance : $|Y_{fs}| = 100 \text{ mS (Min.)}$
- Low On Resistance : $R_{DS(ON)} = 1.3 \Omega \text{ (Typ.)}$
- Enhancement-Mode
- Complementary to 2SK1061

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Drain-Source Voltage		V_{DSS}	-60	V
Gate-Source Voltage		V_{GSS}	± 20	V
Drain Current	DC	I_D	-200	mA
	Pulse	I_{DP}	-800	
Drain Power Dissipation (Ta = 25°C)		P_D	300	mW
Channel Temperature		T_{ch}	150	°C
Storage Temperature Range		T_{stg}	-55~150	°C

Unit in mm

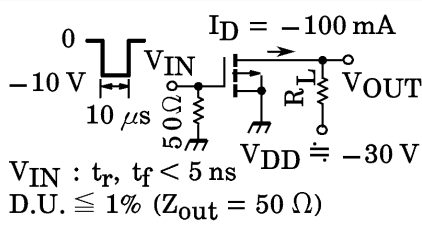


Weight : 0.13 g (Typ.)

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ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current		I_{GSS}	$V_{GS} = \pm 10\text{ V}, V_{DS} = 0$	—	—	± 100	nA
Drain Cut-off Current		I_{DSS}	$V_{DS} = -60\text{ V}, V_{GS} = 0$	—	—	-10	μA
Drain-Source Breakdown Voltage		$V_{(BR)DSS}$	$I_D = -1\text{ mA}, V_{GS} = 0$	-60	—	—	V
Gate Threshold Voltage		V_{th}	$V_{DS} = -10\text{ V}, I_D = -1\text{ mA}$	-2	—	-3.5	V
Forward Transfer Admittance		$ Y_{fs} $	$V_{DS} = -10\text{ V}, I_D = -50\text{ mA}$	100	—	—	mS
Drain-Source ON Resistance		$R_{DS(ON)}$	$I_D = -50\text{ mA}, V_{GS} = -10\text{ V}$	—	1.3	2.0	Ω
Drain-Source ON Voltage		$V_{DS(ON)}$	$I_D = -50\text{ mA}, V_{GS} = -10\text{ V}$	—	-65	-100	mV
Input Capacitance		C_{iss}	$V_{DS} = -10\text{ V}, V_{GS} = 0,$ $f = 1\text{ MHz}$	—	73	85	pF
Reverse Transfer Capacitance		C_{rss}	$V_{DS} = -10\text{ V}, V_{GS} = 0,$ $f = 1\text{ MHz}$	—	15	22	pF
Output Capacitance		C_{oss}	$V_{DS} = -10\text{ V}, V_{GS} = 0,$ $f = 1\text{ MHz}$	—	48	60	pF
Switching Time	Rise Time	t_r		—	8	—	ns
	Turn-on Time	t_{on}		—	14	—	
	Fall Time	t_f		—	35	—	
	Turn-off Time	t_{off}		—	100	—	

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

