

TOSHIBA FIELD EFFECT TRANSISTOR SILICON N CHANNEL MOS TYPE

2SK1061

Unit in mm

HIGH SPEED SWITCHING APPLICATIONS

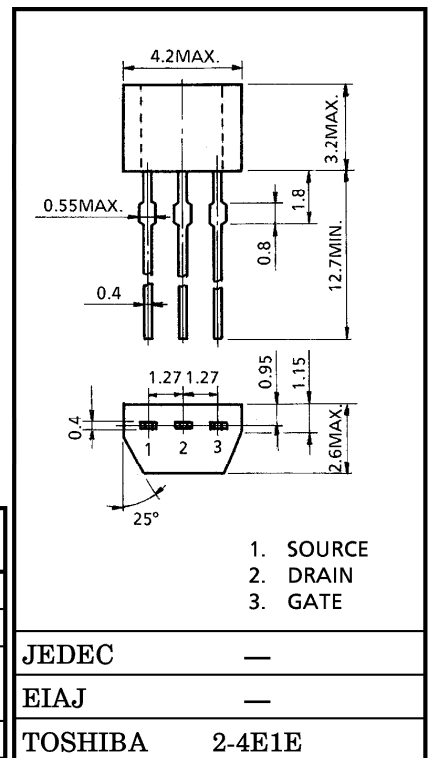
ANALOG SWITCH APPLICATIONS

INTERFACE APPLICATIONS

- Excellent Switching Times : $t_{on} = 14 \text{ ns (Typ.)}$
- High Forward Transfer Admittance : $|Y_{fs}| = 100 \text{ mS (Min.)}$
- Low On Resistance : $R_{DS(ON)} = 0.6 \Omega \text{ (Typ.)}$
- Enhancement-Mode
- Complementary to 2SJ167

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

CHARACTERISTIC		SYMBOL	RATING	UNIT
Drain-Source Voltage		V_{DS}	60	V
Gate-Source Voltage		V_{GSS}	± 20	V
Drain Current	DC	I_D	200	mA
	Pulse	I_{DP}	800	
Drain Power Dissipation ($T_a = 25^\circ\text{C}$)		P_D	300	mW
Channel Temperature		T_{ch}	150	$^\circ\text{C}$
Storage Temperature Range		T_{stg}	$-55 \sim 150$	$^\circ\text{C}$



Weight : 0.13 g

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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		$R_{DS(ON)}$	$I_D = 50\text{ mA}, V_{GS} = 10\text{ V}$	—	0.6	1.0	Ω
Drain-Source ON Voltage		$V_{DS(ON)}$	$I_D = 50\text{ mA}, V_{GS} = 10\text{ V}$	—	30	50	mV
Input Capacitance		C_{iss}	$V_{DS} = 10\text{ V}, V_{GS} = 0\text{ V}, f = 1\text{ MHz}$	—	55	65	pF
Reverse Transfer Capacitance		C_{rss}		—	13	18	
Output Capacitance		C_{oss}		—	40	50	
Switching Time	Rise Time	t_r	<p>D.U. $\leq 1\%$ $V_{IN} : t_r, t_f < 5\text{ ns}$ $(Z_{out} = 50\ \Omega)$</p>	—	8	—	ns
	Turn-on Time	t_{on}		—	14	—	
	Fall Time	t_f		—	35	—	
	Turn-off Time	t_{off}		—	75	—	

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

