

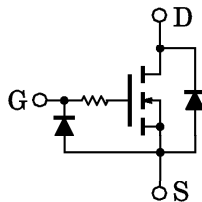
TOSHIBA FIELD EFFECT TRANSISTOR SILICON N CHANNEL MOS TYPE

2SK2824

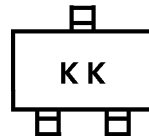
FOR PORTABLE EQUIPMENT
HIGH SPEED SWITCH APPLICATIONS
ANALOG SWITCH APPLICATIONS

- High Input Impedance
- 1.5V Gate Drive
- Low Gate Threshold Voltage : $V_{th}=0.5\sim 1.0V$
- Small Package

EQUIVALENT CIRCUIT

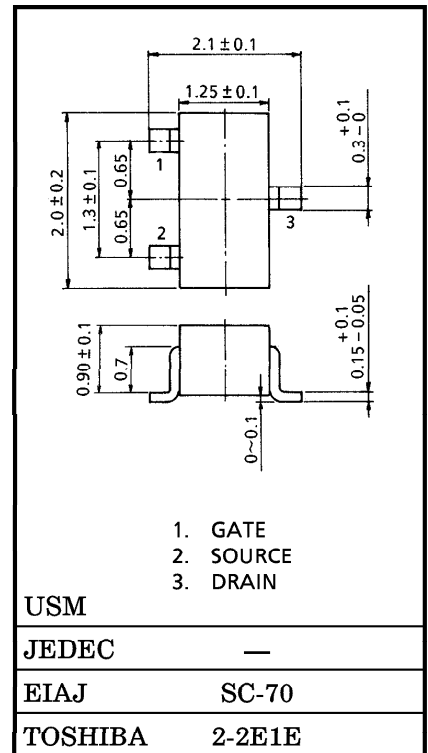


MARKING



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

Unit in mm



Weight : 0.006g (Typ.)

MAXIMUM RATINGS (Ta = 25°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	100	mW
Channel Temperature	T_{ch}	150	°C
Storage Temperature Range	T_{stg}	-55~150	°C

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ELECTRICAL CHARACTERISTICS (Ta = 25°C)

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}	$V_{DS} = 1.5V, I_D = 0.1mA$	0.5	—	1.0	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = 1.5V, I_D = 10mA$	35	70	—	mS
Drain-Source ON Resistance 1	$R_{DS(ON)1}$	$I_D = 1mA, V_{GS} = 1.2V$	—	15	50	Ω
Drain-Source ON Resistance 2	$R_{DS(ON)2}$	$I_D = 10mA, V_{GS} = 1.5V$	—	10	40	Ω
Drain-Source ON Resistance 3	$R_{DS(ON)3}$	$I_D = 10mA, V_{GS} = 2.5V$	—	7	28	Ω
Input Capacitance	C_{iss}	$V_{DS} = 1.5V, V_{GS} = 0, f = 1MHz$	—	12	—	pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS} = 1.5V, V_{GS} = 0, f = 1MHz$	—	3.4	—	pF
Output Capacitance	C_{oss}	$V_{DS} = 1.5V, V_{GS} = 0, f = 1MHz$	—	12	—	pF
Switching Time	Turn-on Time	$V_{DD} = 1.5V, I_D = 10mA, V_{GS} = 0 \sim 1.5V$	—	0.35	—	μs
	Turn-off Time		—	0.2	—	

SWITCHING TIME TEST CIRCUIT

(a) TEST CIRCUIT

