

TOSHIBA FIELD EFFECT TRANSISTOR SILICON P CHANNEL JUNCTION TYPE

# 2SJ104

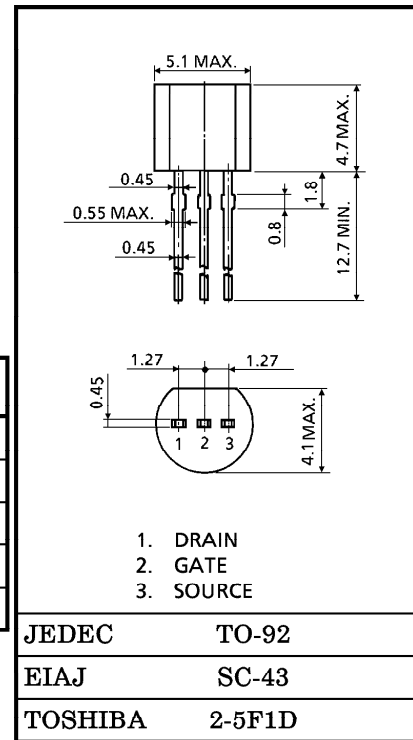
FOR AUDIO AMPLIFIER, ANALOG SWITCH, CONSTANT CURRENT AND IMPEDANCE CONVERTER APPLICATIONS

Unit in mm

- High Input Impedance :  $I_{GSS} = 1.0\text{nA (Max.) (}V_{GS} = 25\text{V)}$
- Low  $R_{DS(ON)} = 40\Omega$  (Typ.) ( $I_{DSS} = -5\text{mA}$ )
- Complimentary to 2SK364

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Gate-Drain Voltage	$V_{GDS}$	25	V
Gate Current	$I_G$	-10	mA
Drain Power Dissipation	$P_D$	400	mW
Junction Temperature	$T_j$	125	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55~125	$^\circ\text{C}$



Weight : 0.21g

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Cut-off Current	$I_{GSS}$	$V_{GS} = 25\text{V}, V_{DS} = 0$	—	—	1.0	nA
Gate-Drain Breakdown Voltage	$V_{(BR)GDS}$	$V_{DS} = 0, I_G = 100\mu\text{A}$	25	—	—	V
Drain Current	$I_{DSS}$ (Note 1)	$V_{DS} = -10\text{V}, V_{GS} = 0$	-2.6	—	-20	mA
Gate-Source Cut-off Voltage	$V_{GS(OFF)}$	$V_{DS} = -10\text{V}, I_D = -0.1\mu\text{A}$	0.2	—	2.0	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = -10\text{V}, V_{GS} = 0,$ $f = 1\text{kHz}$ (Note 2)	12	30	—	mS
Input Capacitance	$C_{iss}$	$V_{DS} = -10\text{V}, V_{GS} = 0, f = 1\text{MHz}$	—	105	—	pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DG} = -10\text{V}, I_D = 0, f = 1\text{MHz}$	—	32	—	pF
Drain-Source ON Resistance	$R_{DS(ON)}$	$V_{DS} = -10\text{mV}, V_{GS} = 0$ (Note 2)	—	40	—	$\Omega$

Note 1 :  $I_{DSS}$  Classification GR : -2.6~-6.5mA, BL : -6~-12mA, V : -10~-20mA

Note 2 : Condition of the typical value  $I_{DSS} = -5\text{mA}$

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