

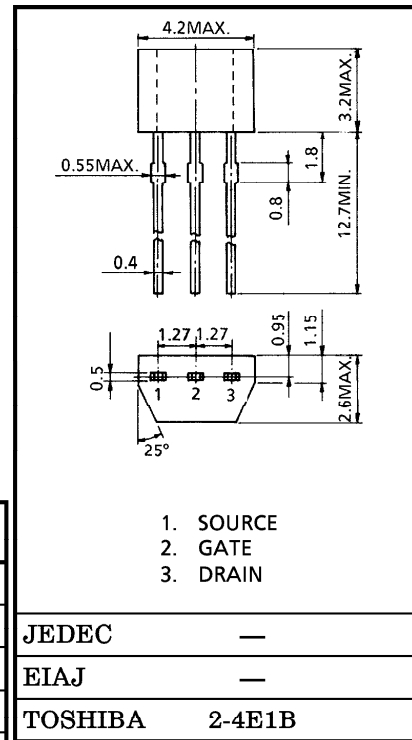
TOSHIBA FIELD EFFECT TRANSISTOR SILICON P CHANNEL JUNCTION TYPE

# 2SJ105

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

Unit in mm

- High Breakdown Voltage :  $V_{GDS} = 50V$
- High Input Impedance :  $I_{GSS} = 1.0nA$  (Max.) ( $V_{GS} = 30V$ )
- Low  $R_{DS(ON)}$  :  $R_{DS(ON)} = 270\Omega$  (Typ.) ( $I_{DSS} = -5mA$ )
- Complimentary to 2SK330
- Small Package



**MAXIMUM RATINGS ( $T_a = 25^\circ C$ )**

CHARACTERISTIC	SYMBOL	RATING	UNIT
Gate-Drain Voltage	$V_{GDS}$	50	V
Gate Current	$I_G$	-10	mA
Drain Power Dissipation	$P_D$	200	mW
Junction Temperature	$T_j$	125	$^\circ C$
Storage Temperature Range	$T_{stg}$	-55~125	$^\circ C$

JEDEC	—
EIAJ	—
TOSHIBA	2-4E1B

Weight : 0.13g

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Cut-off Current	$I_{GSS}$	$V_{GS} = 30V, V_{DS} = 0$	—	—	1.0	nA
Gate-Drain Breakdown Voltage	$V_{(BR)GDS}$	$V_{DS} = 0, I_G = 100\mu A$	50	—	—	V
Drain Current	$I_{DSS}$ (Note)	$V_{DS} = -10V, V_{GS} = 0$	-1.2	—	-14	mA
Gate-Source Cut-off Voltage	$V_{GS(OFF)}$	$V_{DS} = -10V, I_D = -0.1\mu A$	0.3	—	6.0	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = -10V, V_{GS} = 0, f = 1kHz$	1.0	4.0	—	mS
Drain-Source ON Resistance	$R_{DS(ON)}$	$V_{DS} = -10mV, V_{GS} = 0$ $I_{DSS} = -5mA$	—	270	—	$\Omega$
Input Capacitance	$C_{iss}$	$V_{DS} = -10V, V_{GS} = 0, f = 1MHz$	—	18	—	pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DG} = -10V, I_D = 0, f = 1MHz$	—	3.6	—	pF

Note :  $I_{DSS}$  Classification Y : -1.2~-3.0mA, GR : -2.6~-6.5mA, BL : -6~-14mA

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