

TENTATIVE TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL PLANAR TYPE

# 2SC5323

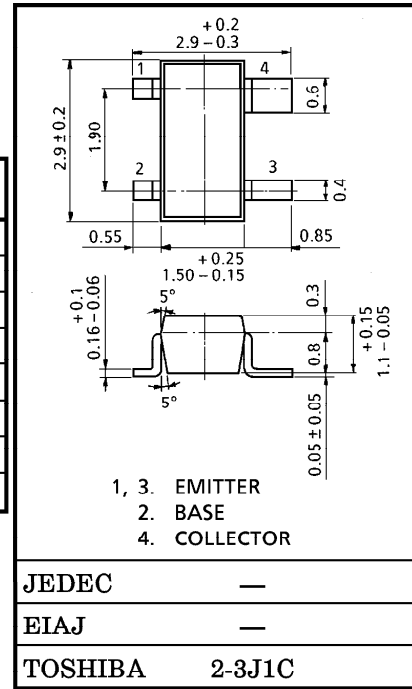
VHF~UHF BAND LOW NOISE AMPLIFIER APPLICATIONS

Unit in mm

- Low Noise Figure : NF = 1.4dB (f=2GHz)
- High Gain : Ga = 12dB (f=2GHz)

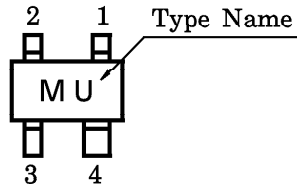
MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V <sub>CB0</sub>	8	V
Collector-Emitter Voltage	V <sub>CEO</sub>	5	V
Emitter-Base Voltage	V <sub>EB0</sub>	1.5	V
Collector Current	I <sub>C</sub>	10	mA
Base Current	I <sub>B</sub>	5	mA
Collector Power Dissipation	P <sub>C</sub>	150	mW
Junction Temperature	T <sub>j</sub>	125	°C
Storage Temperature Range	T <sub>stg</sub>	-55~125	°C



Weight : 0.012g

MARKING



MICROWAVE CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Transition Frequency	f <sub>T</sub>	V <sub>CE</sub> = 3V, I <sub>C</sub> = 7mA	13	16	—	GHz
Insertion Gain	S <sub>21e</sub>   <sup>2</sup> (1)	V <sub>CE</sub> = 3V, I <sub>C</sub> = 7mA, f = 1GHz	14.5	17.5	—	dB
	S <sub>21e</sub>   <sup>2</sup> (2)	V <sub>CE</sub> = 3V, I <sub>C</sub> = 7mA, f = 2GHz	9	12	—	
Noise Figure	NF (1)	V <sub>CE</sub> = 3V, I <sub>C</sub> = 3mA, f = 1GHz	—	0.9	1.8	dB
	NF (2)	V <sub>CE</sub> = 3V, I <sub>C</sub> = 3mA, f = 2GHz	—	1.4	2.3	

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I <sub>CBO</sub>	V <sub>CB</sub> = 10V, I <sub>E</sub> = 0	—	—	1	μA
Emitter Cut-off Current	I <sub>EB0</sub>	V <sub>EB</sub> = 1V, I <sub>C</sub> = 0	—	—	1	μA
DC Current Gain	h <sub>FE</sub>	V <sub>CE</sub> = 3V, I <sub>C</sub> = 7mA	50	—	250	V
Output Capacitance	C <sub>ob</sub>	V <sub>CB</sub> = 2.5V, I <sub>E</sub> = 0, f = 1MHz	—	0.35	—	pF
Reverse Transfer Capacitance	C <sub>re</sub>	(Note)	—	0.3	—	pF

(Note) : C<sub>re</sub> is measured by 3 terminal method with Capacitance Bridge.

CAUTION

This device electrostatic sensitivity. Please handle with caution.

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