

TENTATIVE TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL PLANAR TYPE

2SC5322

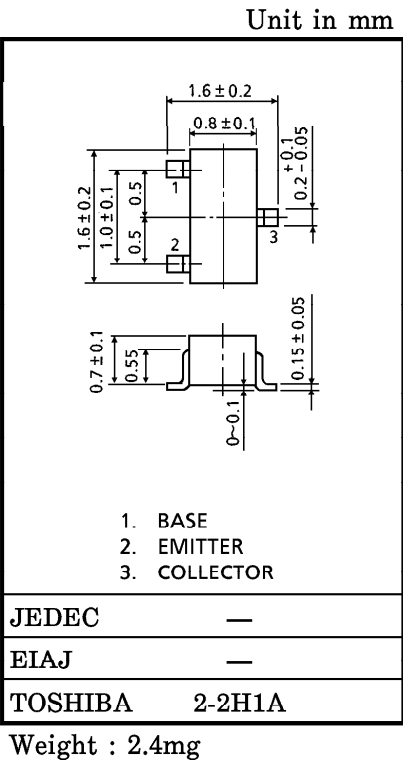
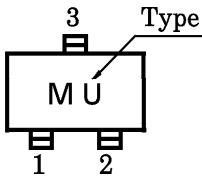
VHF~UHF BAND LOW NOISE AMPLIFIER APPLICATIONS
(CHIP : f_T =16GHz series)

- Low Noise Figure : $NF=1.4dB$ ($f=2GHz$)
- High Gain : $G_a=10dB$ ($f=2GHz$)

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	8	V
Collector-Emitter Voltage	V_{CEO}	5	V
Emitter-Base Voltage	V_{EBO}	1.5	V
Collector Current	I_C	10	mA
Base Current	I_B	5	mA
Collector Power Dissipation	P_C	100	mW
Junction Temperature	T_j	125	°C
Storage Temperature Range	T_{stg}	-55~125	°C

MARKING



MICROWAVE CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Transition Frequency	f_T	$V_{CE}=3V, I_C=7mA$	9	—	—	GHz
Insertion Gain	$ S_{21e} ^2 (1)$	$V_{CE}=3V, I_C=7mA, f=1GHz$	—	15.5	—	dB
	$ S_{21e} ^2 (2)$	$V_{CE}=3V, I_C=7mA, f=2GHz$	—	10	—	
Noise Figure	NF (1)	$V_{CE}=3V, I_C=3mA, f=1GHz$	—	0.9	1.8	dB
	NF (2)	$V_{CE}=3V, I_C=3mA, f=2GHz$	—	1.4	2.3	

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ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB}=10V, I_E=0$	—	—	1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=1V, I_C=0$	—	—	1	μA
DC Current Gain	h_{FE}	$V_{CE}=3V, I_C=7mA$	50	—	250	V
Output Capacitance	C_{ob}	$V_{CB}=2.5V, I_E=0, f=1MHz$ (Note)	—	0.45	—	pF
Reverse Transfer Capacitance	C_{re}		—	0.35	—	pF

Note : C_{re} is measured by 3 terminal method with Capacitance bridge.

CAUTION

This device electrostatic sensitivity. Please handle with caution.