TOSHIBA 2SC5320

TENTATIVE

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL PLANAR TYPE

2 S C 5 3 2 0

VHF~UHF BAND LOW NOISE AMPLIFIER APPLICATIONS

(CHIP: $f_T = 16 \text{ GHz series}$)

Low Noise Figure : NF = 1.4 dB (f = 2 GHz)High Gain $|S_{21e}|^2 = 10 \text{ dB (f} = 2 \text{ GHz)}$

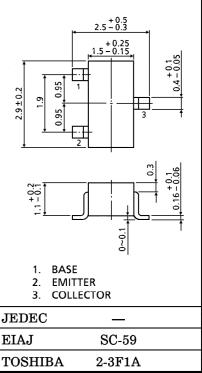
MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	v_{CBO}	8	V
Collector-Emitter Voltage	v_{CEO}	5	V
Emitter-Base Voltage	$V_{ m EBO}$	1.5	V
Collector Current	$I_{\mathbf{C}}$	10	mA
Base Current	$I_{\mathbf{B}}$	5	mA
Collector Power Dissipation	$P_{\mathbf{C}}$	150	mW
Junction Temperature	T_{j}	125	°C
Storage Temperature Range	$\mathrm{T_{stg}}$	-55~125	°C

MARKING



Unit in mm



Weight: 0.012 g

MICROWAVE CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Transition Frequency	$ m f_{T}$	$V_{CE} = 3 V$, $I_{C} = 7 mA$	9	_	_	GHz
Incortion (inin	$ S_{21e} ^2(1)$	$V_{CE} = 3 V$, $I_{C} = 7 mA$, $f = 1 GHz$	12.5	15.5	_	dB
	$ S_{21e} ^2$ (2)	$V_{CE} = 3 V, I_{C} = 7 mA, f = 2 GHz$	7	10	_	
I Noise Right	NF (1)	$V_{CE} = 3 V, I_{C} = 3 mA, f = 1 GHz$	_	0.9	1.8	dB
	NF (2)	$V_{CE} = 3 V$, $I_{C} = 3 mA$, $f = 2 GHz$	_	1.4	2.2	

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB} = 8 V, I_{E} = 0$		_	1	μ A
Emitter Cut-off Current	$I_{ m EBO}$	$V_{EB} = 1 V, I_C = 0$	_	_	1	μ A
DC Current Gain	$_{ m hFE}$	$V_{CE} = 3 V, I_{C} = 7 mA$	50	_	250	V
Output Capacitance	C_{ob}	$V_{CB} = 2.5 V, I_{E} = 0,$	_	0.4	_	pF
Reverse Transfer Capacitance	$\mathrm{C_{re}}$	f = 1 MHz (Note)	_	0.3	0.7	рF

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

This device electrostatic sensitivity. Please handle with caution.

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