TOSHIBA 2SC5086FT

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL PLANAR TYPE

2 S C 5 0 8 6 F T

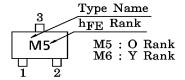
VHF~UHF BAND LOW NOISE AMPLIFIER APPLICATIONS

- Low Noise Figure, High Gain.
- $NF = 1.1dB, |S_{21e}|^2 = 11dB (f = 1GHz)$

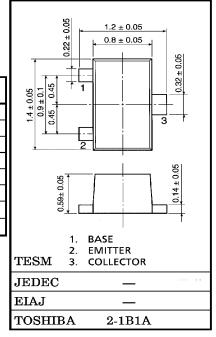
MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	v_{CBO}	20	V
Collector-Emitter Voltage	v_{CEO}	12	V
Emitter-Base Voltage	v_{EBO}	3	V
Base Current	$I_{\mathbf{B}}$	40	mA
Collector Current	$I_{\mathbf{C}}$	80	mA
Collector Power Dissipation	$P_{\mathbf{C}}$	100	mW
Junction Temperature	T_{j}	125	°C
Storage Temperature Range	$T_{ m stg}$	-55~125	°C

MARKING



Unit in mm



MICROWAVE CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Transition Frequency	${ m f_T}$	$V_{CE}=10V, I_{C}=20mA$	5	7	_	GHz
Ilngartian (-ain -	$ S_{21e} ^2(1)$	$V_{CE} = 10V, I_{C} = 20mA, f = 500MHz$	_	16.5	_	dB
	$ S_{21e} ^2$ (2)	$V_{CE}=10V$, $I_{C}=20mA$, $f=1GHz$	7.5	11	_	
Noise Figure	NF (1)	$V_{CE} = 10V, I_{C} = 5mA, f = 500MHz$	_	1	_	dB
	NF (2)	$V_{CE}=10V$, $I_{C}=5mA$, $f=1GHz$	_	1.1	2	

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	μ A
Emitter Cut-off Current	$I_{ m EBO}$	$V_{EB}=1V, I_C=0$	_	_	1	μ A
DC Current Gain	h _{FE} (Note 1)	$V_{CE} = 10V, I_{C} = 20mA$	80	_	240	_
Output Capacitance	$C_{f ob}$	$V_{CB} = 10V, I_{E} = 0, f = 1MHz$	_	1.0	_	pF
Reverse Transfer Capacitance	$\mathrm{C_{re}}$	(Note 2)	_	0.65	1.15	pF

(Note 1): hFE Classification $O: 80\sim 160, Y: 120\sim 240$

(Note 2): Cre is measured by 3 terminal method with capacitance bridge.

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