

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL PLANAR TYPE

2SC3268

VHF~UHF BAND LOW NOISE AMPLIFIER APPLICATIONS.

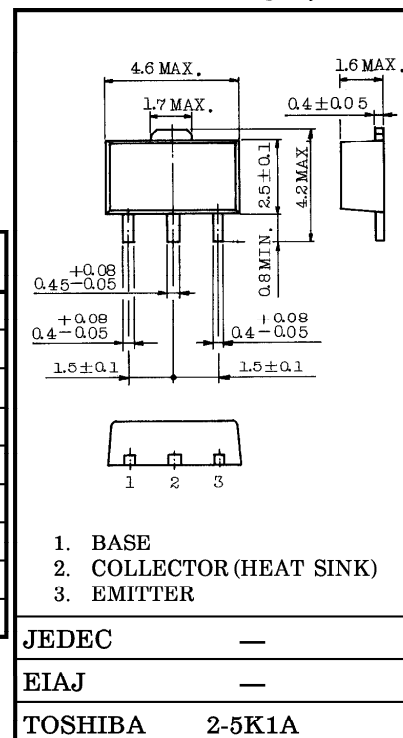
Unit in mm

- NF = 1.7dB, $|S_{21e}|^2 = 15.0\text{dB}$ (f = 500MHz)
- NF = 2dB, $|S_{21e}|^2 = 9.5\text{dB}$ (f = 1000MHz)

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V _{CB0}	17	V
Collector-Emitter Voltage	V _{CEO}	12	V
Emitter-Base Voltage	V _{EB0}	3	V
Base Current	I _B	30	mA
Collector Current	I _C	70	mA
Collector Power Dissipation	P _C	300	mW
Collector Power Dissipation	P _C ※	800	mW
Junction Temperature	T _j	125	°C
Storage Temperature Range	T _{stg}	-55~150	°C

P_C※ : When mounted ceramic substrate of 250mm² × 0.8mmt



Weight : 0.052g

MICROWAVE CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Transition Frequency	f _T	V _{CE} = 10V, I _C = 20mA	—	5	—	GHz
Insertion Gain	$ S_{21e} ^2$ (1)	V _{CE} = 10V, I _C = 20mA, f = 500MHz	—	15.0	—	dB
	$ S_{21e} ^2$ (2)	V _{CE} = 10V, I _C = 20mA, f = 1GHz	—	9.5	—	dB
Noise Figure	NF (1)	V _{CE} = 10V, I _C = 5mA, f = 500MHz	—	1.7	—	dB
	NF (2)	V _{CE} = 10V, I _C = 5mA, f = 1GHz	—	2.0	—	dB

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

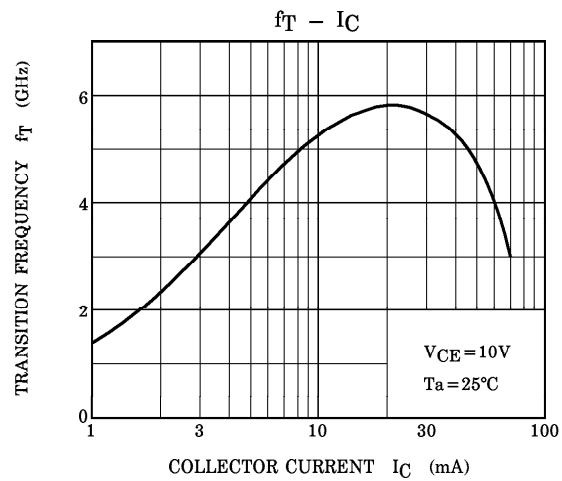
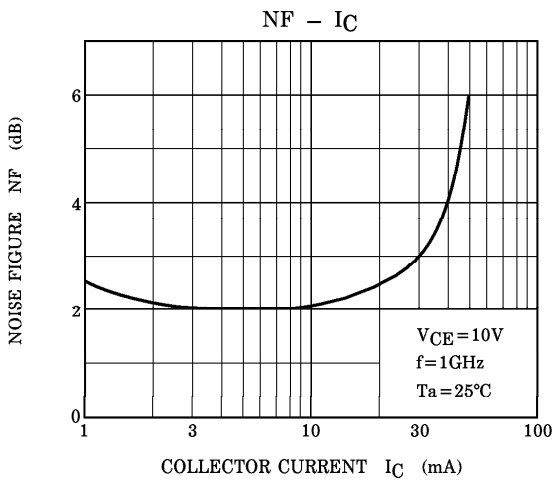
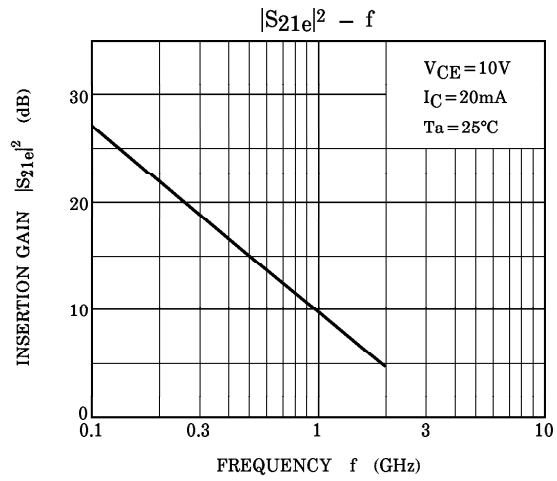
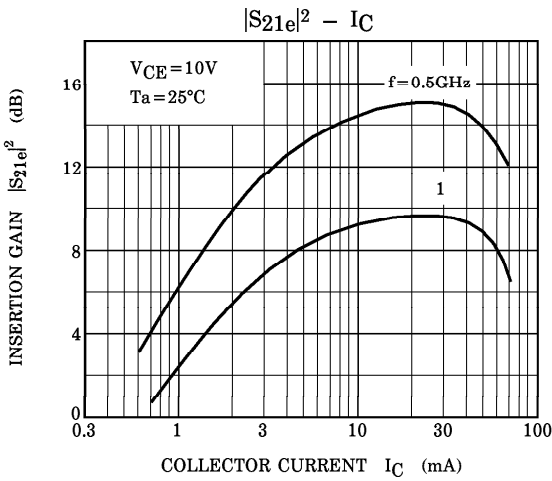
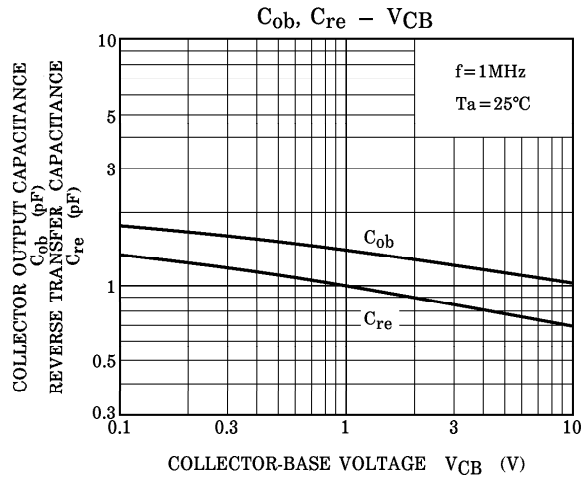
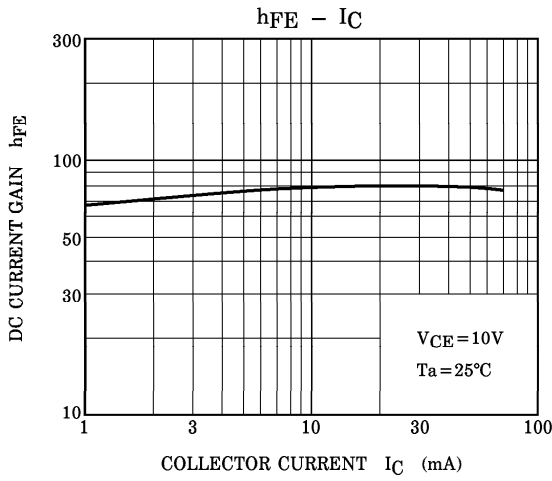
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I _{CB0}	V _{CB} = 10V, I _E = 0	—	—	1	μA
Emitter Cut-off Current	I _{EB0}	V _{EB} = 1V, I _C = 0	—	—	1	μA
DC Current Gain	h _{FE}	V _{CE} = 10V, I _C = 20mA	25	—	—	—
Collector Output Capacitance	C _{ob}	V _{CB} = 10V, I _E = 0, f = 1MHz	—	1.05	—	pF
Reverse Transfer Capacitance	C _{re}	(Note)	—	0.7	—	pF

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

Marking : ME

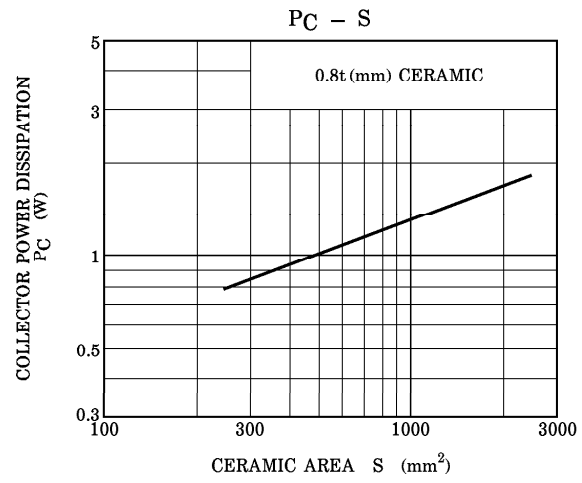
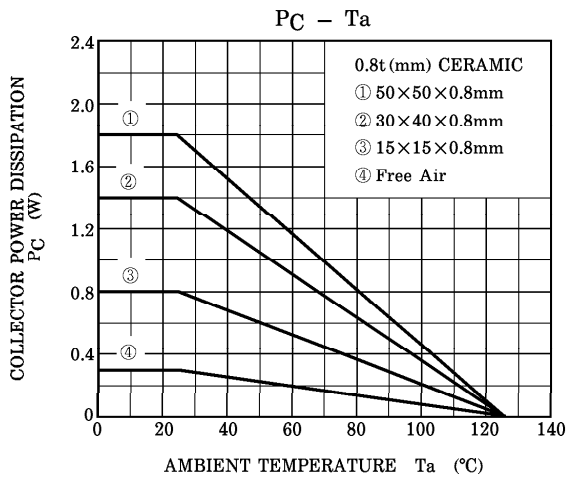
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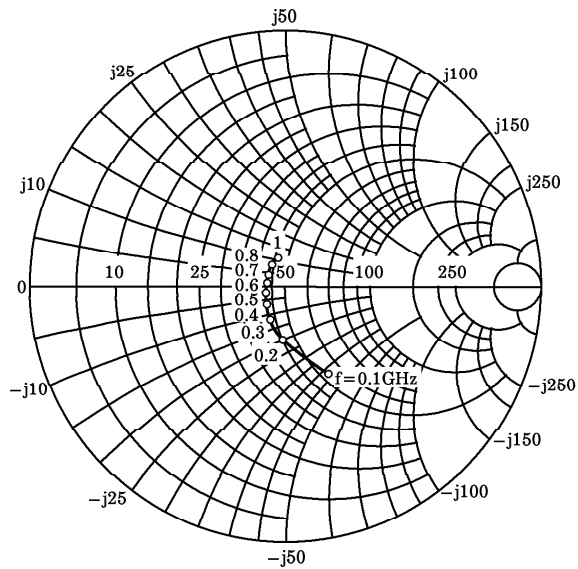


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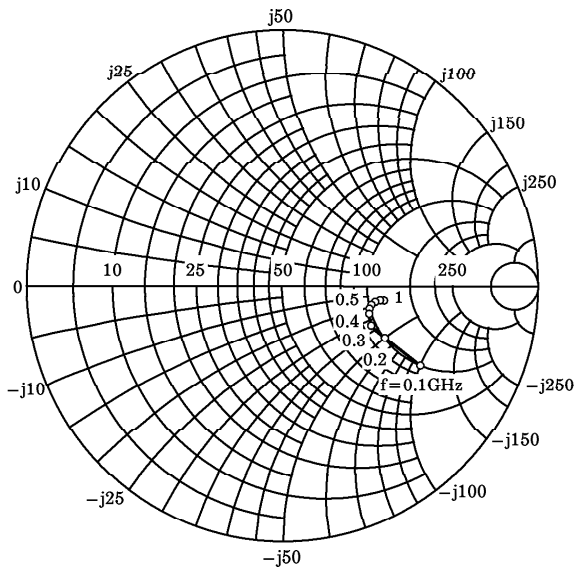
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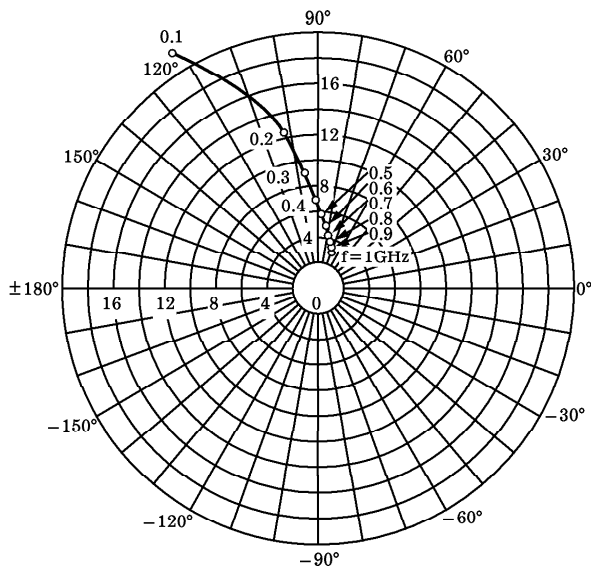
S11e
 VCE=10V
 IC=20mA
 Ta=25°C
 (UNIT : Ω)



S22e
 VCE=10V
 IC=20mA
 Ta=25°C
 (UNIT : Ω)



S21e
 VCE=10V
 IC=20mA
 Ta=25°C



S12e
 VCE=10V
 IC=20mA
 Ta=25°C

