

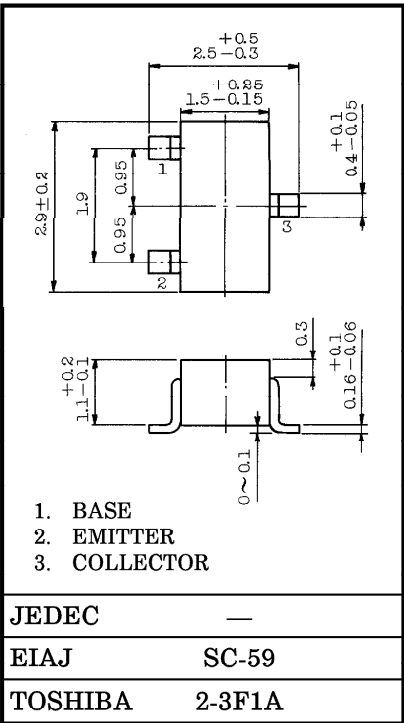
TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL PLANAR TYPE

2SC3429

VHF ~ UHF BAND LOW NOISE AMPLIFIER APPLICATIONS.

- Low Noise Figure.
- $NF=1.5dB$, $|S_{21e}|^2=16dB$ ($f=500MHz$)
- $NF=1.7dB$, $|S_{21e}|^2=10.5dB$ ($f=1GHz$)

Unit in mm



MAXIMUM RATINGS (Ta = 25°C)

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

MICROWAVE CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONSITION	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	—	16	—	dB
	S _{21e} ² (2)	V _{CE} = 10V, I _C = 20mA, f = 1GHz	—	10.5	—	dB
Noise Figure	NF (1)	V _{CE} = 10V, I _C = 5mA, f = 500MHz	—	1.5	—	dB
	NF (2)	V _{CE} = 10V, I _C = 5mA, f = 1GHz	—	1.7	—	dB

Weight : 0.012g

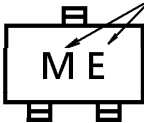
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONSITION	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} = 10V, I _C = 20mA	25	—	—	—
Output Capacitance	C _{ob}	V _{CB} = 10V, I _E = 0,	—	0.85	—	pF
Reverse Transfer Capacitance	C _{re}	f = 1MHz (Note)	—	0.57	—	pF

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

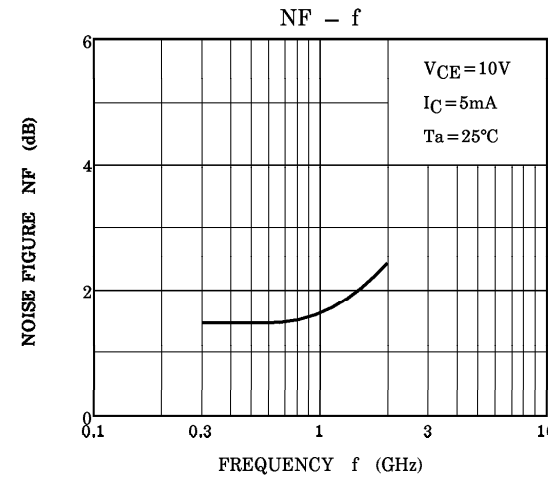
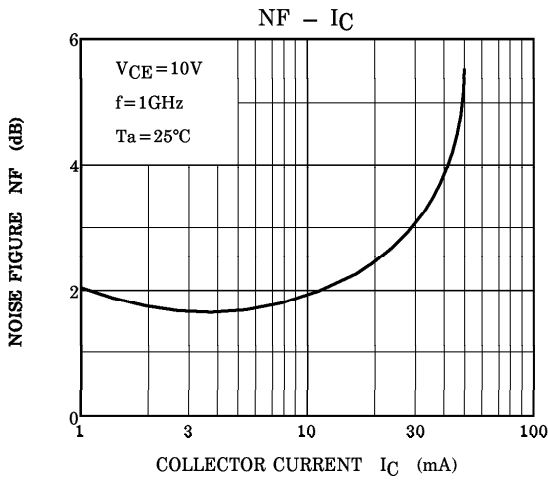
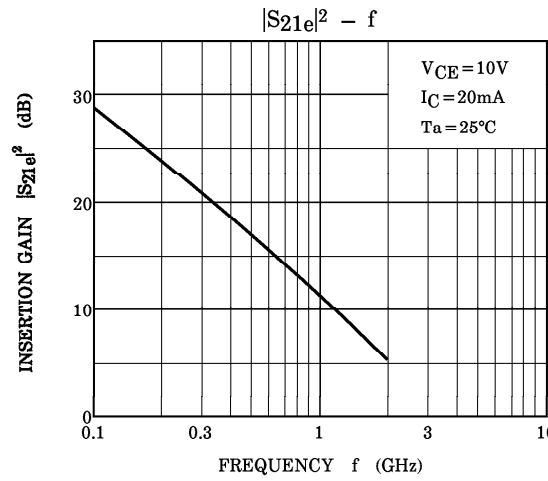
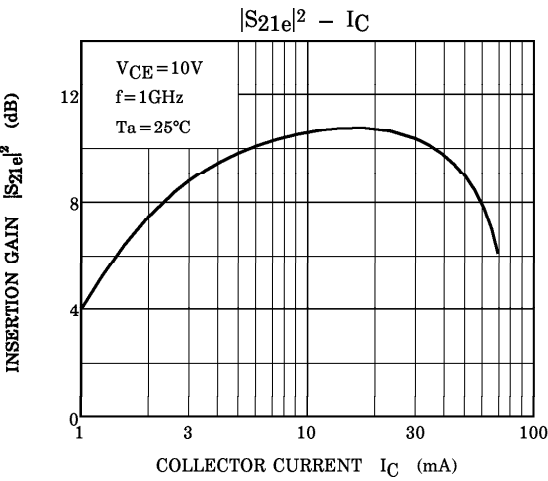
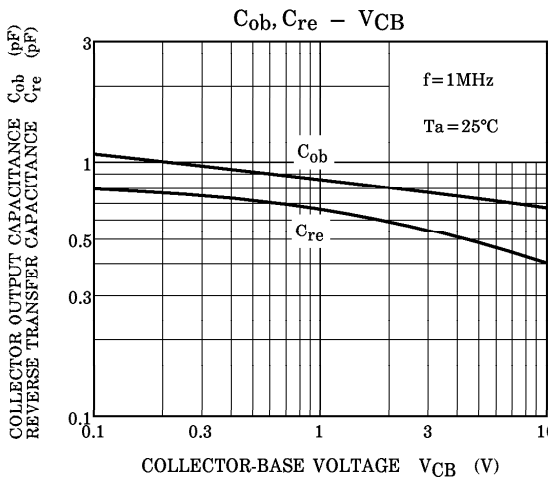
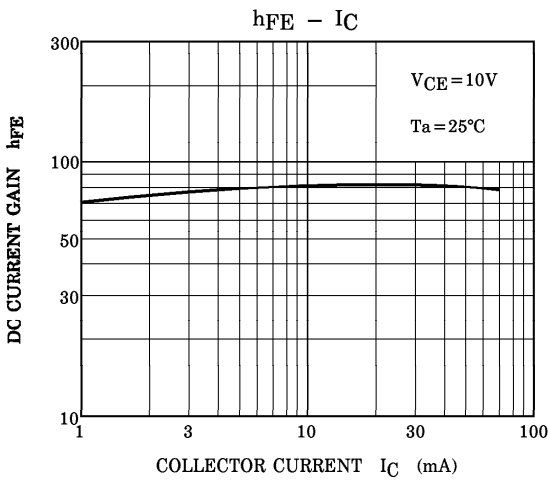
MARKING

Type Name



961001EAA2

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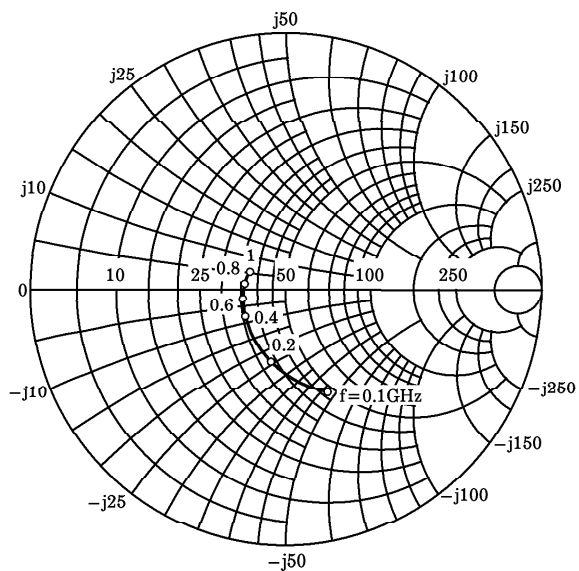


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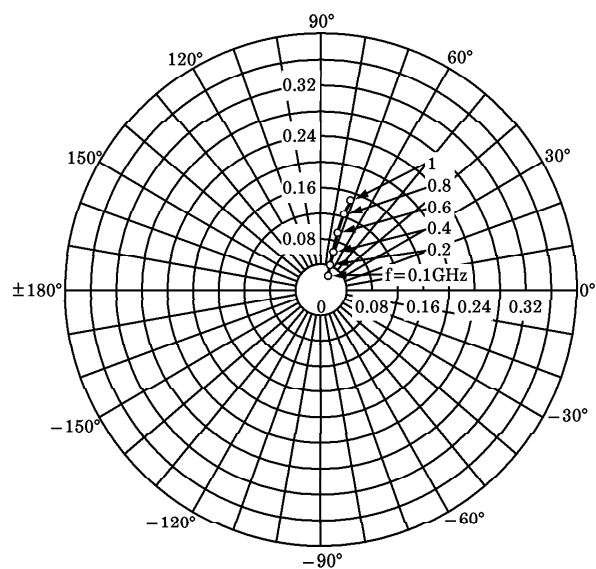
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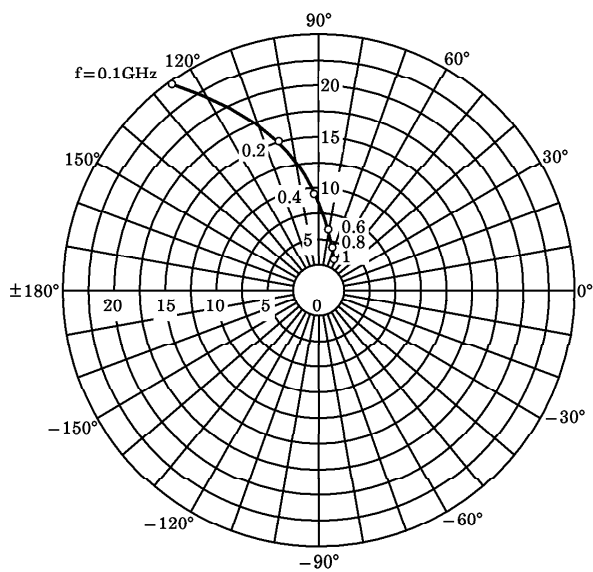
S_{11e}
 $V_{CE} = 10V$
 $I_C = 20mA$
 $T_a = 25^\circ C$
 (UNIT : Ω)



S_{12e}
 $V_{CE} = 10V$
 $I_C = 20mA$
 $T_a = 25^\circ C$



S_{21e}
 $V_{CE} = 10V$
 $I_C = 20mA$
 $T_a = 25^\circ C$



S_{22e}
 $V_{CE} = 10V$
 $I_C = 20mA$
 $T_a = 25^\circ C$
 (UNIT : Ω)

