

HIGH FREQUENCY LOW NOISE AMPLIFIER

NPN SILICON EPITAXIAL TRANSISTOR

DESCRIPTION

The 2SC2570A is designed for use in Low Noise Amplifier of VHF & UHF stages.

FEATURES

- Low noise and high gain : NF = 1.5 dB TYP., Ga = 8 dB TYP. @f = 1.0 GHz, $V_{CE} = 10\text{ V}$, $I_C = 5.0\text{ mA}$
- Wide dynamic range : NF = 1.9 dB, Ga = 9 dB @f = 1 GHz, $V_{CE} = 10\text{ V}$, $I_C = 15\text{ mA}$

ORDERING INFORMATION

Part Number	Quantity
2SC2570A	Loose products (500 pcs)
2SC2570A-T	Taping products (Box type) (2 500 pcs)

Remark To order evaluation samples, please contact your NEC sales office (available in 500-pcs units).

ABSOLUTE MAXIMUM RATINGS ($T_A = +25\text{ }^\circ\text{C}$)

Parameter	Symbol	Ratings	Unit
Collector to Base Voltage	V_{CBO}	25	V
Collector to Emitter Voltage	V_{CEO}	12	V
Emitter to Base Voltage	V_{EBO}	3.0	V
Collector Current	I_C	70	mA
Total Power Dissipation	P_{tot}	600	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-65 to +150	$^\circ\text{C}$

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Not all devices/types available in every country. Please check with local NEC representative for availability and additional information.

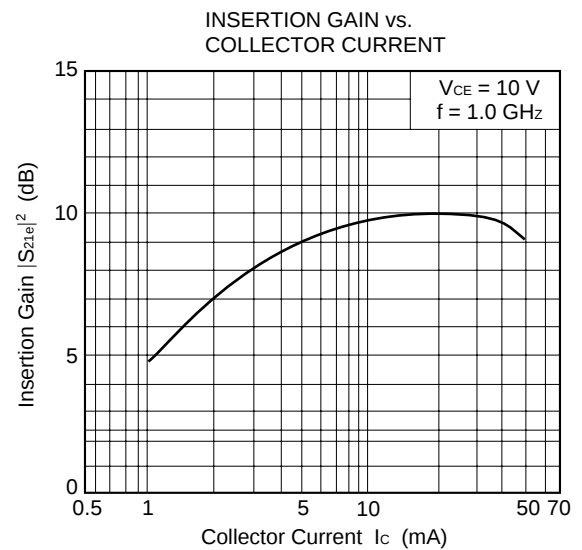
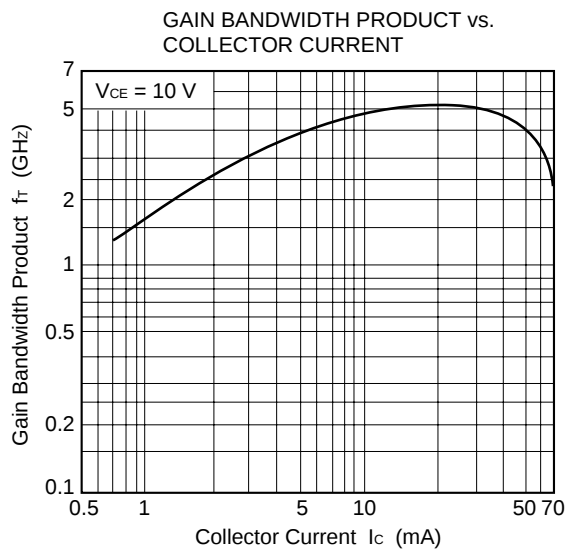
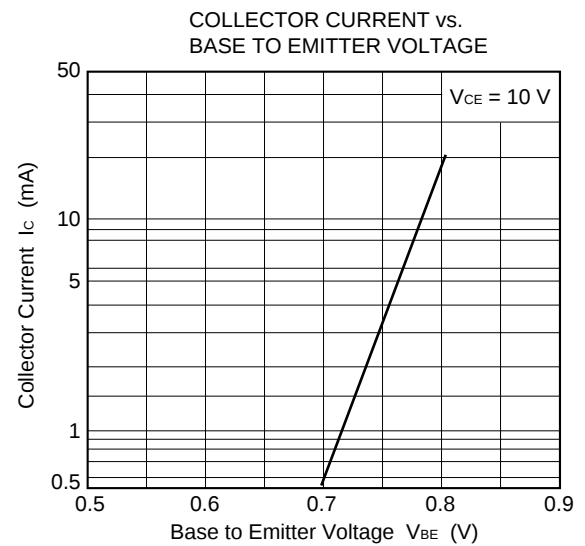
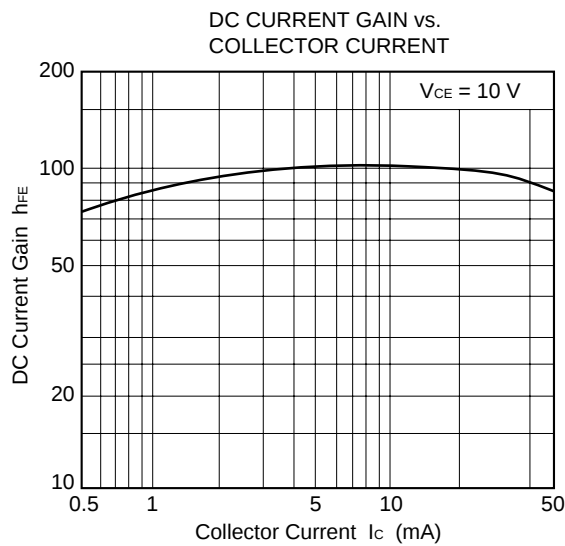
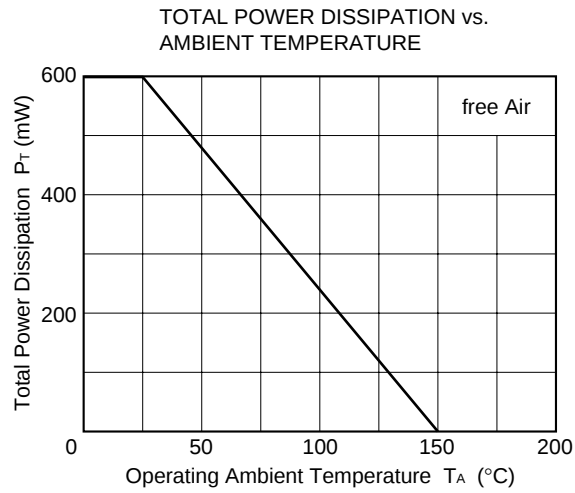
ELECTRICAL CHARACTERISTICS ($T_A = +25\text{ }^{\circ}\text{C}$)

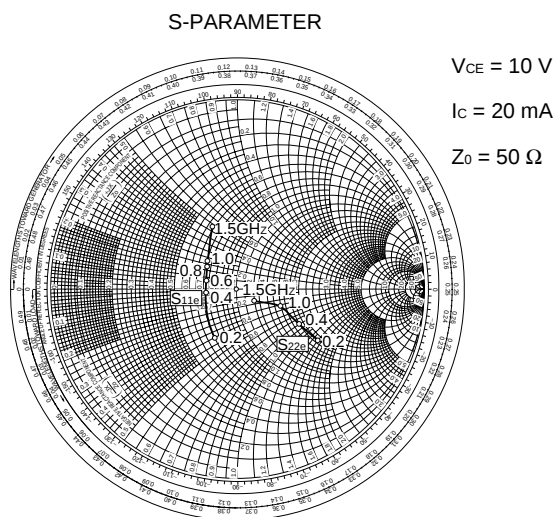
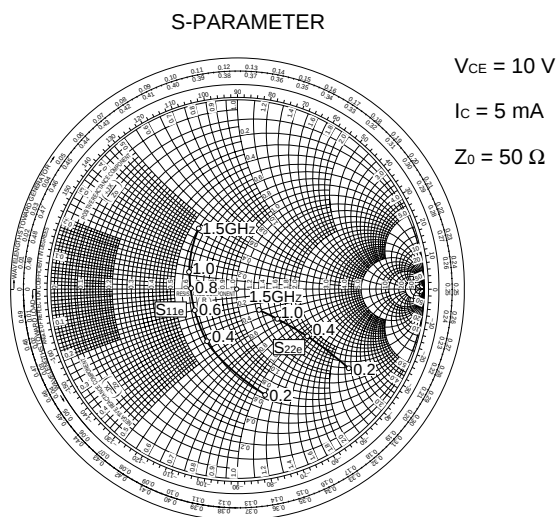
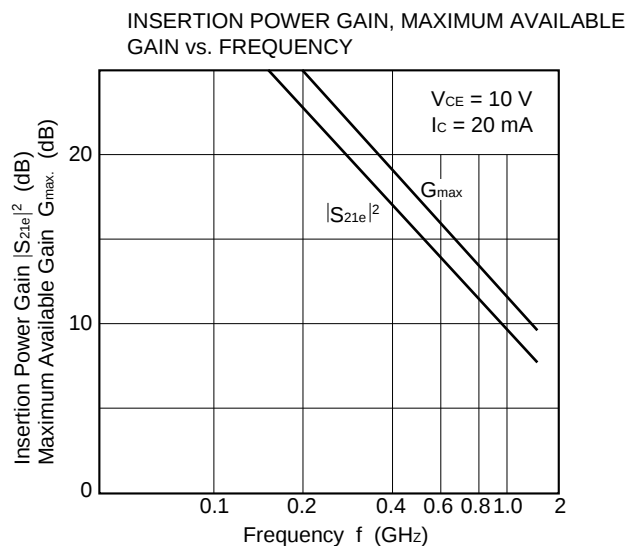
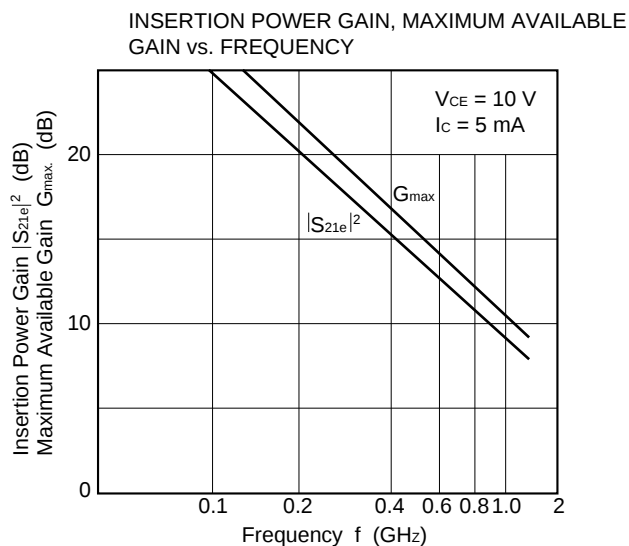
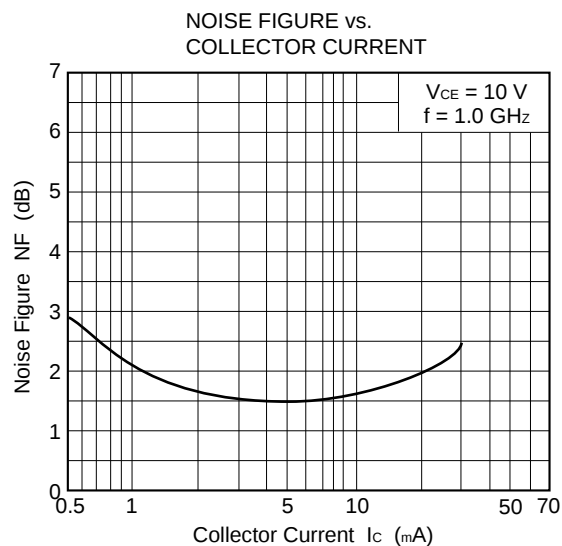
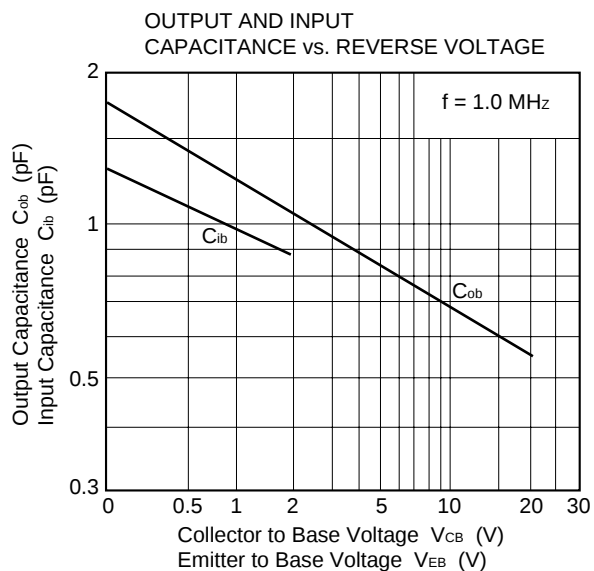
Parameter	Symbol	Test Conditions	MIN.	TYP.	MAX.	Unit
DC Current Gain	h_{FE} ^{Note 1}	$V_{CE} = 10\text{ V}$, $I_C = 20\text{ mA}$	40	–	200	–
Gain Bandwidth Product	f_T	$V_{CE} = 10\text{ V}$, $I_C = 20\text{ mA}$	–	5.0	–	GHz
Output Capacitance	C_{Ob} ^{Note 2}	$V_{CB} = 10\text{ V}$, $I_E = 0$, $f = 1.0\text{ MHz}$	–	0.7	0.9	pF
Insertion Power Gain	$ S_{21e} ^2$	$V_{CE} = 10\text{ V}$, $I_C = 20\text{ mA}$, $f = 1.0\text{ GHz}$	8	10	–	dB
Noise Figure	NF	$V_{CE} = 10\text{ V}$, $I_C = 5\text{ mA}$, $f = 1.0\text{ GHz}$	–	1.5	3.0	dB
Maximum Available Gain	MAG	$V_{CE} = 10\text{ V}$, $I_C = 20\text{ mA}$, $f = 1.0\text{ GHz}$	–	11.5	–	dB
Collector Cutoff Current	I_{CBO}	$V_{CB} = 15\text{ V}$, $I_E = 0$	–	–	0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 2.0\text{ V}$, $I_C = 0$	–	–	0.1	μA

Notes 1. Pulse Measurement: $PW \leq 350\text{ }\mu\text{s}$, Duty Cycle $\leq 2\%$

2. The emitter and case terminal should be connected to the guard terminal of the capacitance bridge.

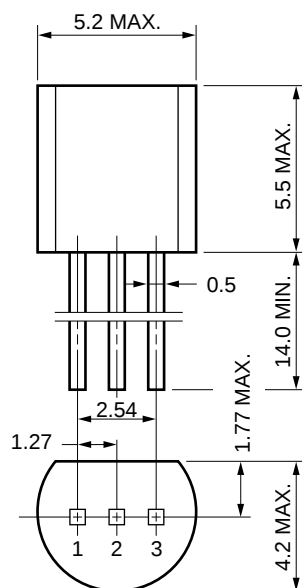
TYPICAL CHARACTERISTICS ($T_A = +25\text{ }^{\circ}\text{C}$)





PACKAGE DIMENSION

TO-92 (UNIT:mm)



1. BASE	EIAJ	: SC-43B
2. EMITTER	JEDEC	: TO-92
3. COLLECTOR	IEC	: PA33

[MEMO]

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