

isc Silicon NPN RF Transistor

2SC2570A

DESCRIPTION

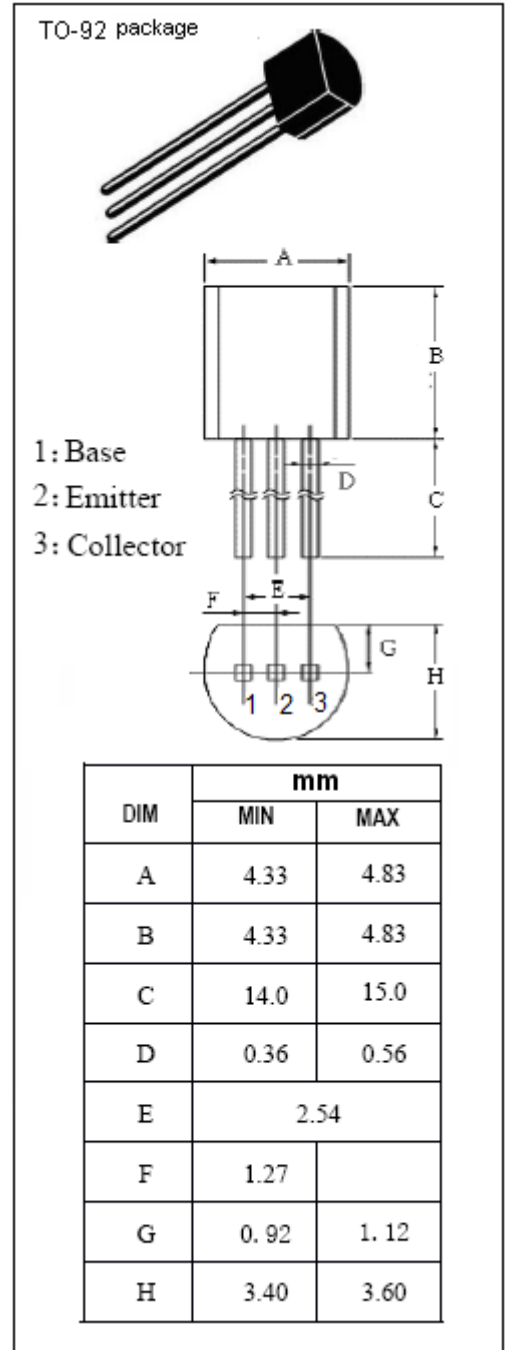
- Low Noise and High Gain
 NF = 1.5 dB TYP.
 Ga = 8 dB TYP. @f = 1.0 GHz, V_{CE} = 10 V, I_C = 5 mA
- Wide Dynamic Range
 NF = 1.9 dB TYP.
 Ga = 9 dB TYP. @f = 1.0 GHz, V_{CE} = 10 V, I_C = 15 mA

APPLICATIONS

- Designed for use in low-noise amplifier of VHF ~ UHF stages.

ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{CBO}	Collector-Base Voltage	25	V
V _{CEO}	Collector-Emitter Voltage	12	V
V _{EBO}	Emitter-Base Voltage	3.0	V
I _C	Collector Current-Continuous	70	mA
P _C	Collector Power Dissipation @T _C =25°C	0.6	W
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature Range	-65~150	°C



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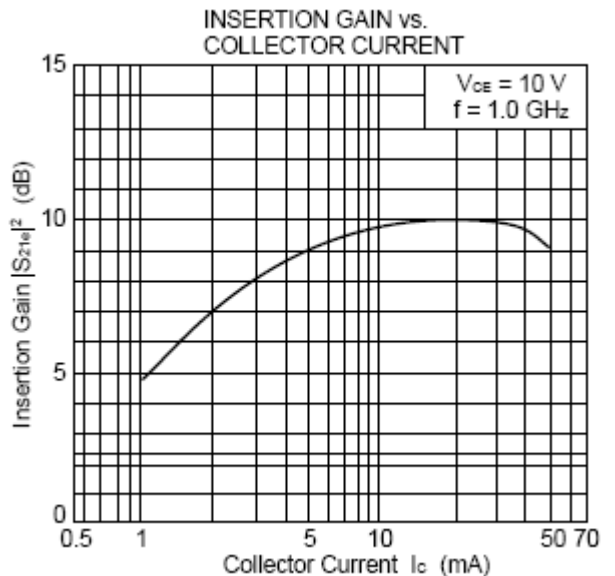
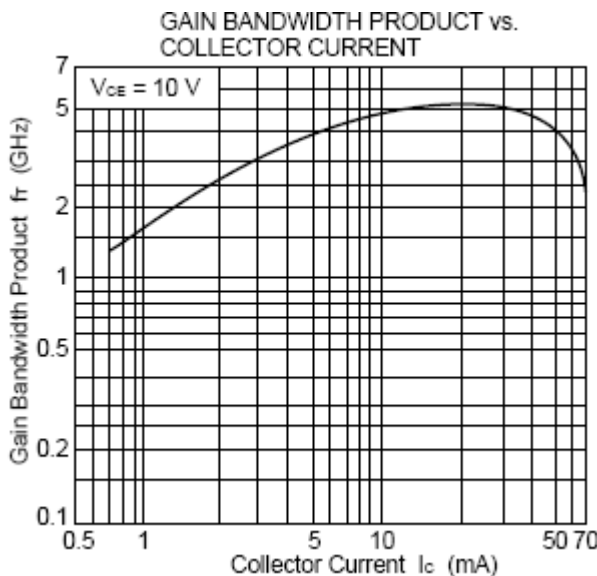
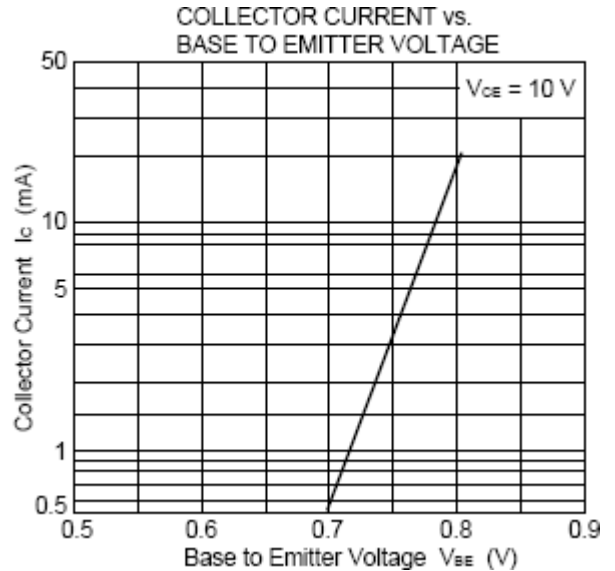
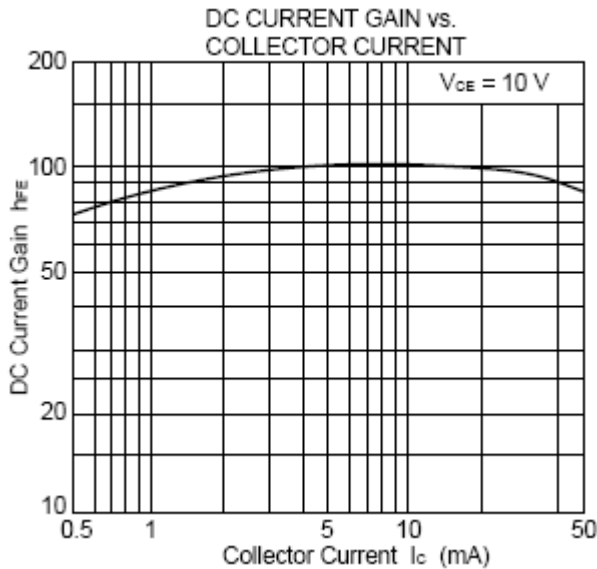
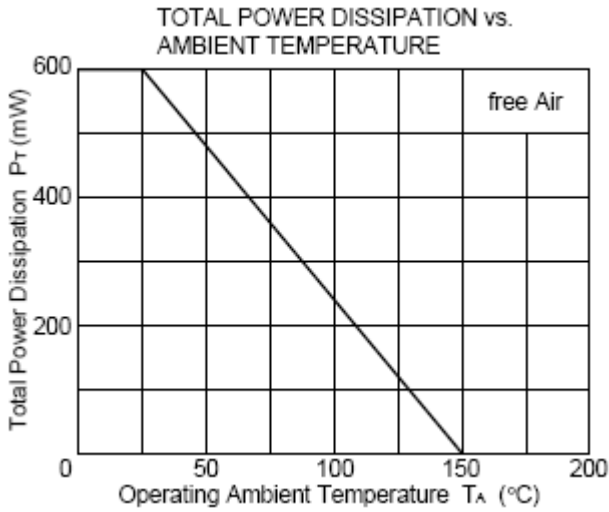
ELECTRICAL CHARACTERISTICS

T_c=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
I _{CBO}	Collector Cutoff Current	V _{CB} = 15V; I _E = 0			0.1	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 2V; I _C = 0			0.1	μ A
h _{FE}	DC Current Gain	I _C = 20mA ; V _{CE} = 10V	40		200	
f _T	Current-Gain—Bandwidth Product	I _C = 20mA ; V _{CE} = 10V		5		GHz
C _{OB}	Output Capacitance	I _E = 0 ; V _{CB} = 10V;f= 1.0MHz		0.7	0.9	pF
S _{21e} ²	Insertion Power Gain	I _C = 20mA ; V _{CE} = 10V; f= 1.0GHz	8	10		dB
MAG	Maximum Available Gain	I _C = 20mA ; V _{CE} = 10V;f= 1.0GHz		11.5		dB
NF	Noise Figure	I _C = 5mA ; V _{CE} = 10V;f= 1.0GHz		1.5	3.0	dB

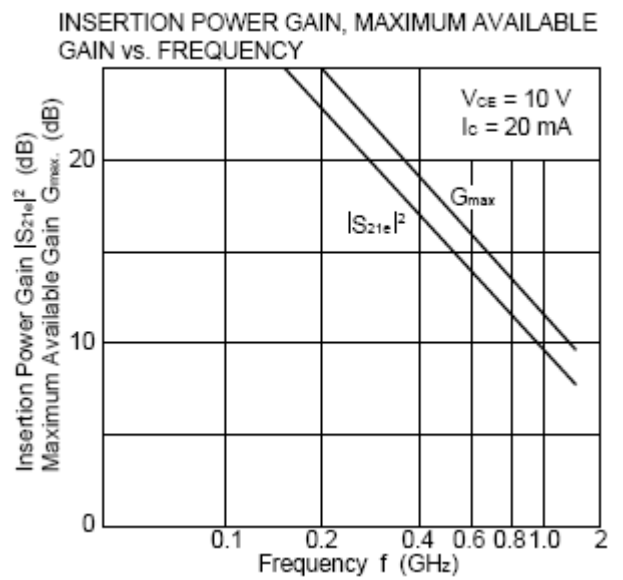
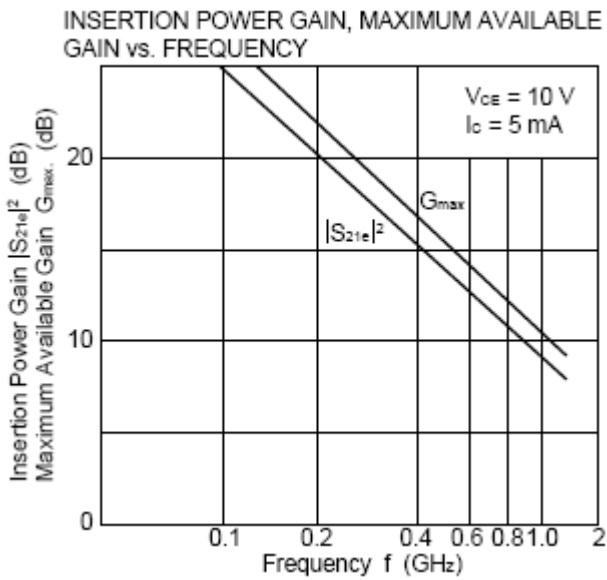
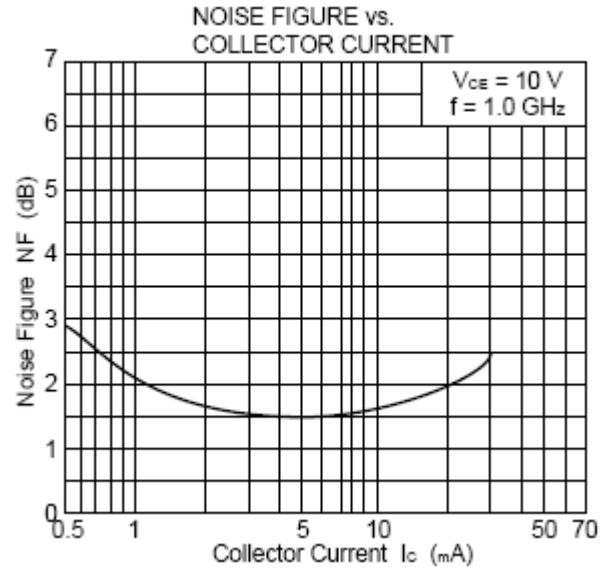
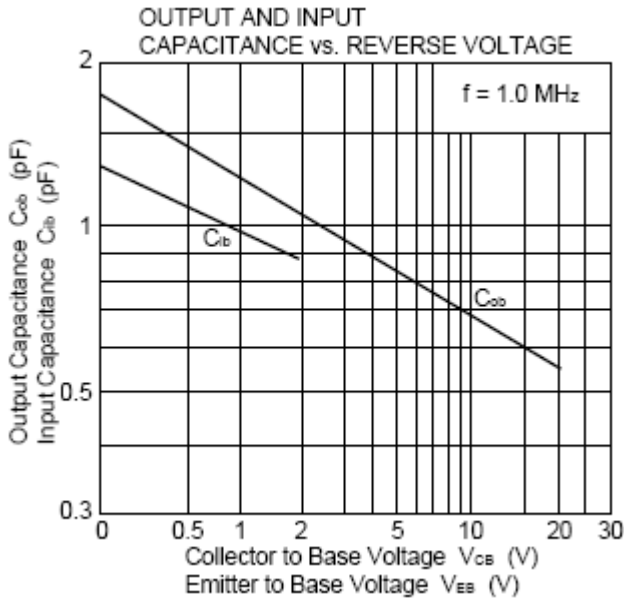
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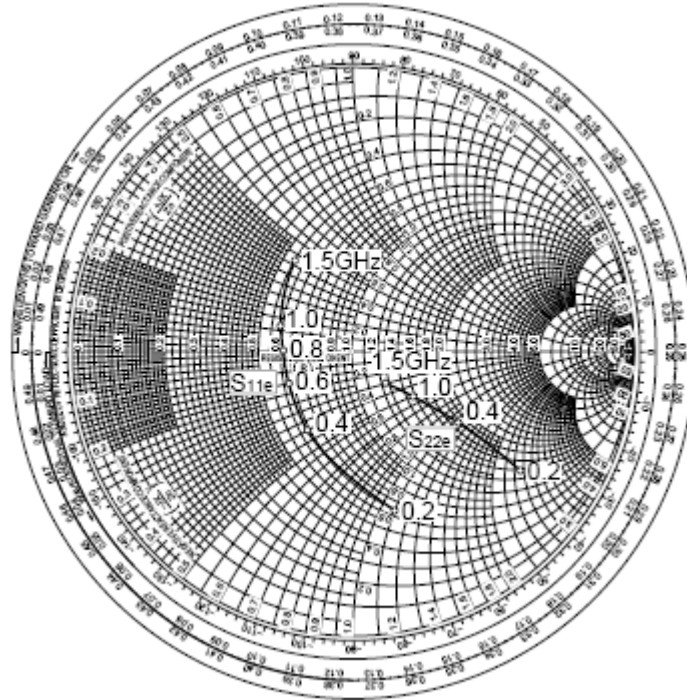


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S-PARAMETER

$V_{CE} = 10\text{ V}$, $I_c = 5\text{ mA}$, $Z_o = 50\ \Omega$



S-PARAMETER

$V_{CE} = 10\text{ V}$, $I_c = 20\text{ mA}$, $Z_o = 50\ \Omega$

