

isc Silicon NPN RF Transistor

2SC2954

DESCRIPTION

- Low Noise and High Gain
 $NF = 2.3 \text{ dB TYP. ; } |S_{21e}|^2 = 20 \text{ dB TYP.}$
 @ $f = 200 \text{ MHz}$
 $NF = 2.4 \text{ dB TYP. ; } |S_{21e}|^2 = 12.5 \text{ dB TYP.}$
 @ $f = 500 \text{ MHz}$


APPLICATIONS

- Designed for low noise wide band amplifier and buffer amplifier of OSC, for VHF and CATV band.

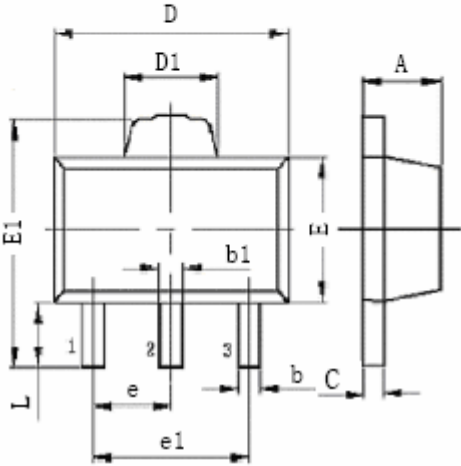
ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	35	V
V_{CEO}	Collector-Emitter Voltage	18	V
V_{EBO}	Emitter-Base Voltage	3.0	V
I_c	Collector Current-Continuous	0.15	A
P_c	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	2	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65~150	$^\circ\text{C}$

SOT-89 package



1: Base
2: Emitter
3: Collector



DIM	mm	
	MIN	MAX
A	1.40	1.60
b	0.32	0.52
b1	0.36	0.56
C	0.35	0.44
D	4.40	4.46
D1	1.40	1.80
E	2.30	2.60
E1	3.94	4.25
e	1.50typ	
e1	2.90	3.10
L	0.90	1.10

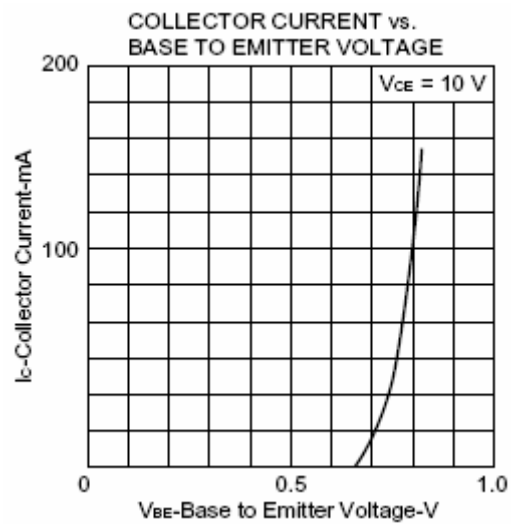
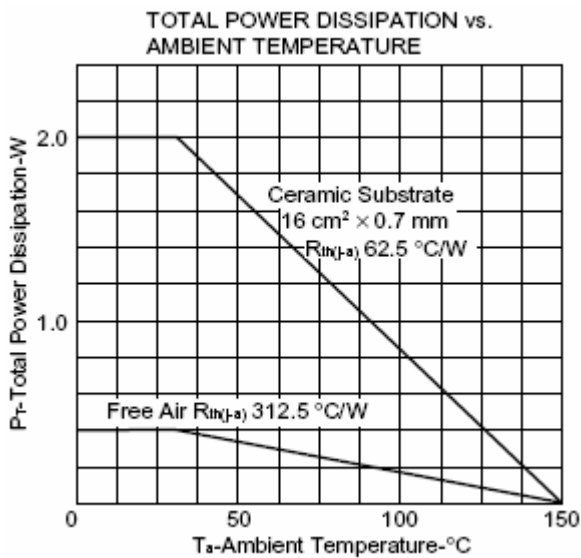
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ELECTRICAL CHARACTERISTICS

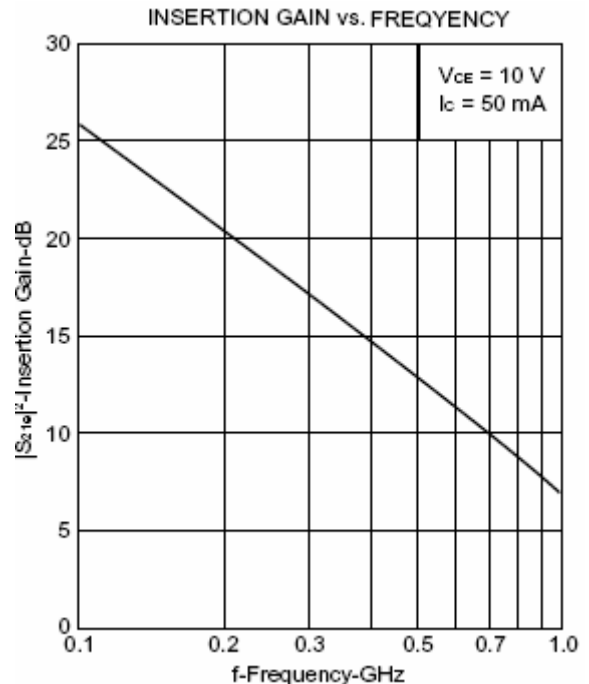
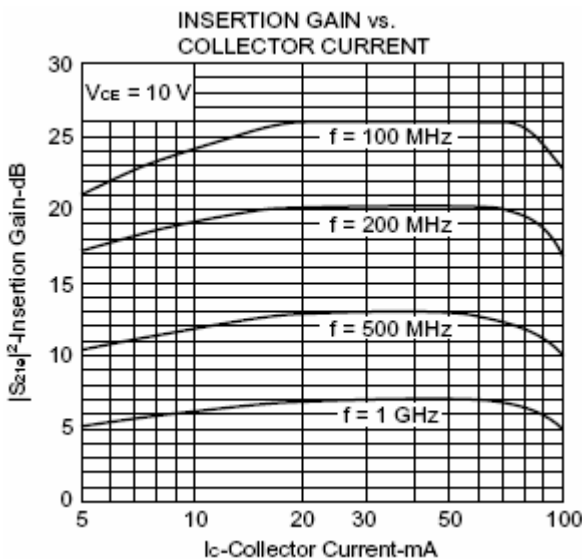
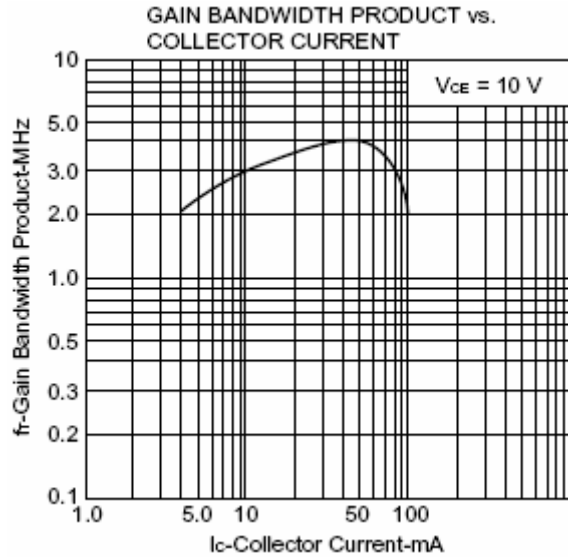
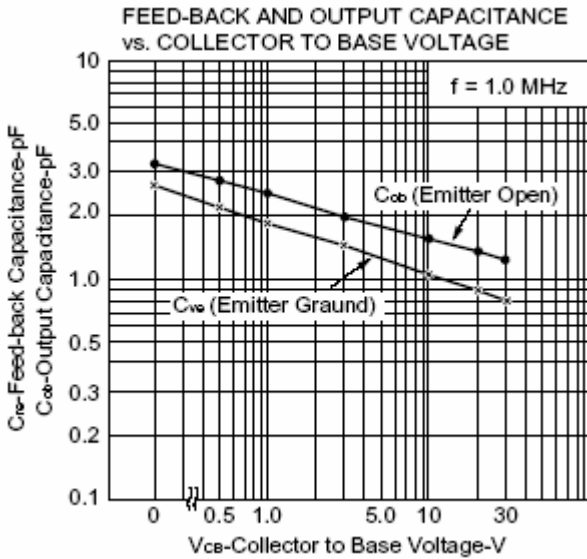
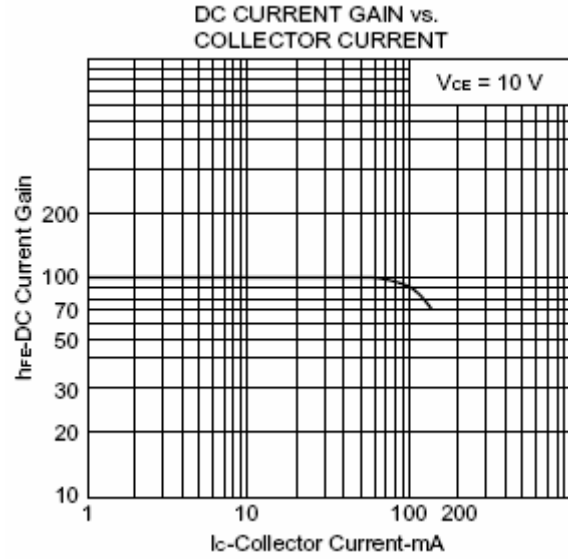
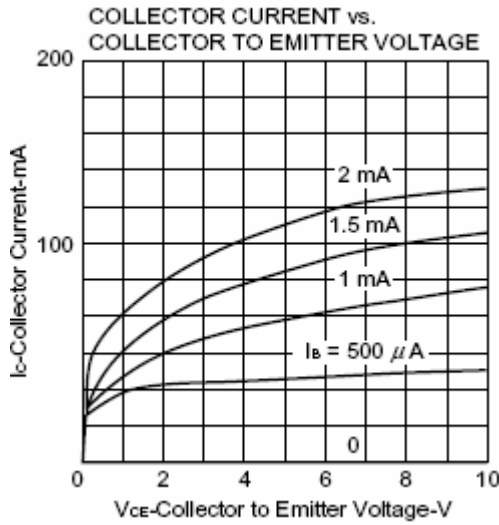
T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
I _{CBO}	Collector Cutoff Current	V _{CB} = 10V; I _E = 0			0.1	μ A
h _{FE}	DC Current Gain	I _C = 50mA ; V _{CE} = 10V	30		200	
f _T	Current-Gain—Bandwidth Product	I _C = 50mA ; V _{CE} = 10V	3.0	4.0		GHz
C _{re}	Feed-Back Capacitance	I _E = 0 ; V _{CB} = 10V;f= 1.0MHz		1.1	1.8	pF
S _{21e} ²	Insertion Power Gain	I _C = 50mA ; V _{CE} = 10V;f= 500MHz R _G = 50 Ω	10	12.5		dB
NF	Noise Figure	I _C = 30mA ; V _{CE} = 10V;f= 500MHz R _G = 50 Ω		2.4	4.0	dB



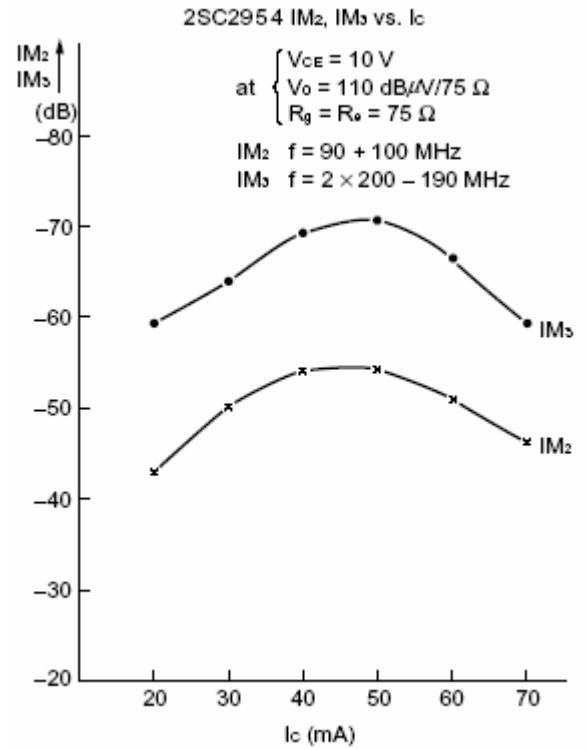
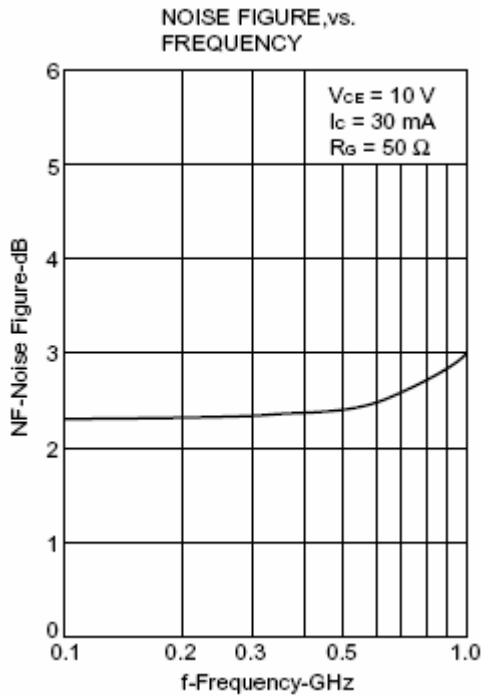
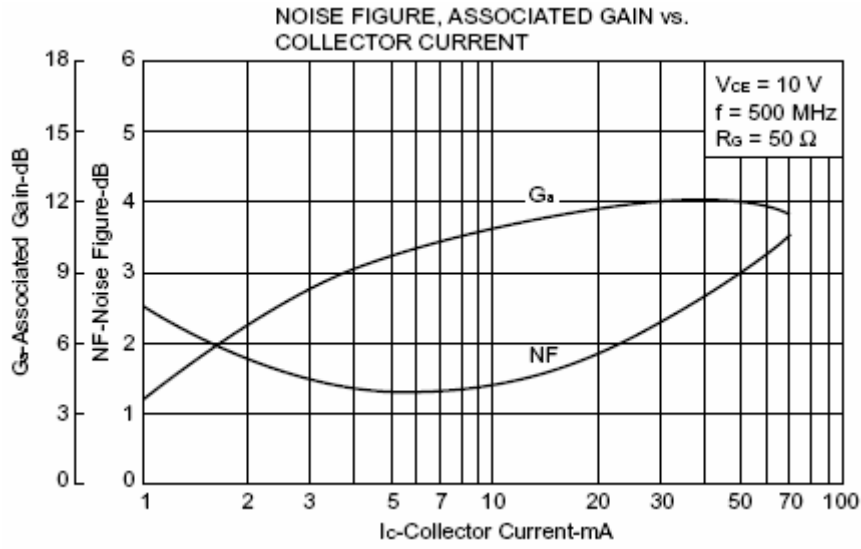
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S_{11e} , S_{22e} -FREQUENCY CONDITION $V_{CE} = 10\text{ V}$
 $I_C = 50\text{ mA}$
 $f = 0.1\text{ to }1.0\text{ GHz (STEP: }100\text{ MHz)}$

