

SILICON TRANSISTOR NPN SILICON EPITAXIAL TRANSISTOR POWER MINI MOLD

DESCRIPTION

The 2SC3357 is an NPN silicon epitaxial transistor designed for low noise amplifier at VHF, UHF and CATV band. It has large dynamic range and good current characteristic.

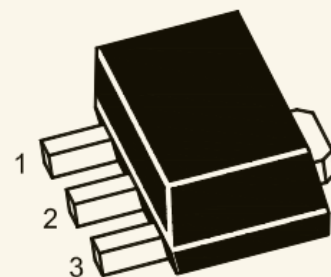
FEATURES

- Low Noise and High Gain
NF = 1.1 dB TYP., Ga = 8.0 dB TYP. @VCE = 10 V,
IC = 7 mA, f = 1.0 GHz
NF = 1.8 dB TYP., Ga = 9.0 dB TYP. @VCE = 10 V,
IC = 40 mA, f = 1.0 GHz
- Large PT in Small Package
PT : 2 W with 16 cm2 × 0.7 mm Ceramic Substrate.

ABSOLUTE MAXIMUM RATINGS (TA = 25 ° C)

Collector to Base Voltage	VCBO	20	V
Collector to Emitter Voltage	VCEO	12	V
Emitter to Base Voltage	VEBO	3.0	V
Collector Current	IC	100	mA
Total Power Dissipation	PT*	1.2	W
Thermal Resistance	Rth(j-a)*	62.5	° C/W
Junction Temperature	Tj	150	° C
Storage Temperature	Tstg	-65 to +150	° C

* mounted on 16 cm2 × 0.7 mm Ceramic Substrate



1.Base 2.Collector 3.Emitter
SOT-89 Plastic Package

ELECTRICAL CHARACTERISTICS (TA = 25 ° C)

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Collector Cutoff Current	ICBO			1.0	μA	V _{CB} = 10 V, I _E = 0
Emitter Cutoff Current	IEBO			1.0	μA	VEB = 1.0 V, I _C = 0
DC Current Gain	h _{FE} *	50	120	300		V _{CE} = 10 V, I _C = 20 mA
Gain Bandwidth Product	f _r		6.5		GHz	V _{CE} = 10 V, I _C = 20 mA
Feed-Back Capacitance	C _{re} **		0.65	1.0	pF	V _{CB} = 10 V, I _E = 0, f = 1.0 MHz
Insertion Power Gain	S _{21e} ²		9		dB	V _{CE} = 10 V, I _C = 20 mA, f = 1.0 GHz
Noise Figure	NF		1.1		dB	V _{CE} = 10 V, I _C = 7 mA, f = 1.0 GHz
Noise Figure	NF		1.8	3.0	dB	V _{CE} = 10 V, I _C = 40 mA, f = 1.0 GHz

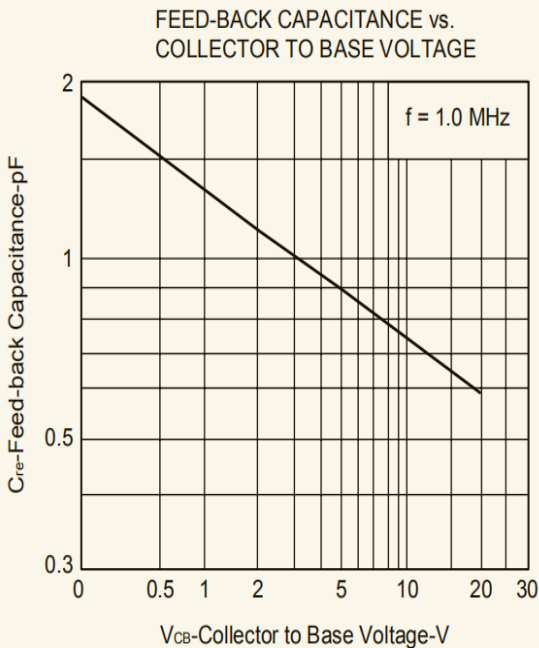
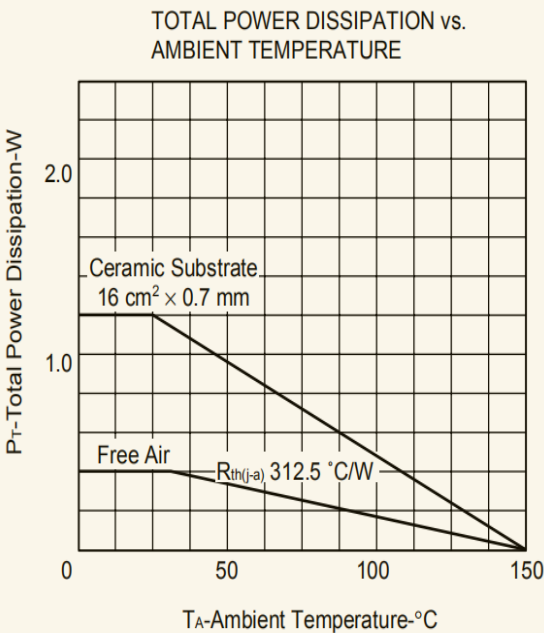
* Pulse Measurement PW ≤ 350 μs, Duty Cycle ≤ 2 %

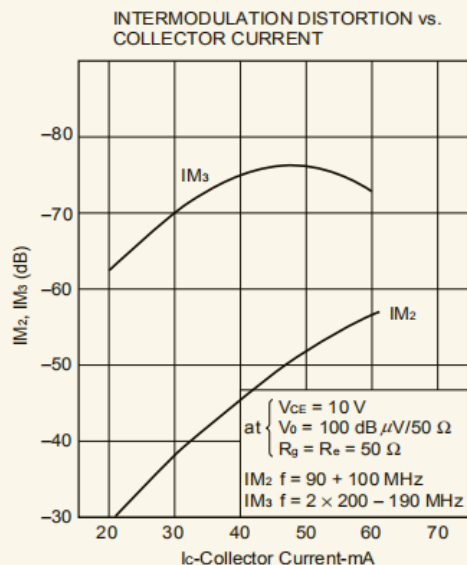
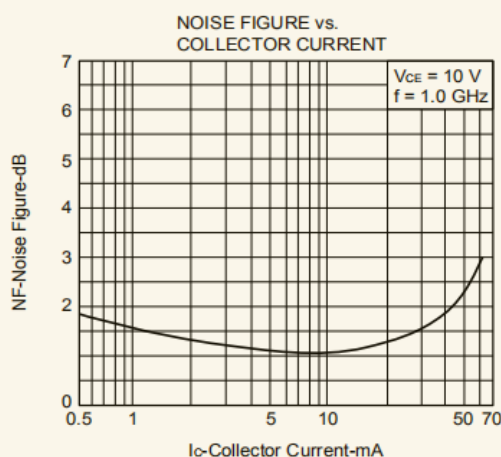
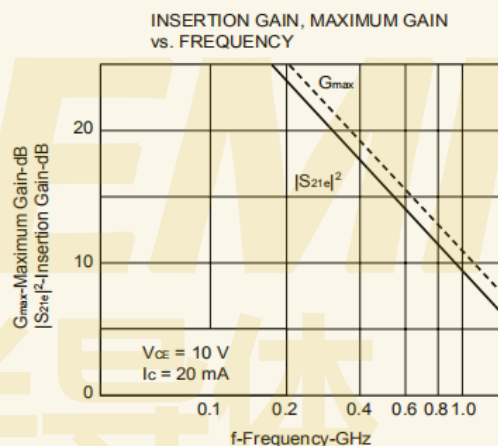
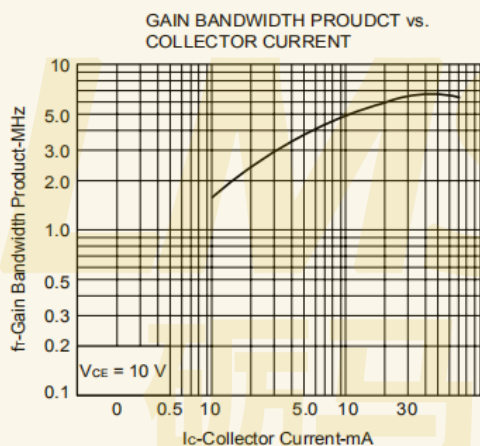
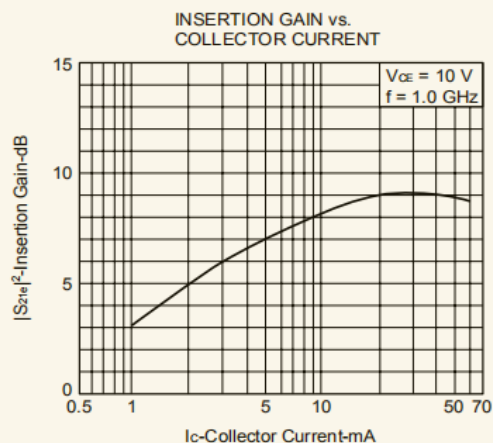
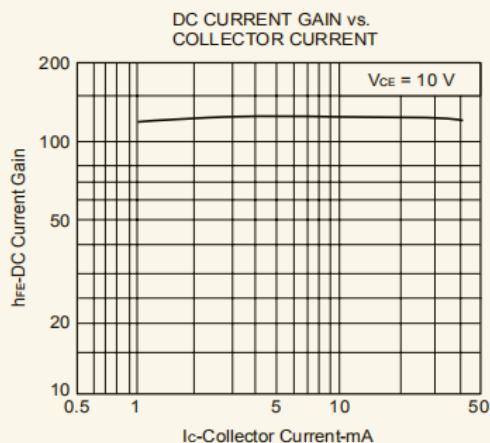
** The emitter terminal and the case shall be connected to the guard terminal of the three-terminal capacitance bridge.

h_{FE} Classification

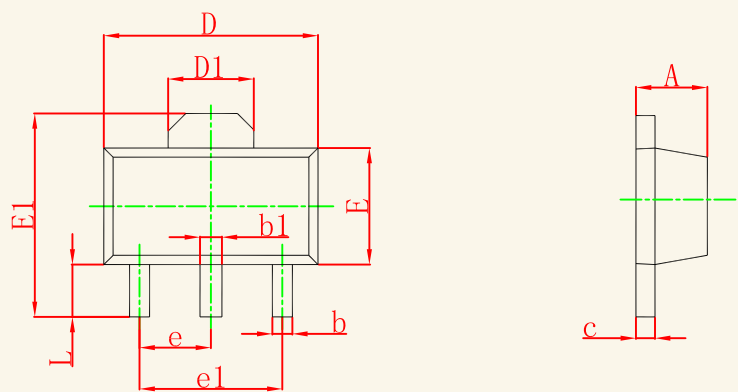
Class	RH	RF	RE
Marking	RH	RF	RE
h _{FE}	50 to 100	80 to 160	125 to 250

TYPICAL CHARACTERISTICS (TA = 25 °C)



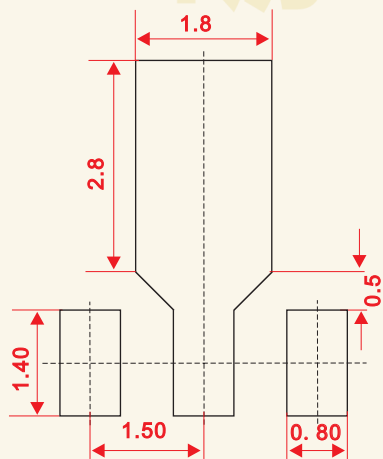


SOT-89-3L Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.400	1.600	0.055	0.063
b	0.320	0.520	0.013	0.020
b1	0.400	0.580	0.016	0.023
c	0.350	0.440	0.014	0.017
D	4.400	4.600	0.173	0.181
D1	1.550 REF.		0.061 REF.	
E	2.300	2.600	0.091	0.102
E1	3.940	4.250	0.155	0.167
e	1.500 TYP.		0.060 TYP.	
e1	3.000 TYP.		0.118 TYP.	
L	0.900	1.200	0.035	0.047

SOT-89-3L Suggested Pad Layout



- Note:
- 1.Controlling dimension:in millimeters.
 - 2.General tolerance:±0.05mm.
 - 3.The pad layout is for reference purposes only.

NOTICE

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