



Features

- Collector-Emitter Voltage: $V_{CEO} = 12V$
- Collector Power Dissipation: $P_C = 1.2W$
- Collector Current -Continuous: $I_C = 100mA$

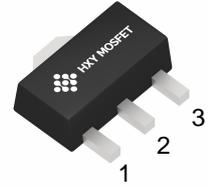
Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
2SC3357	SOT-89	RF/RE	1000

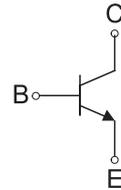
1. BASE

2. COLLECTOR

3. EMITTER



SOT-89



Maximum Ratings (Ta=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	20	V
V_{CEO}	Collector-Emitter Voltage	12	V
V_{EBO}	Emitter-Base Voltage	3	V
I_C	Collector Current -Continuous	100	mA
P_C	Collector Power Dissipation	1.2	W
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

Electrical Characteristics(Ta=25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	20			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}^*$	$I_C=1mA, I_B=0$	12			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu A, I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=20V, I_E=0$			1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=1V, I_C=0$			1	μA
DC current gain	h_{FE}	$V_{CE}=10V, I_C=20mA$	50		250	
Insertion Power Gain	$ S_{21e} ^2$	$V_{CE}=10V, I_C=20mA, f=1GHz$		9	0.4	
Noise Figure	NF	$V_{CE}=10V, I_C=7mA, f=1GHz$	6.5	1.1		dB
		$V_{CB}=10V, I_C=40mA, f=1GHz$		1.8	3	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=50mA, I_B=5mA$			0.4	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=50mA, I_B=5mA$			1.2	V
Transition frequency	f_T	$V_{CE}=10V, I_C=20mA$		6.5		GHz
Reverse Transfer Capacitance	C_{re}	$V_{CB}=10V, I_E=0, f=1MHz$			1	pF

* pulse test

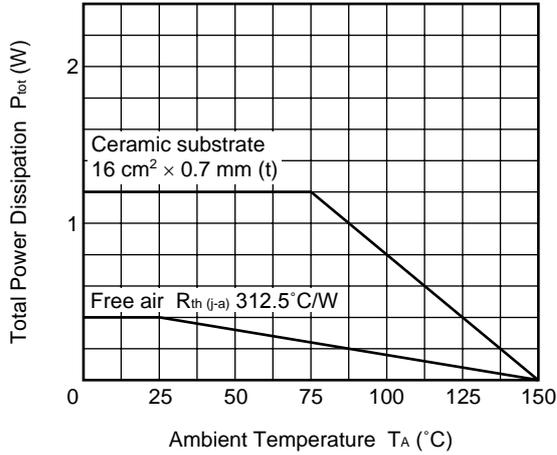
Classification Of h_{FE}

Rank	2SC3357-RF	2SC3357-RE
Range	82 -160	120 - 270
Marking	RF	RE

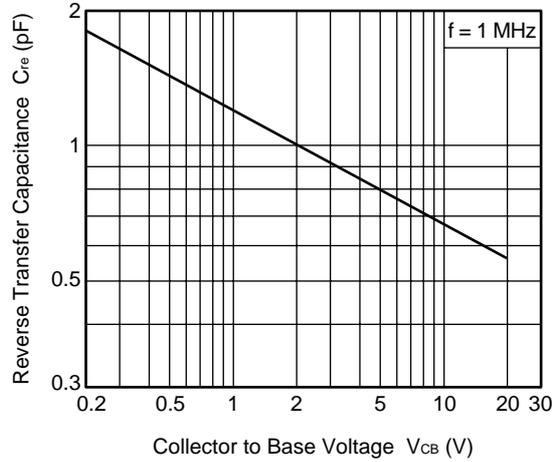


Typical Characteristics

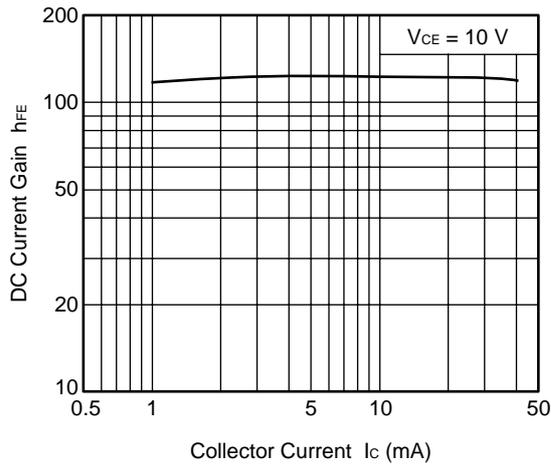
Total Power Dissipation
Vs. Ambient Temperature



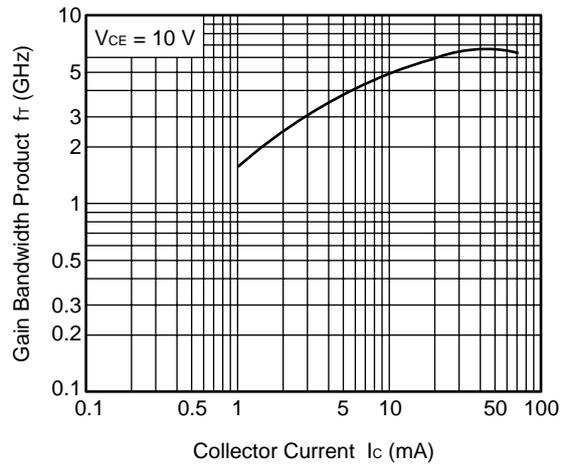
Reverse Transfer Capacitance
Vs. Collector To Base Voltage



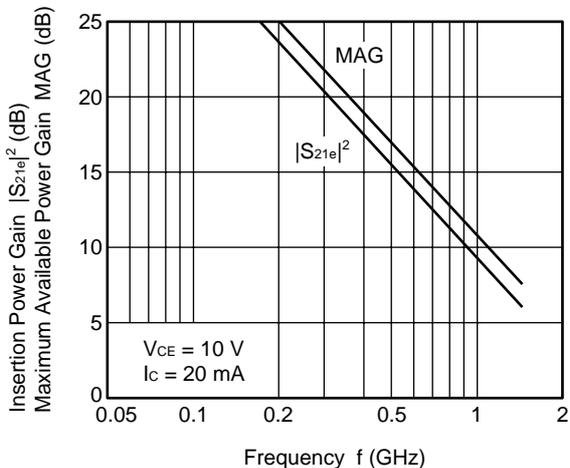
DC Current Gain Vs
Collector Current



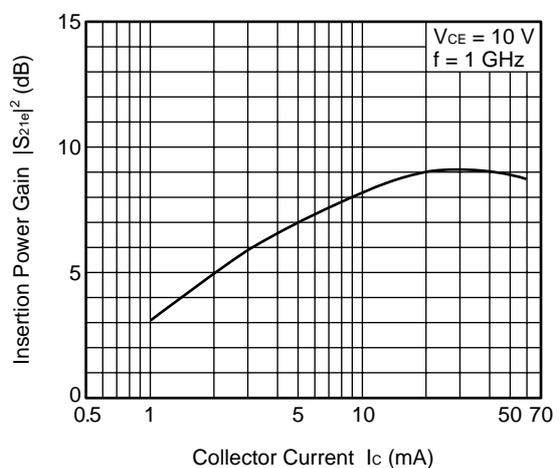
Gain Bandwidth Product
Vs. Collector Current



Insertion Power Gain, MAG
Vs. Frequency

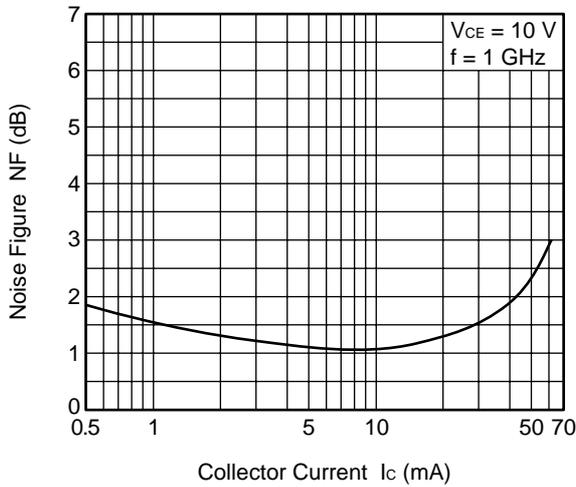


Insertion Power Gain
Vs. Collector Current

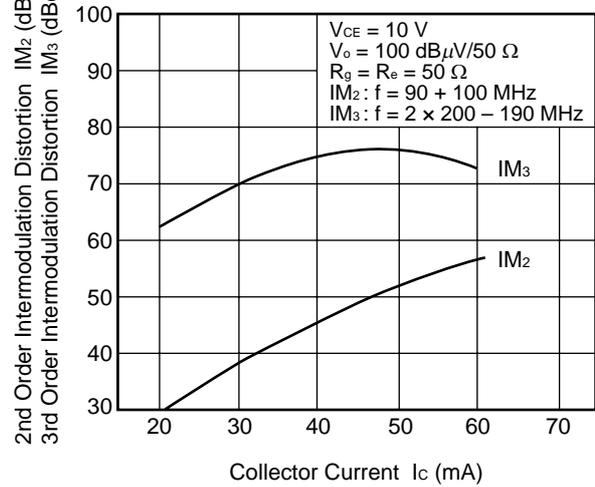




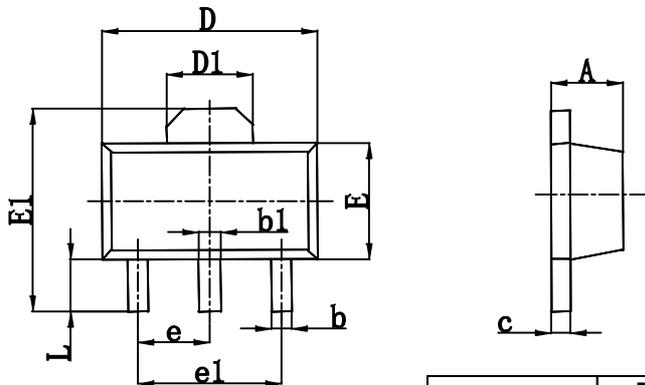
NOISE FIGURE vs.
COLLECTOR CURRENT



IM₂, IM₃ vs. COLLECTOR CURRENT



SOT-89 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



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