

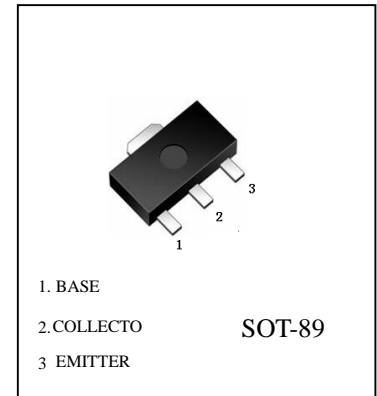
## 2SC3357 (NPN)

### DESCRIPTION

- Low Noise and High Gain  
 $NF = 1.1 \text{ dB TYP.}, G_a = 8.0 \text{ dB TYP.}$   
 $@V_{CE} = 10 \text{ V}, I_C = 7 \text{ mA}, f = 1.0 \text{ GHz}$   
 $NF = 1.8 \text{ dB TYP.}, G_a = 9.0 \text{ dB TYP.}$   
 $@V_{CE} = 10 \text{ V}, I_C = 40 \text{ mA}, f = 1.0 \text{ GHz}$

### APPLICATIONS

- Designed for low noise amplifier at VHF, UHF and CATV band.



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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	20	V
$V_{CEO}$	Collector-Emitter Voltage	12	V
$V_{EBO}$	Emitter-Base Voltage	3.0	V
$I_C$	Collector Current-Continuous	0.1	A
$P_C$	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	1.2	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-65~150	$^\circ\text{C}$

**ELECTRICAL CHARACTERISTICS**
**2SC3357**

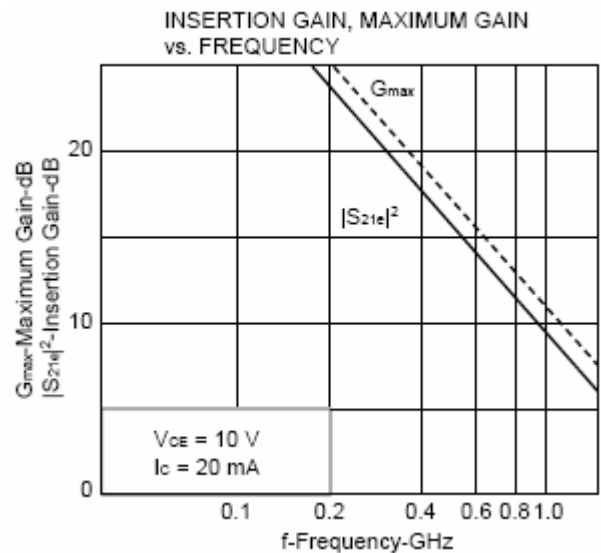
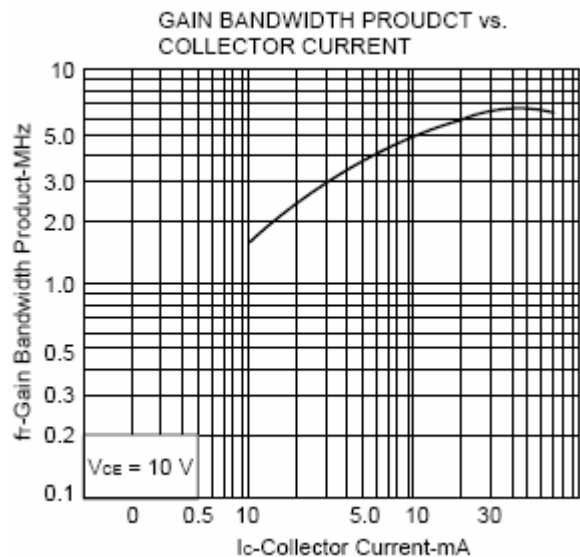
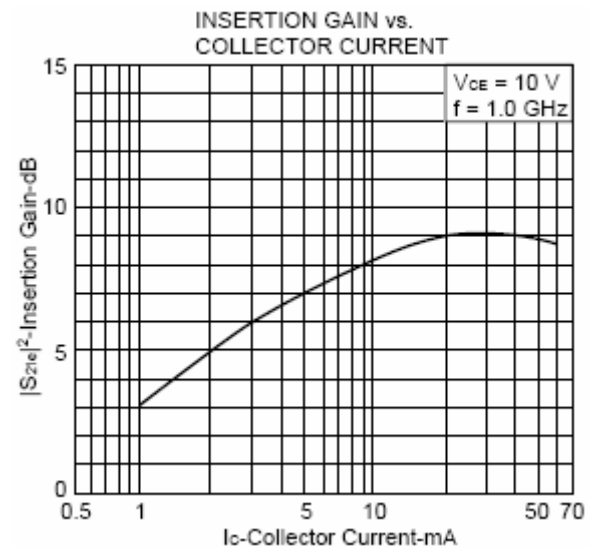
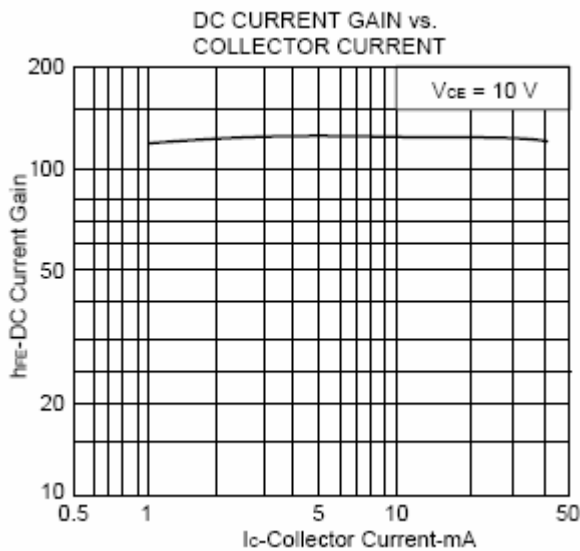
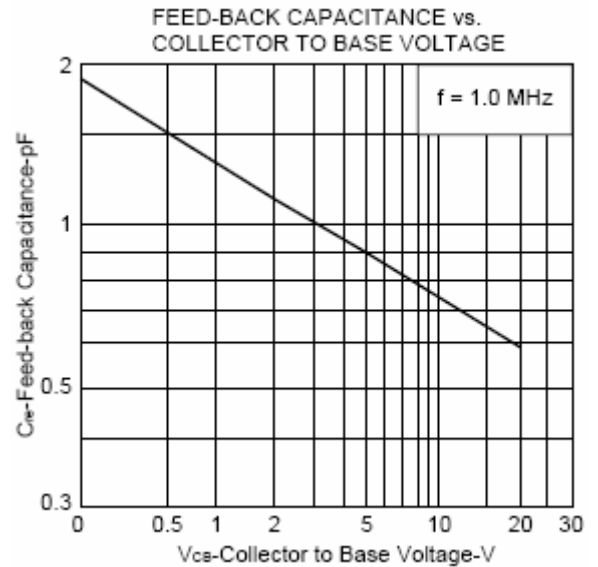
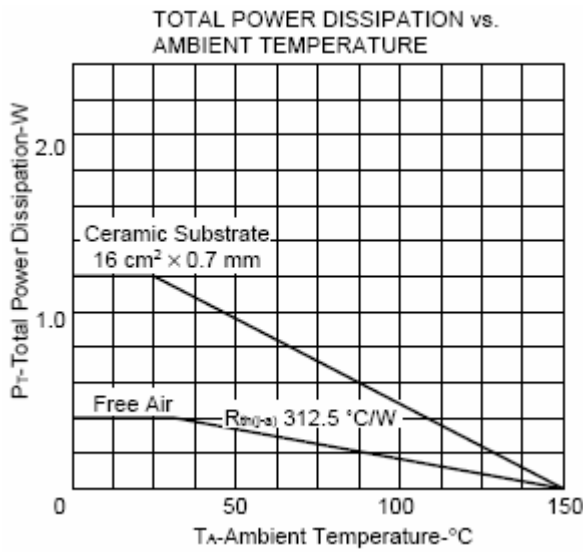
 T<sub>C</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = 10V; I <sub>E</sub> = 0			1.0	μ A
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 1V; I <sub>C</sub> = 0			1.0	μ A
h <sub>FE</sub>	DC Current Gain	I <sub>C</sub> = 20mA ; V <sub>CE</sub> = 10V	50		300	
f <sub>T</sub>	Current-Gain—Bandwidth Product	I <sub>C</sub> = 20mA ; V <sub>CE</sub> = 10V		6.5		GHz
C <sub>re</sub>	Feed-Back Capacitance	I <sub>E</sub> = 0 ; V <sub>CB</sub> = 10V;f= 1.0MHz		0.65	1.0	pF
S <sub>21e</sub>   <sup>2</sup>	Insertion Power Gain	I <sub>C</sub> = 20mA ; V <sub>CE</sub> = 10V;f= 1.0GHz		9		dB
NF	Noise Figure	I <sub>C</sub> = 7mA ; V <sub>CE</sub> = 10V;f= 1.0GHz		1.1		dB
NF	Noise Figure	I <sub>C</sub> = 40mA ; V <sub>CE</sub> = 10V;f= 1.0GHz		1.8	3.0	dB

**◆ h<sub>FE</sub> Classification**

Marking	RH	RF	RE
h <sub>FE</sub>	50-100	80-160	125-250

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