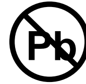
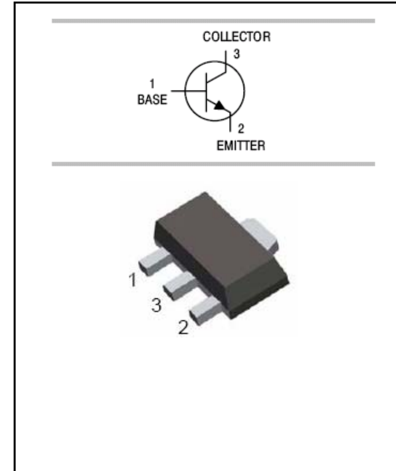
NPN SILICON EPITAXIAL TRANSISTOR
POWER MINI MOLD

2SC3357

FEATURES



Lead-free



- 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,
- Large PT in Small Package
  PT : 2 W with 16 cm^2*0.7 mm Ceramic Substrate.

APPLICATIONS

- 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.

ORDERING INFORMATION

Type No.	Marking	Package Code
2SC3357	RH/RF/RE	SOT-89

MAXIMUM RATING @ Ta=25℃ unless otherwise specified

Symbol	Parameter	Value	Units
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	100	mA
P_T 备注 1	Total Power Dissipation	1.2	W
$R_{th(j-a)}$ 备注 1	Thermal Resistance	62.5	°C/W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-65 to +150	℃

备注 1：mounted on 16 cm2 × 0.7 mm Ceramic Substrate

Galaxy Microelectronics

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ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=10uA	20			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=1mA	12			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=10uA	3.0			V
Collector cut-off current	I_{CBO}	V_{CB}=10V,I_E=0			1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=1.0V,I_C=0			1	μA
DC current gain	h_{FE} 备注 2	V_{CE}=10V,I_C=20mA	50	120	300	
Transition frequency	f_T	V_{CE}=10V,I_C=20mA		6.5		GHz
Feed-Back Capacitance	C_{re} 备注 3	V_{CB} = 10 V, I_C =0 mA, f = 1.0 MHz		0.65	1.0	pF
Insertion power gain	$\|S_{21e}\|^2$	V_{CE}=10V, I_C= 20mA , f=1GHz		9		dB
Noise Figure	NF	V_{CE}=10V,I_C=7mA, f=1GHz		1.1		dB
Noise Figure	NF	V_{CE}=10V,I_C=40mA, f=1GHz		1.8	3.0	dB

备注 2：Pulse Measurement PW ≤ 350 μs, Duty Cycle ≤ 2 %

备注 3：The emitter terminal and the case shall be connected to the guard terminal of the three-terminal capacitnace bridge.

CLASSIFICATION OF h_{FE}

Rank	RH	RF	RE
Range	50-100	80-160	125-250
MARKING	RH	RF	RE

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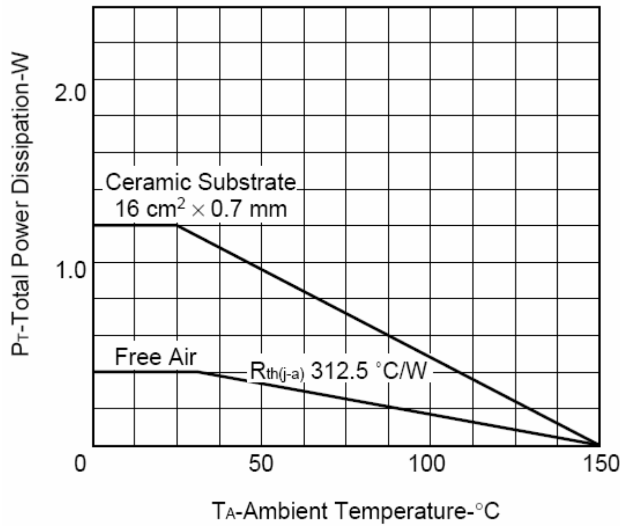
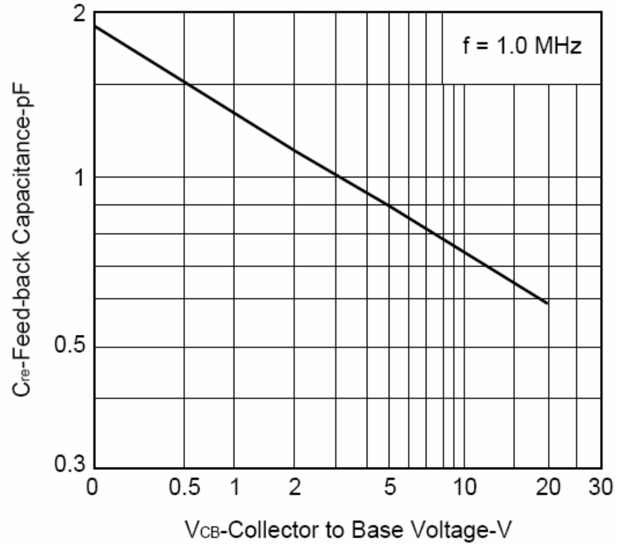
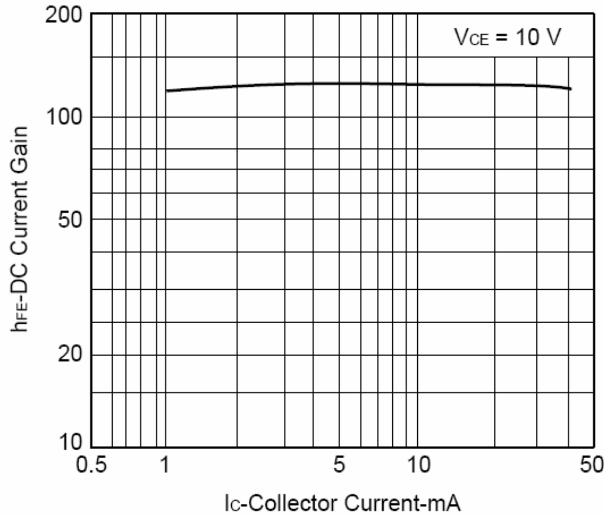
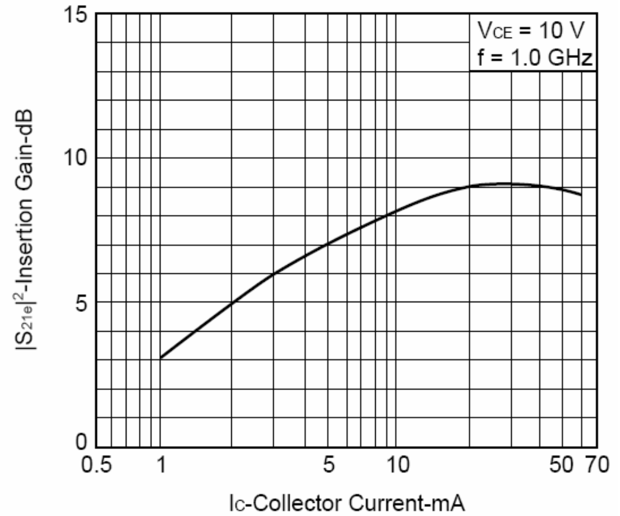
TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified









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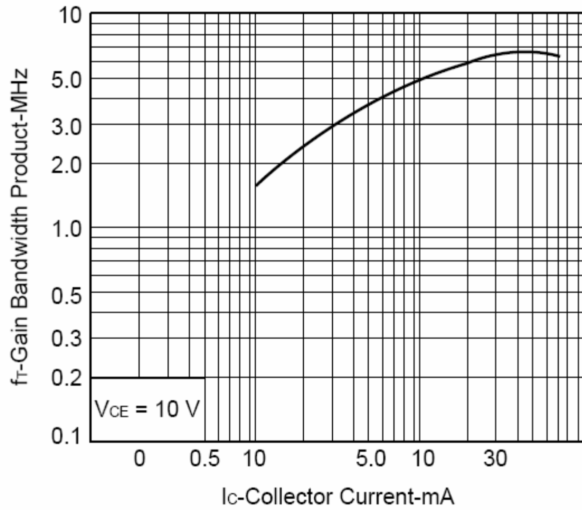

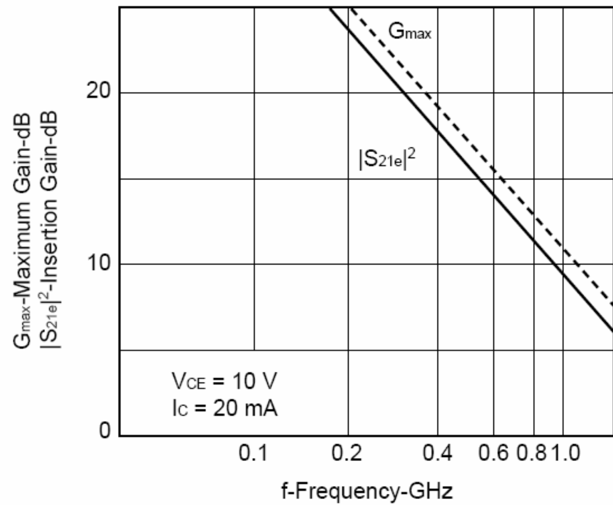

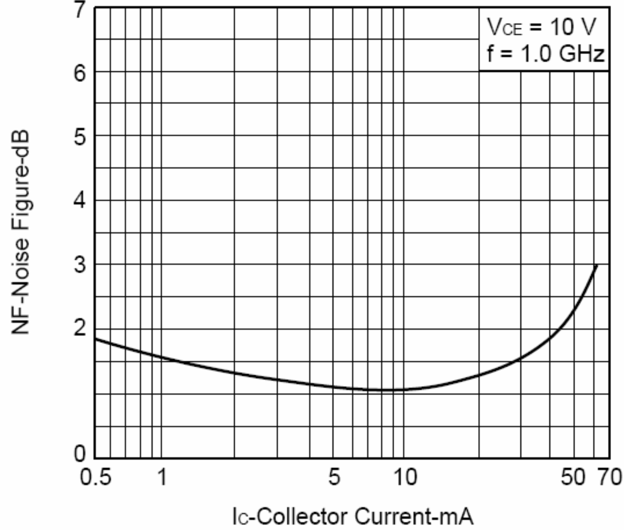

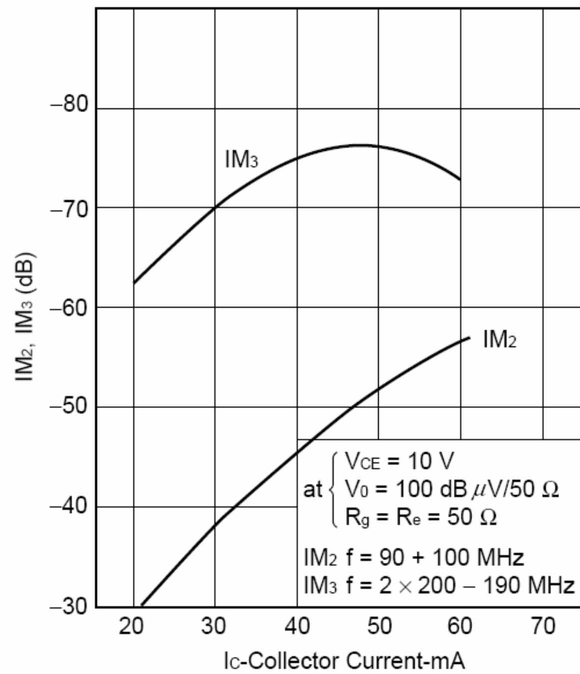

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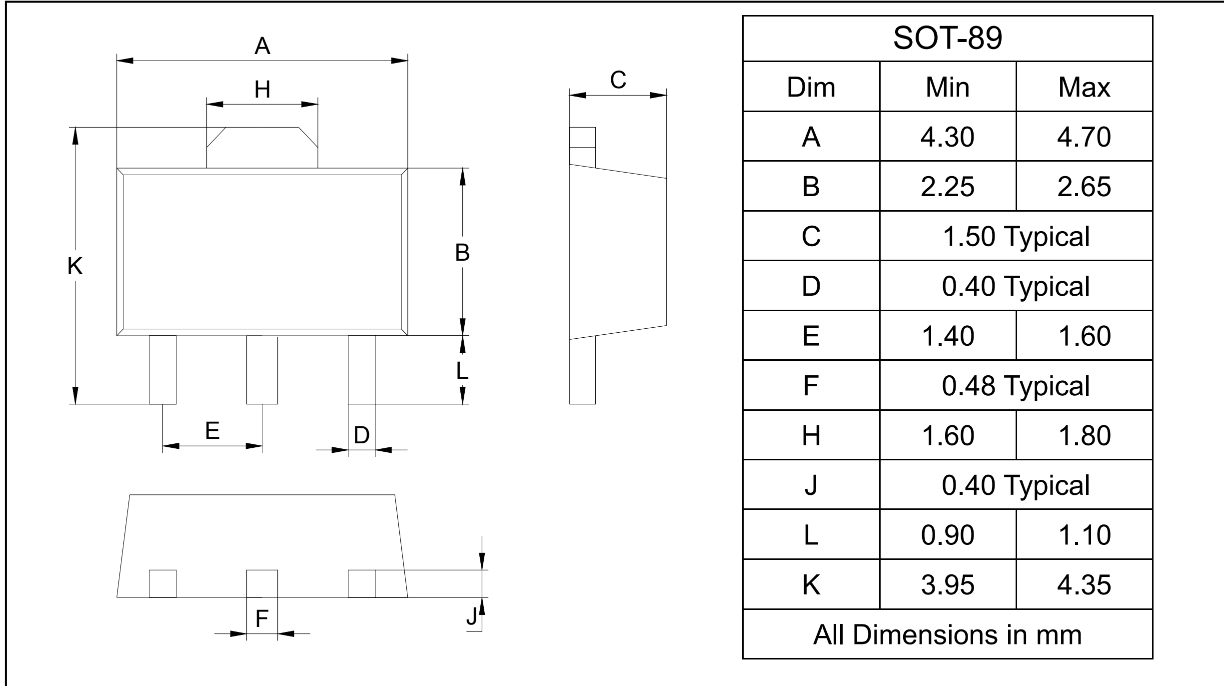
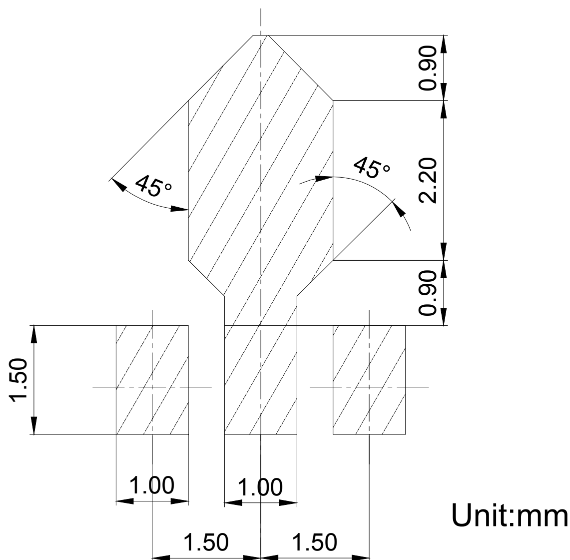
PACKAGE OUTLINE

Plastic surface mounted package SOT-89



SOT-89		
Dim	Min	Max
A	4.30	4.70
B	2.25	2.65
C	1.50 Typical	
D	0.40 Typical	
E	1.40	1.60
F	0.48 Typical	
H	1.60	1.80
J	0.40 Typical	
L	0.90	1.10
K	3.95	4.35
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit:mm

PACKAGE INFORMATION

Device	Package	Shipping
2SC3357	SOT-89	1000/Tape&Reel