isc Silicon NPN RF Transistor 2SC3357

DESCRIPTION

- Low Noise and High Gain
  NF = 1.1 dB TYP., G_a = 8.0 dB TYP.
  @V_{CE} = 10 V, I_C = 7 mA, f = 1.0 GHz
  NF = 1.8 dB TYP., G_a = 9.0 dB TYP.
  @V_{CE} = 10 V, I_C = 40 mA, f = 1.0 GHz
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

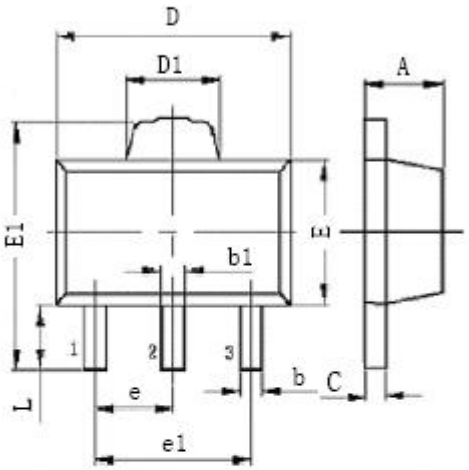
- Designed for low noise amplifier at VHF, UHF and CATV band.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

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℃	1.2	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-65~150	℃

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℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
I_{CBO}	Collector Cutoff Current	V_{CB}= 10V; I_E= 0			1.0	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 1V; I_C= 0			1.0	μA
h_{FE}	DC Current Gain	I_C= 20mA ; V_{CE}= 10V	50		300	
f_T	Current-Gain—Bandwidth Product	I_C= 20mA ; V_{CE}= 10V		6.5		GHz
C_{re}	Feed-Back Capacitance	I_E= 0 ; V_{CB}= 10V;f= 1.0MHz		0.65	1.0	pF
$\|S_{21e}\|^2$	Insertion Power Gain	I_C= 20mA ; V_{CE}= 10V;f= 1.0GHz		9		dB
NF	Noise Figure	I_C= 7mA ; V_{CE}= 10V;f= 1.0GHz		1.1		dB
NF	Noise Figure	I_C= 40mA ; V_{CE}= 10V;f= 1.0GHz		1.8	3.0	dB

◆ **h_{FE} Classification**

Marking	RH	RF	RE
h_{FE}	50-100	80-160	125-250