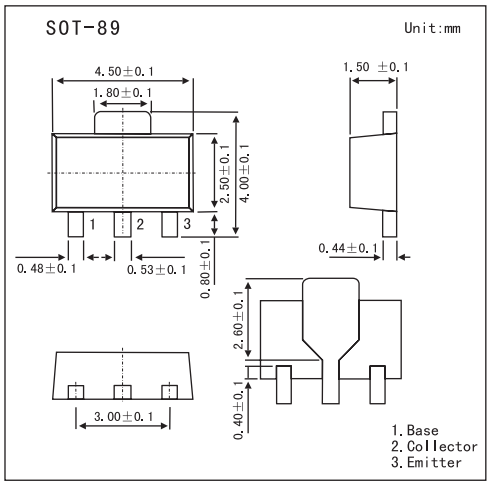
NPN Silicon RF Transistor

2SC3357



■ Features

- Low Noise and High Gain

  NF = 1.1 dB TYP., G_a = 7.5 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

- High power gain : MAG = 10 dB TYP. @ I_C = 40 mA, f = 1 GHz

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	20	V
Collector-emitter voltage	V_{CEO}	12	V
Emitter-base voltage	V_{EBO}	3.0	V
Collector current	I_C	100	mA
Total power dissipation	P_T*	1.2	W
Junction temperature	T_j	150	℃
Storage temperature	T_{stg}	-65 to +150	℃
Thermal Resistance	$R_{th(j-a)}$*	62.5	℃/W

* mounted on 16 cm^2 X 0.7 mm(t) Ceramic Substrate

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	V_{CB} = 10V,I_E=0			1.0	μA
Emitter cutoff current	I_{EBO}	V_{EB} = 1.0V,I_C=0			1.0	μA
DC current gain	h_{FE} *1	V_{CE} =10V,Ic=20mA	50	120	250	
Insertion Power Gain	$\|S_{21e}\|^2$	V_{CE} = 10 V, I_C = 20 mA, f = 1.0 GHz		9		dB
Noise Figure	NF	V_{CE} = 10 V, I_C = 7 mA, f = 1.0 GHz		1.1		dB
		V_{CE} = 10 V, I_C = 40 mA, f = 1.0 GHz		1.8	3.0	dB
Output Capacitance	C_{ob}	V_{CB} = 10 V, I_E = 0, f = 1.0 MHz		0.65	1.0	pF
Transition frequency	f_T	V_{CE} = 10V ,Ic=20mA		6.5		GHz

*1 Pulse Measurement PW ≤350 ms, Duty Cycle ≤ 2 %

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

■ h_{FE} Classification

Marking	RH	RF	RE
Rank	RH	RF	RE
hFE	20～100	80～160	125～250