



DESCRIPTION

The 2SC3357 is available in SOT-89 package.

FEATURE

High gain: $S_{21e} \geq 2$

TYP. Value : 10dB

@ $V_{CE}=10V$, $I_C=20mA$, $f=1GHz$

Low noise: NF

TYP. Value: 1.7dB

@ $V_{CE}=10V$, $I_C=7mA$, $f=1GHz$

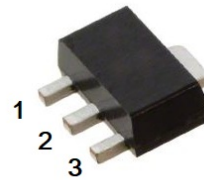
f_T (TYP.): TYP. Value: 6.5GHz

@ $V_{CE}=10V$, $I_C=20mA$, $f=1GHz$

ORDERING INFORMATION

Package Type	Part Number
SOT-89	2SC3357-A
	2SC3357-B
	2SC3357-C
	2SC3357-D
	2SC3357-E
Note	SPQ: 1,000pcs/Reel
AiT provides all RoHS Compliant Products	

PIN DESCRIPTION



SOT-89

PIN#	DESCRIPTION
1	BASE
2	COLLECTOR
3	EMITTER

HFE CLASSIFICATION

Classification	hFE
A	60~100
B	90~140
C	130~180
D	170~250
E	250~300



ABSOLUTE MAXIMUM RATINGS

T_A = 25°C, unless otherwise specified

V _{CBO} , Collector-Base Breakdown Voltage	20V
V _{CEO} , Collector-Emitter Breakdown Voltage	12V
V _{EBO} , Emitter-Base Breakdown Voltage	3V
I _C , Collector Current	100mA
P _D , Collector Power Dissipation *	1.20W
T _j , Junction Temperature	150°C
T _{stg} , Storage Temperature	-65°C ~ + 150°C

Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

* With heat dissipation panel

ELECTRICAL CHARACTERISTICS

T_a = 25°C, unless otherwise specified

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	V _{CBO}	I _C =1μA	20	-	-	V
Collector-Emitter Breakdown Voltage	V _{CEO}	I _C =100μA	12	-	-	V
Collector Cut-Off Current	I _{CBO}	V _{CB} = 10V	-	-	0.1	μA
Emitter Cut-Off Current	I _{EBO}	V _{EB} =1V	-	-	0.1	μA
DC Current Gain	h _{FE}	V _{CE} =10V, I _C =20mA	60	150	300	-
Transit frequency	f _T	V _{CE} =10V, I _C =20mA	-	6.50	-	GHz
Output feedback capacitance	C _{re}	V _{CB} = 10V, I _E =0mA, f=1MHz	-	0.65	-	pF
Power gain	S _{21e} ₂	V _{CE} = 10V, I _C =20mA, f=1GHz	9	10	-	dB
Noise Factor	NF	V _{CE} = 10V, I _C =40mA, f=1GMHz	-	2.60	3.20	dB
		V _{CE} = 10V, I _C =70mA, f=1GHz	-	1.70	2.30	



TYPICAL PERFORMANCE CHARACTERISTICS

Fig 1. h_{FE} vs. I_c

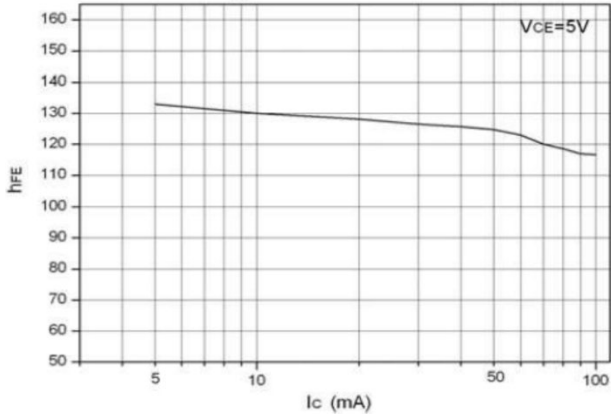


Fig 2. f_T vs. I_c

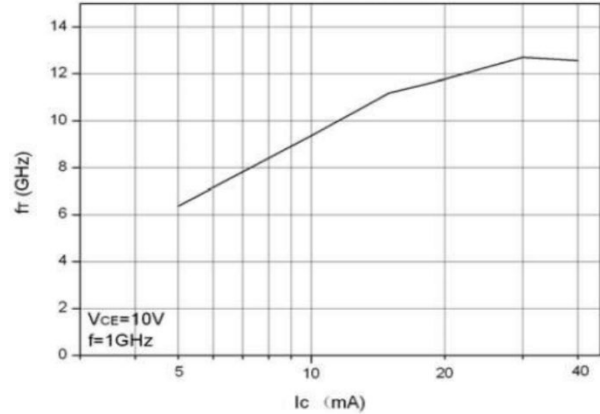


Fig 3. $|S_{21e}|^2$ vs. f

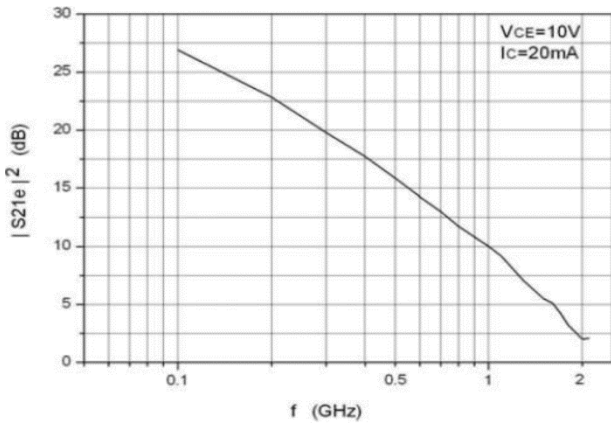


Fig 4. $|S_{21e}|^2$ vs. I_c

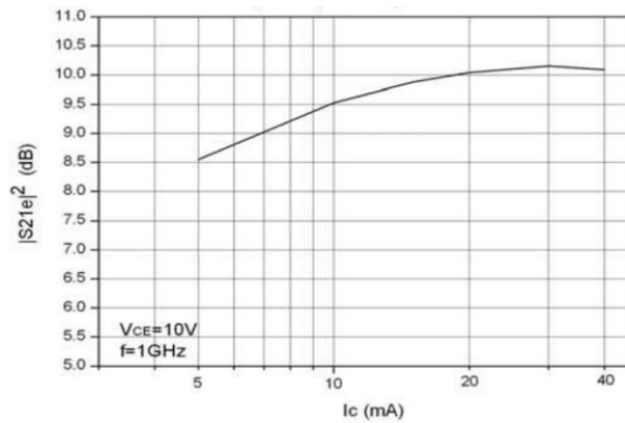


Fig 5. NF vs. I_c

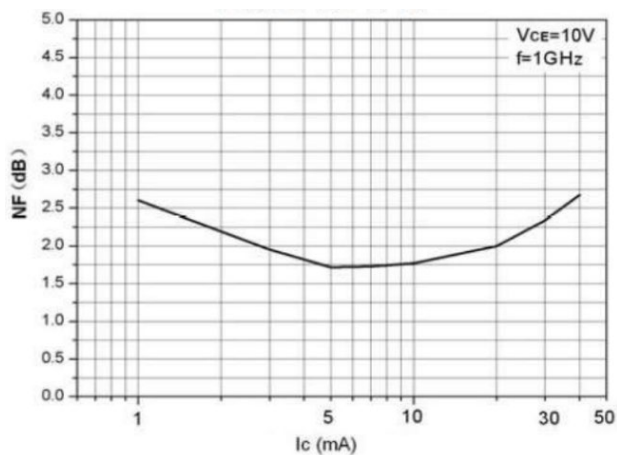
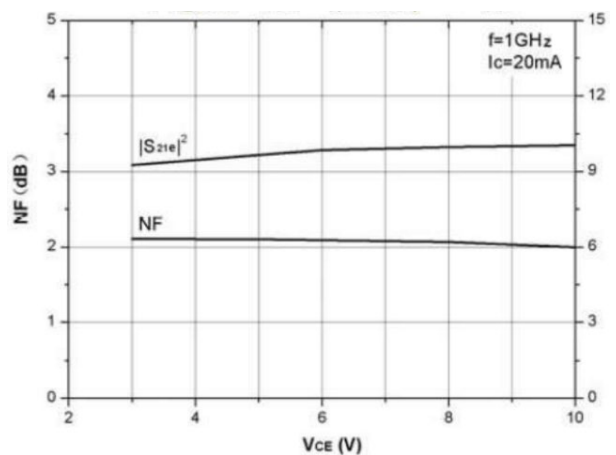


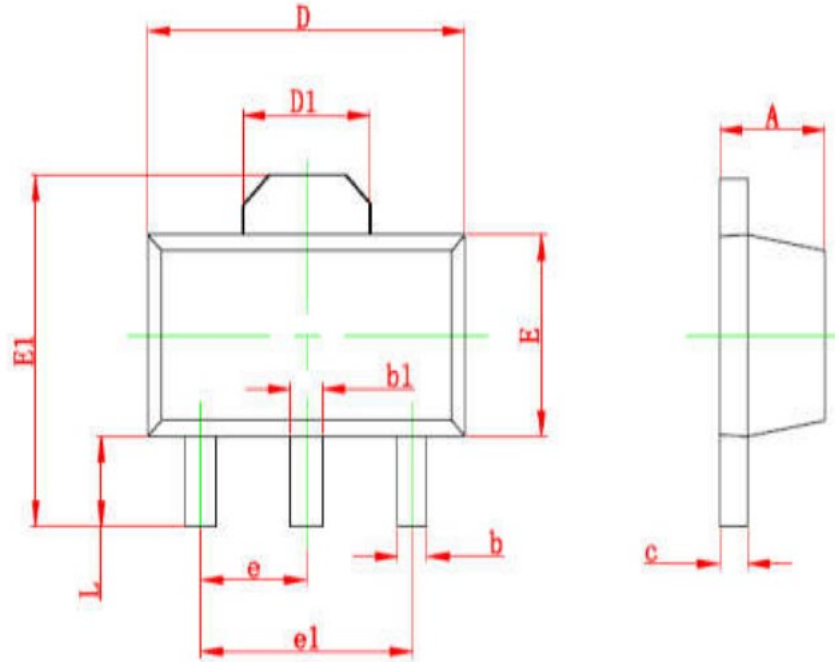
Fig 6. $|S_{21e}|^2$ vs. V_{CE}





PACKAGE INFORMATION

Dimension in SOT-89 Package



SYMBOL	MILLIMETERS	
	Min.	Max.
A	1.400	1.600
b	0.320	0.520
b1	0.400	0.580
c	0.350	0.440
D	4.400	4.600
D1	1.550	
E	2.300	2.600
E1	3.940	4.250
e	1.500	
e1	3.000	
L	0.900	1.200



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