



DESCRIPTION

The 2SC3356L is available in SOT-23 package.

ORDERING INFORMATION

Package Type	Part Number
SOT-23	2SC3356L-X
Note	X = A , B See below hFE Classification Table SPQ: 3,000pcs/Reel
AiT provides all RoHS Compliant Products	

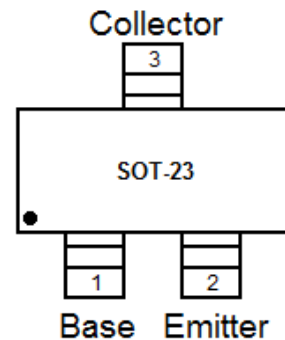
hFE CLASSIFICATION

Classification	A	B
Marking	R24	R25
hFE	80-140	120-200

FEATURES

- High gain: $|S_{21E}|^2$ TYP. Value is 12dB
@ $V_{CE}=10V$, $I_C=30mA$, $f=1GHz$
- Low noise: NF TYP. Value is 1.5dB
@ $V_{CE}=10V$, $I_C=7mA$, $f=1GHz$
- f_T (TYP.) : TYP. Value is 8GHz
@ $V_{CE}=10V$, $I_C=30mA$
- Ultra high frequency low noise transistor
- Silicon epitaxial bipolar process.
- High power gain, low noise figure,
- High dynamic range and ideal current characteristics
- Mainly used in VHF, UHF and CATV
- High frequency wideband low noise amplifier.
- Available in SOT-23 package

PIN DESCRIPTION





ABSOLUTE MAXIMUM RATINGS

T_A=25°C, unless Otherwise noted

V _{CB0} , Collector-base breakdown voltage	20V
V _{CE0} , Collector-emitter breakdown voltage	15V
V _{EB0} , Emitter-base breakdown voltage	2V
I _C , Collector Current	100mA
P _C , Collector Power Dissipation	365mW
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.

ELECTRICAL CHARACTERISTICS

T_A = 25°C, unless otherwise specified

Parameter	Symbol	Characteristic	Min	Typ.	Max	Unit	
Collector-base breakdown voltage	V _{CB0}	I _C =1.0μA	20	-	-	V	
Collector Cutoff Current	I _{CB0}	V _{CB} =10V	-	-	0.1	μA	
Emitter Cutoff Current	I _{EB0}	V _{EB} =1.0V	-	-	0.1	μA	
DC Current Gain	h _{FE}	V _{CE} =5V, I _C =20mA	A	80	-	140	-
			B	120	-	200	
Gain Bandwidth Product	f _T	V _{CE} =10V, I _C =30mA	-	8	-	GHz	
Insertion Power Gain	S _{21E} ²	V _{CE} =10V, I _C =30mA, f=1.0GHz	-	12	-	dB	
Noise Factor	NF	V _{CE} =10V, I _C =7mA, f=1.0GHz	-	1.5	-	dB	



TYPICAL CHARACTERISTICS

$T_A = 25^\circ\text{C}$

Figure 1. Power Dissipation vs. Ambient Temperature

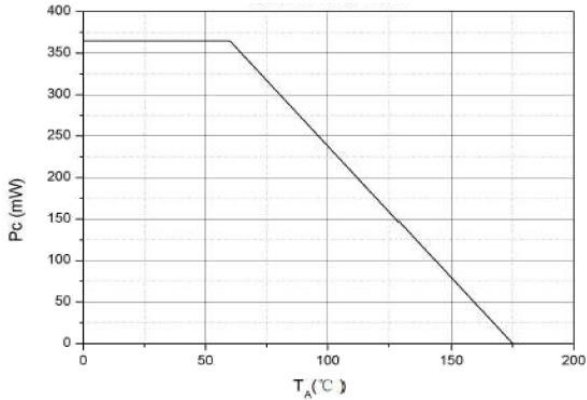


Figure 3. Insertion Power Gain vs. Frequency

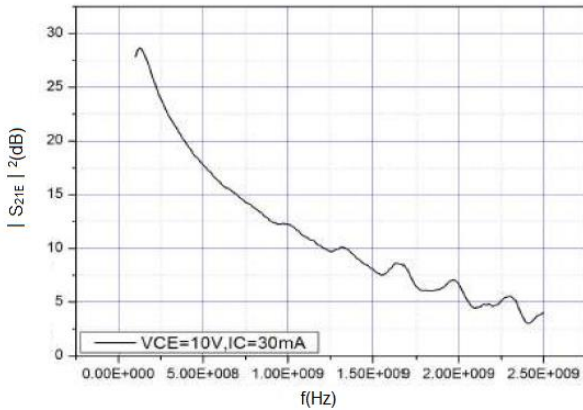


Figure 5. Noise Factor vs. Collector Current

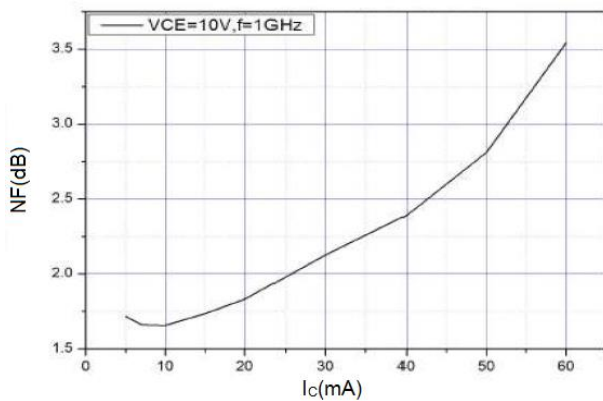


Figure 2. Feed-Back Capacitance vs. Collector to Base Voltage

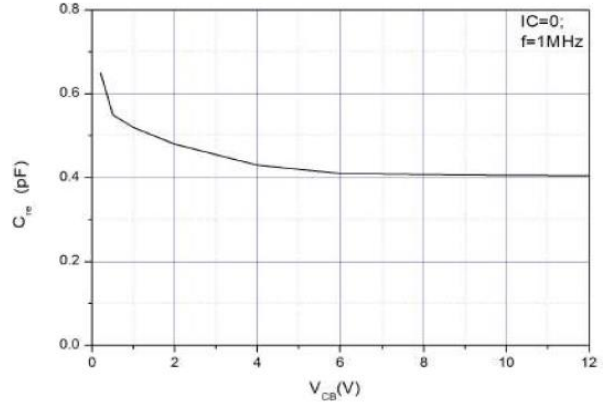


Figure 4. Insertion Power Gain vs. Collector Current

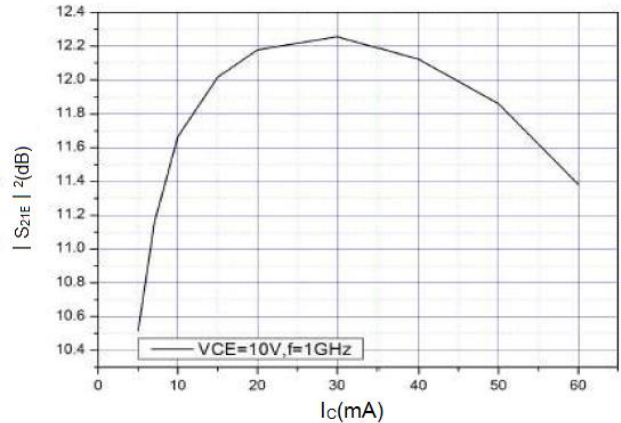


Figure 6. Insertion Power Gain, Noise Factor vs. Collector to Emitter Voltage

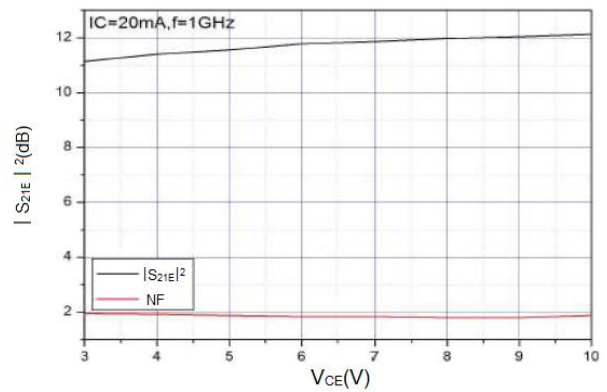
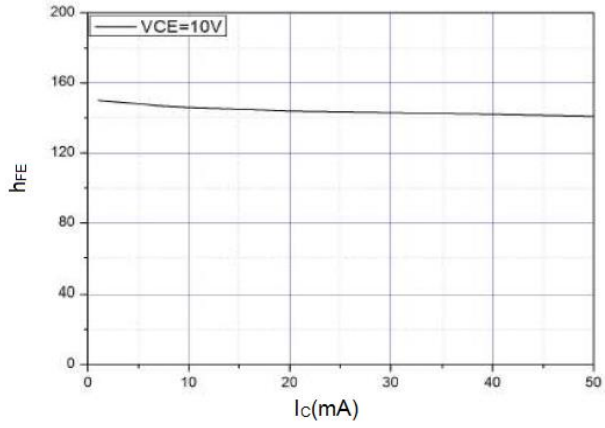




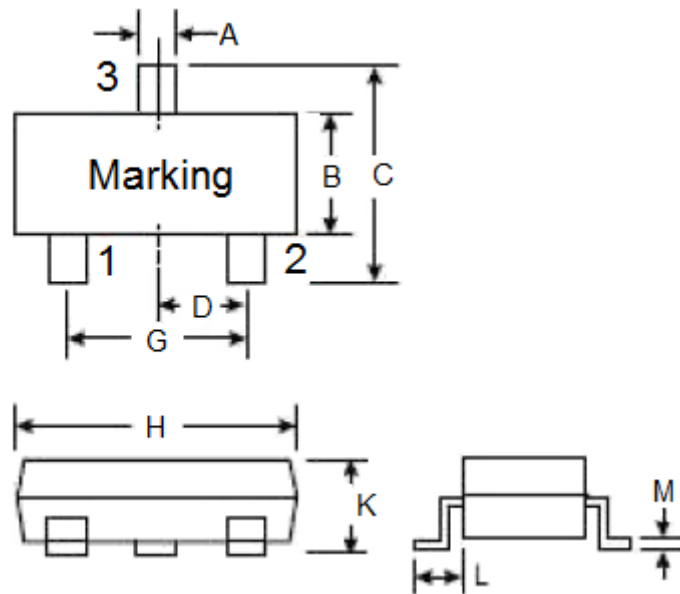
Figure 7. DC Current Gain vs. Collector Current





PACKAGE INFORMATION

Dimension in SOT-23 Package (Unit: mm)



DIM	MIN	MAX
A	0.35	0.5
B	1.4	1.7
C	2.7	3.1
D	0.95	
G	1.7	2.1
H	2.7	3.1
K	1	1.3
L	0.5	0.85
M	0.1	0.35



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