

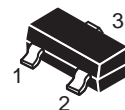
High-Frequency Amplifier Transistor

NPN Silicon

(Pb) Lead(Pb)-Free

FEATURES

- * Low noise amplifier at VHF, UHF and CATV band.
- * Low Noise and High Gain
- * High Power Gain



1. BASE
2. EMITTER
3. COLLECTOR

SOT-23

MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CB0}	Collector- Base Voltage	20	V
V_{CE0}	Collector-Emitter Voltage	12	V
V_{EB0}	Emitter-Base Voltage	3	V
I_C	Collector Current -Continuous	0.1	A
P_C	Collector Power Dissipation	0.25	W
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55-150	$^{\circ}\text{C}$

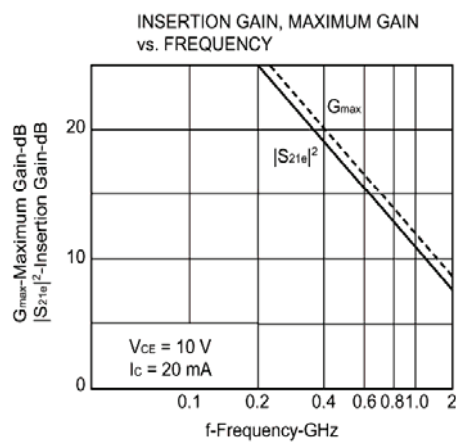
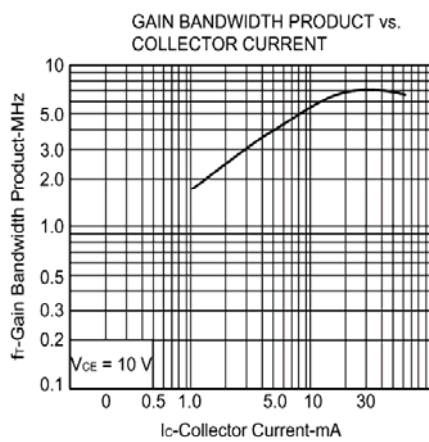
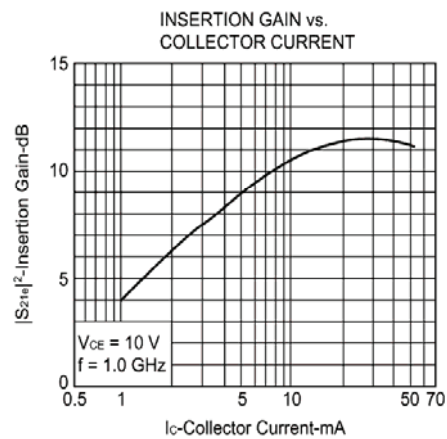
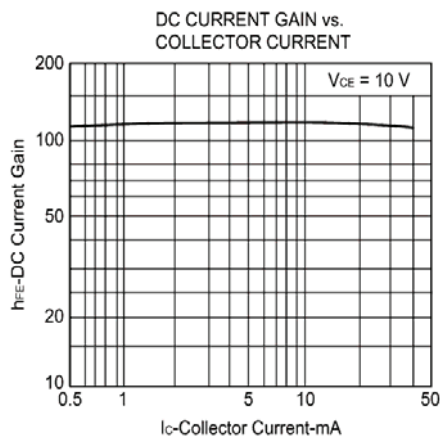
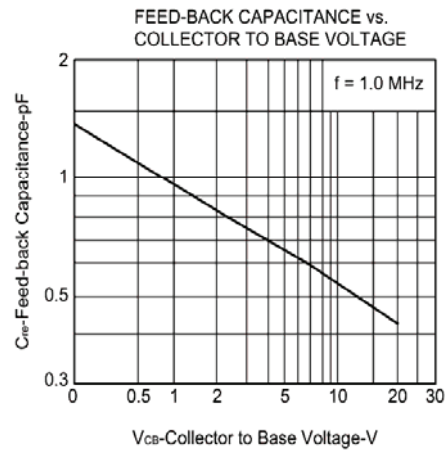
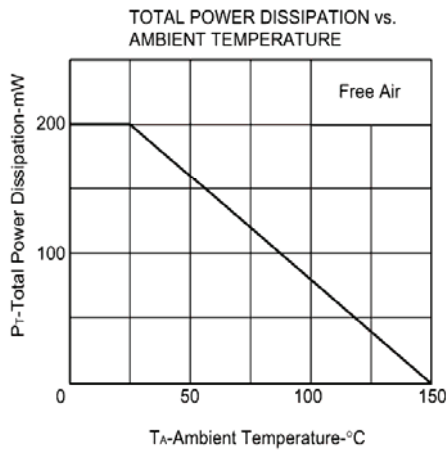
ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu\text{A}$, $I_E=0$	20			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}$, $I_B=0$	12			V
Collector-emitter breakdown voltage	$V_{CE(sat)}$	$I_C=50\text{mA}$, $I_B=5\text{mA}$			200	mV
Collector cut-off current	I_{CBO}	$V_{CB}=10\text{V}$, $I_E=0$			1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=1\text{V}$, $I_C=0$			1	μA
DC current gain	h_{FE}^*	$V_{CE}=3\text{V}$, $I_C=10\text{mA}$	82		270	
Transition frequency	f_T	$V_{CE}=10\text{V}$, $I_C=20\text{mA}$		7		GHz
Noise figure	NF	$V_{CE}=10\text{V}$, $I_C=7\text{mA}$, $f=1\text{GHz}$			2	dB

* pulse test: pulse width $\leq 350\mu\text{s}$, Duty cycle $\leq 2\%$

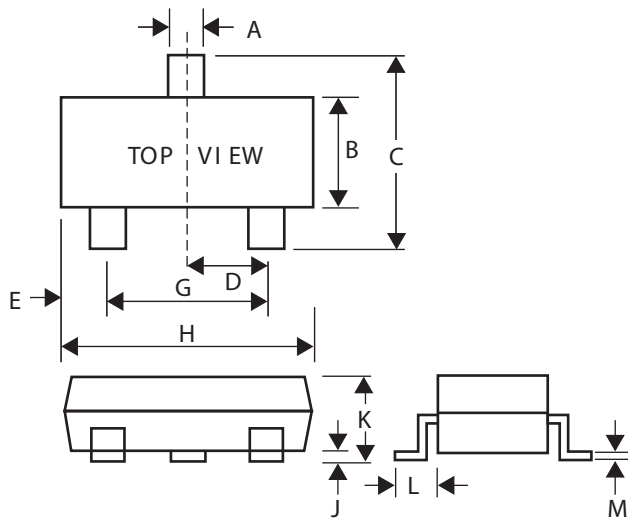
Typical Characteristics

2SC3356



SOT-23 Package Outline Dimensions

Unit:mm



Dim	Min	Max
A	0.35	0.51
B	1.19	1.40
C	2.10	3.00
D	0.85	1.05
E	0.46	1.00
G	1.70	2.10
H	2.70	3.10
J	0.01	0.13
K	0.89	1.10
L	0.30	0.61
M	0.076	0.25