

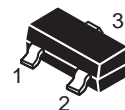
### High-Frequency Amplifier Transistor

#### 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	$^{\circ}\text{C}$

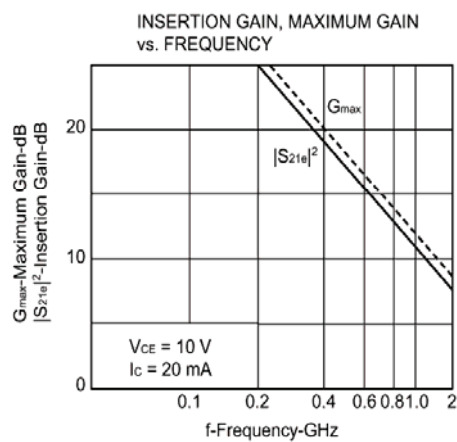
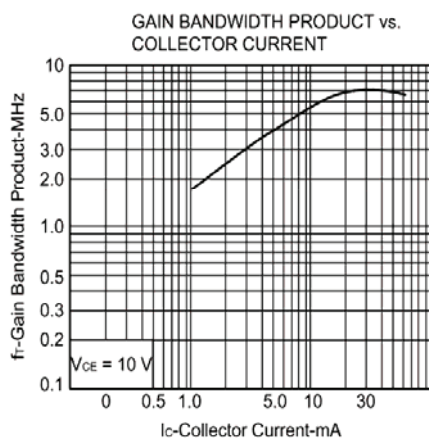
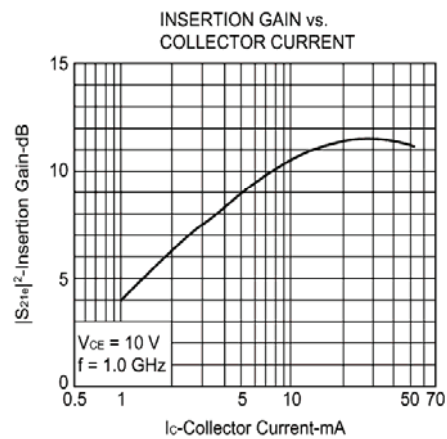
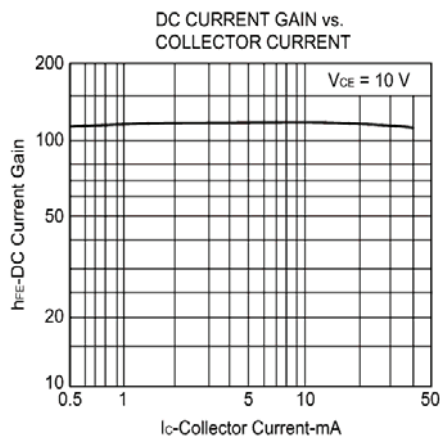
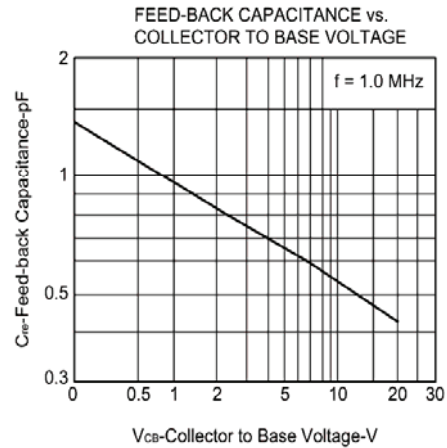
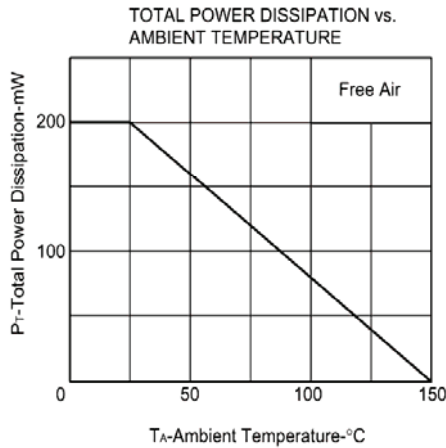
#### ELECTRICAL CHARACTERISTICS ( $T_{amb}=25^{\circ}\text{C}$ unless otherwise specified)

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	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=1\text{V}, I_C=0$			1	$\mu\text{A}$
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 $\leq 2\%$

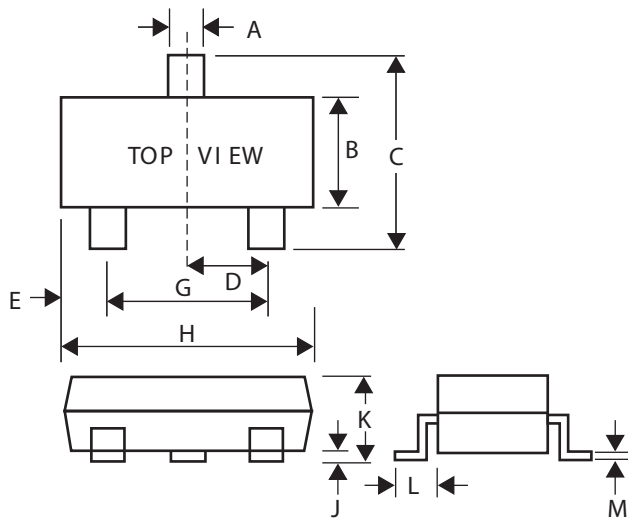
## Typical Characteristics

## 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