



DATA SHEET

SEMICONDUCTOR

2SC3356

High-Frequency Amplifier Transistor



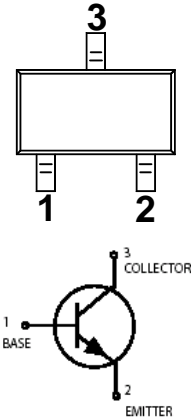
SOT-23 (TO-236AB)

DESCRIPTION

The 2SC3356 is an NPN silicon epitaxial transistor designed for low noise amplifier at VHF, UHF and CATV band. It has dynamic range and good current characteristic.

FEATURES

- Low Noise and High Gain
NF = 1.1 dB TYP., $G_a = 11$ dB TYP. @ $V_{CE} = 10$ V, $I_c = 7$ mA, $f = 1.0$ GHz
- High Power Gain
MAG = 13 dB TYP. @ $V_{CE} = 10$ V, $I_c = 20$ mA, $f = 1.0$ GHz



ABSOLUTE MAXIMUM RATINGS (T_A = 25 °C)

Collector to Base Voltage	V _{CB0}	20	V
Collector to Emitter Voltage	V _{CEO}	12	V
Emitter to Base Voltage	V _{EBO}	3.0	V
Collector Current	I _c	100	mA
Total Power Dissipation	P _T	200	mW
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-55 to +150	°C

ELECTRICAL CHARACTERISTICS (T_A = 25 °C)

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Collector Cutoff Current	I _{cBO}			1.0	μA	V _{CB} = 10 V, I _E = 0
Emitter Cutoff Current	I _{EBO}			1.0	μA	V _{EB} = 1.0 V, I _c = 0
DC Current Gain	h _{FE}	82	170	270		V _{CE} = 10 V, I _c = 20 mA
Gain Bandwidth Product	f _T		7		GHz	V _{CE} = 10 V, I _c = 20 mA
Feed-Back Capacitance	C _{re} **		0.55	1.0	pF	V _{CB} = 10 V, I _E = 0, f = 1.0 MHz
Insertion Power Gain	S _{21e} ²		11.5		dB	V _{CE} = 10 V, I _c = 20 mA, f = 1.0 GHz
Noise Figure	NF		1.1	2.0	dB	V _{CE} = 10 V, I _c = 7 mA, f = 1.0 GHz

* Pulse Measurement PW ≤ 350 μs, Duty Cycle ≤ 2 %

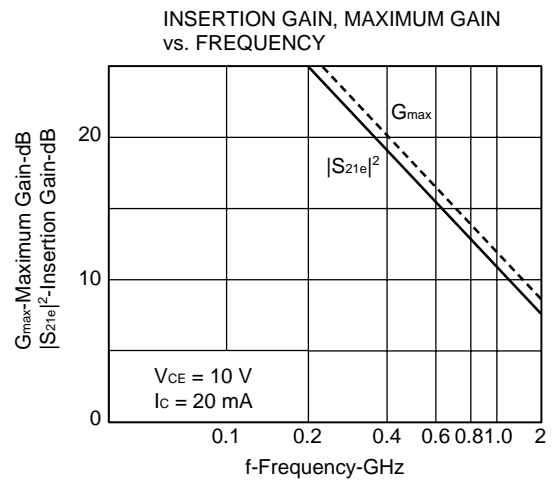
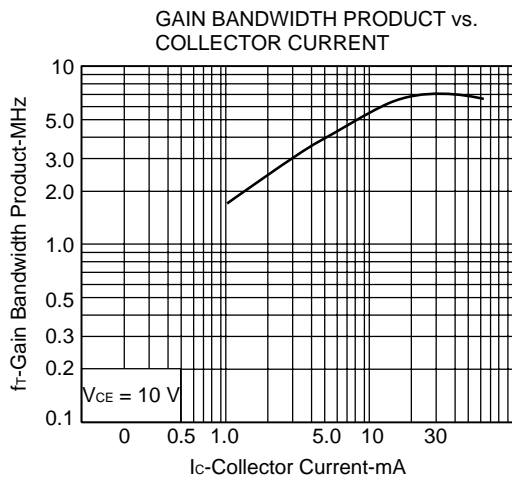
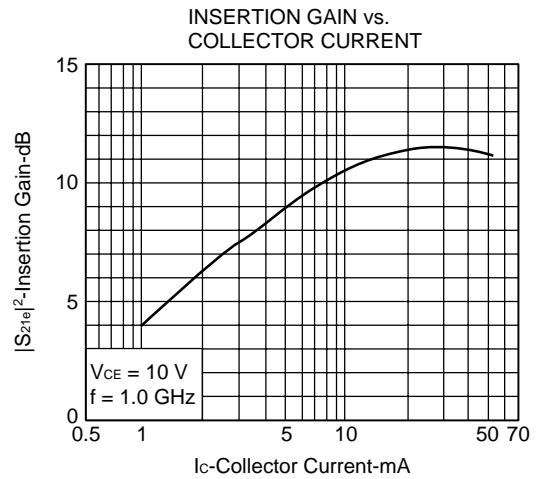
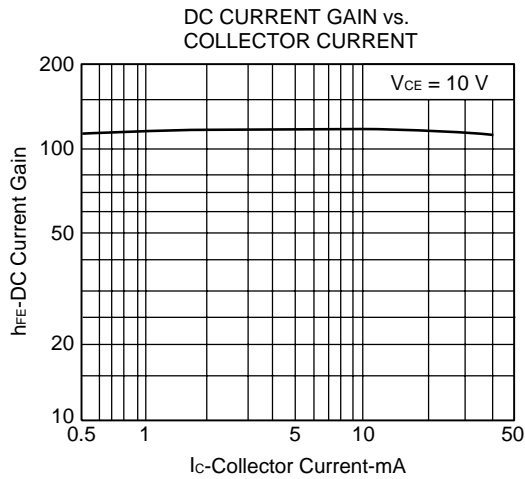
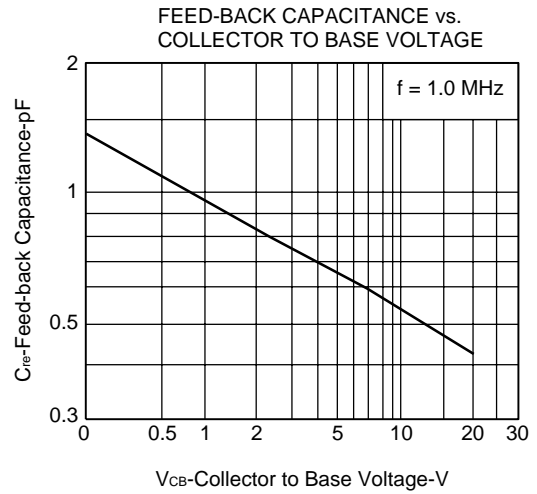
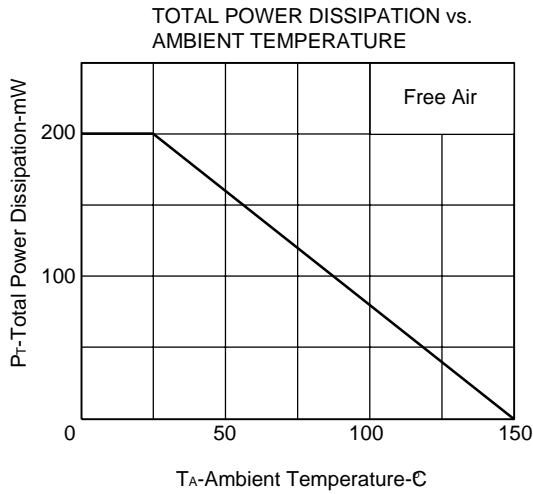
** The emitter terminal and the case shall be connected to the guard terminal of the three-terminal capacitance bridge.

Marking	
2SC3356	R24

DEVICE CHARACTERISTICS

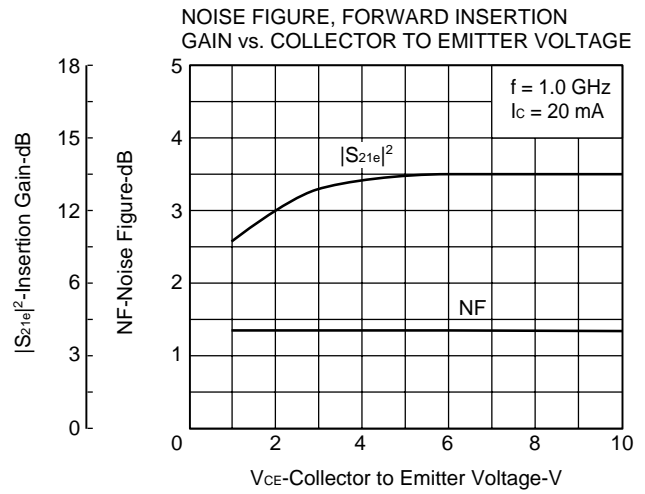
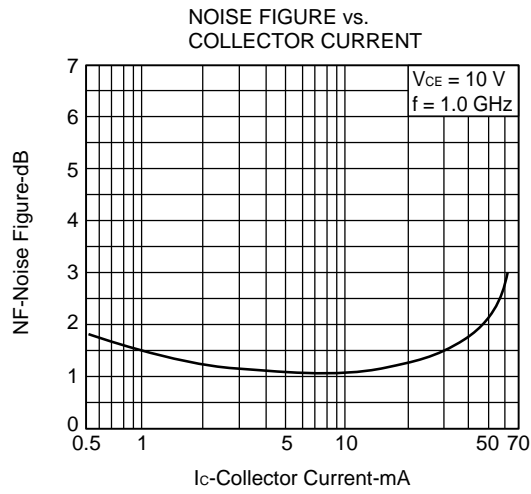
2SC3356

TYPICAL CHARACTERISTICS (T_A = 25 °C)



DEVICE CHARACTERISTICS

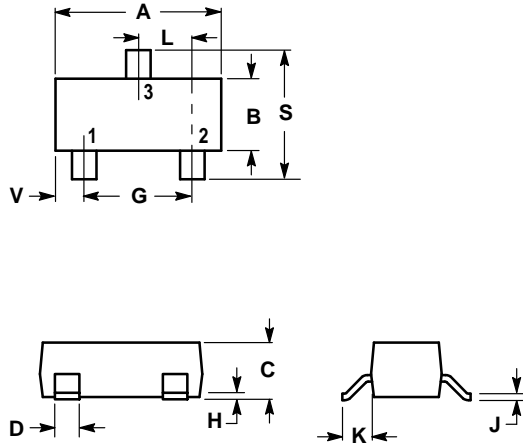
2SC3356



PACKAGE OUTLINE & DIMENSIONS

2SC3356

SOT-23



NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.1102	0.1197	2.80	3.04
B	0.0472	0.0551	1.20	1.40
C	0.0350	0.0440	0.89	1.11
D	0.0150	0.0200	0.37	0.50
G	0.0701	0.0807	1.78	2.04
H	0.0005	0.0040	0.013	0.100
J	0.0034	0.0070	0.085	0.177
K	0.0140	0.0285	0.35	0.69
L	0.0350	0.0401	0.89	1.02
S	0.0830	0.1039	2.10	2.64
V	0.0177	0.0236	0.45	0.60

- PIN 1. BASE
 2. EMITTER
 3. COLLECTOR

