

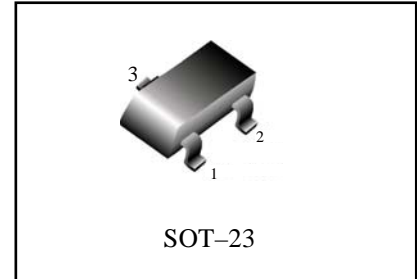
High-Frequency Amplifier Transistor

DESCRIPTION

The FTC3356 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.

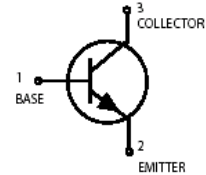
ORDERING INFORMATION

Device	Marking	Shipping
FTC3356	R24	3000/Tape & Reel



FEATURES

- We declare that the material of product compliance with RoHS requirements.
- Low Noise and High Gain
 $NF = 1.1 \text{ dB TYP.}, G_a = 11 \text{ dB TYP. @ } V_{CE} = 10 \text{ V}, I_c = 7 \text{ mA}, f = 1.0 \text{ GHz}$
- High Power Gain
 $MAG = 13 \text{ dB TYP. @ } V_{CE} = 10 \text{ V}, I_c = 20 \text{ mA}, f = 1.0 \text{ GHz}$



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 _{EB0}	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}	-65 to +150	°C

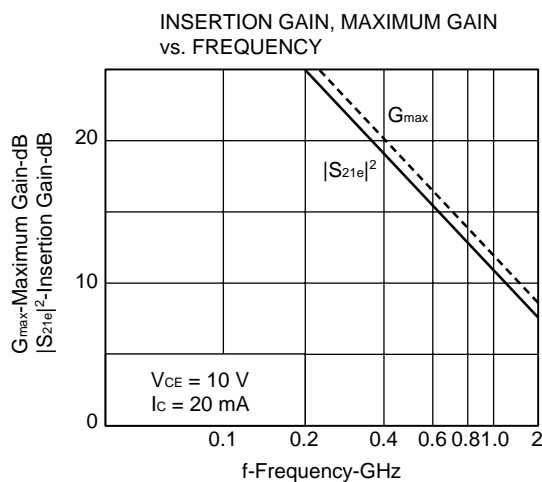
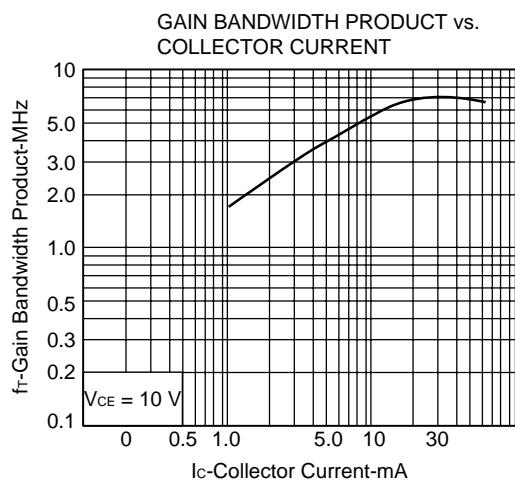
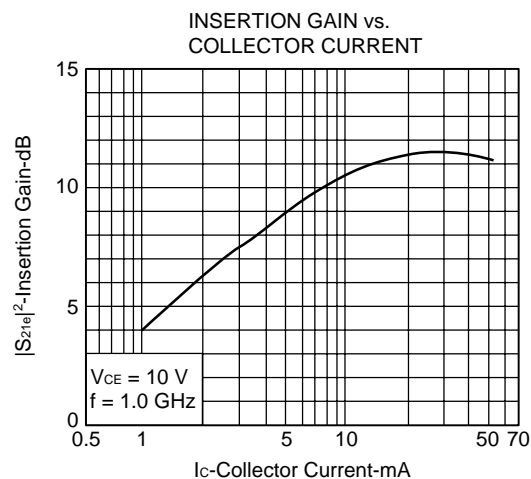
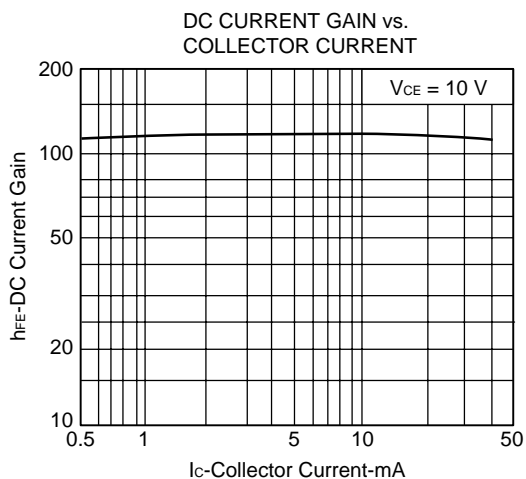
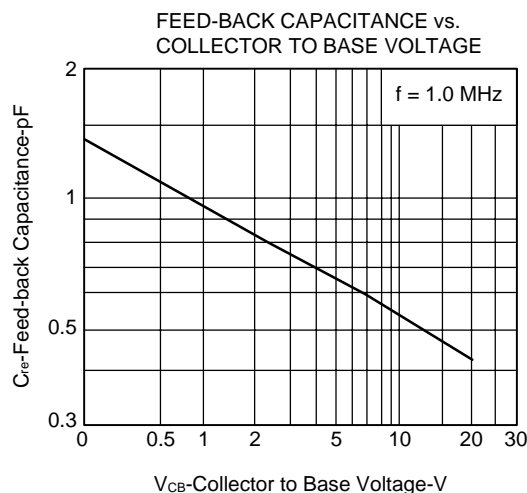
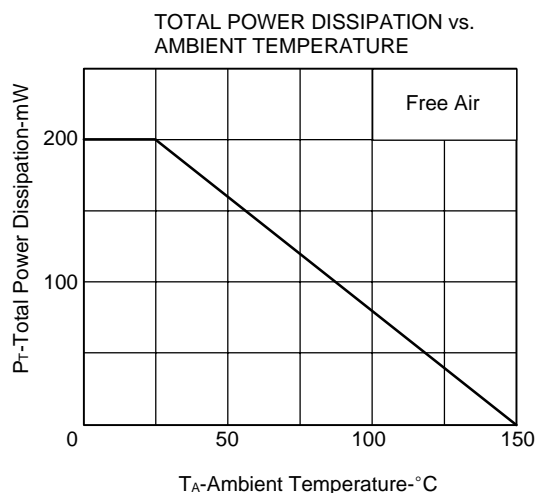
ELECTRICAL CHARACTERISTICS (T_A = 25 °C)

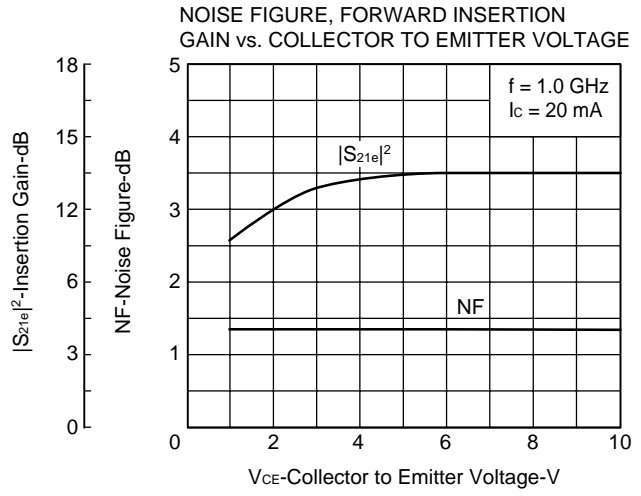
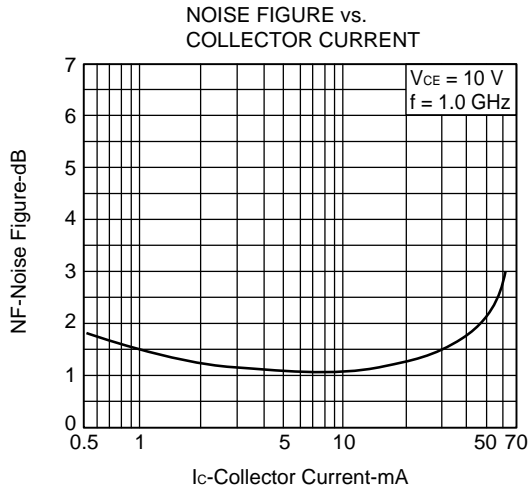
CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Collector Cutoff Current	I _{CB0}			1.0	μA	V _{CB} = 10 V, I _E = 0
Emitter Cutoff Current	I _{EB0}			1.0	μA	V _{EB} = 1.0 V, I _C = 0
DC Current Gain	h _{FE}	82	170	270		V _{CE} = 3 V, I _c = 10 mA
Gain Bandwidth Product	f _T		7		GHz	V _{CE} = 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 %

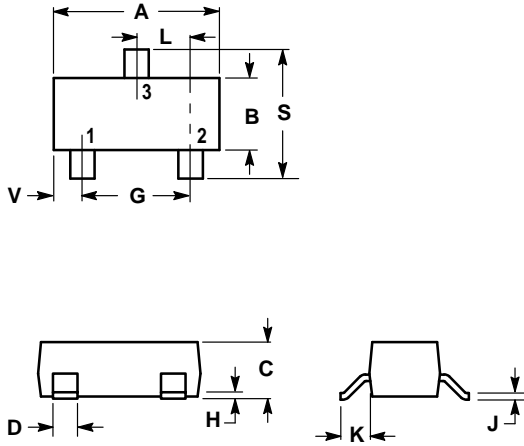
* The emitter terminal and the case shall be connected to the guard terminal of the three-terminal capacitance bridge.

TYPICAL CHARACTERISTICS (T_A = 25 °C)





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

