JXND ELECTRONICS CO.,LTD

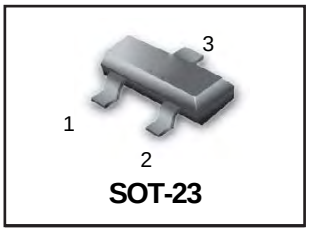
High Frequency Amplifier Transistors
2SC3356LT1G, S-2SC3356LT1G

DESCRIPTION

The 2SC3356LT1 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.

S- Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable.

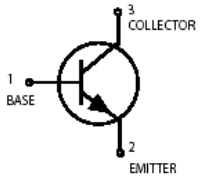


ORDERING INFORMATION

Device	Marking	Shipping
2SC3356LT1G S-2SC3356LT1G	R24	3000/Tape & Reel
2SC3356LT3G S-2SC3356LT3G	R24	10000/Tape & Reel

FEATURES

- We declare that the material of product compliance with RoHS requirements.
- 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_{CBO}	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}	–65 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} = 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.

Driver Marking

2SC3356LT1G=R24

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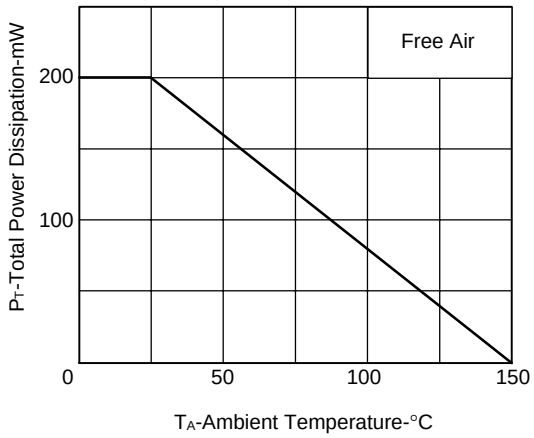
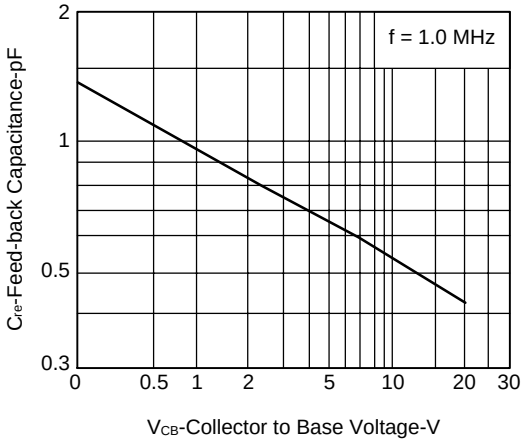
TYPICAL CHARACTERISTICS (T_A = 25 °C)

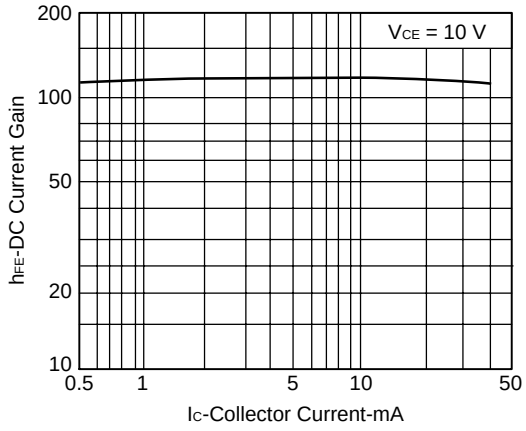
TOTAL POWER DISSIPATION vs.
AMBIENT TEMPERATURE



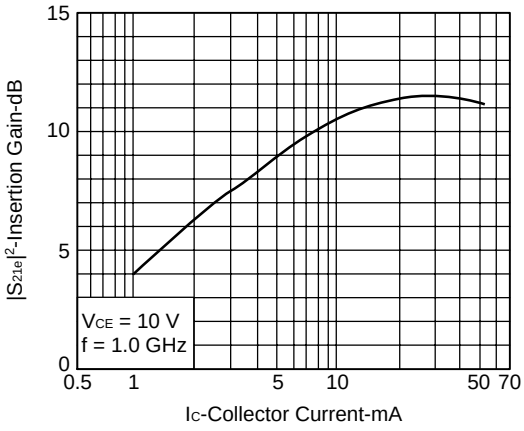
FEED-BACK CAPACITANCE vs.
COLLECTOR TO BASE VOLTAGE



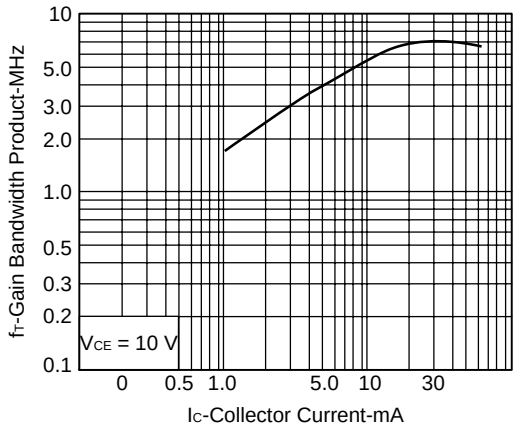
DC CURRENT GAIN vs.
COLLECTOR CURRENT



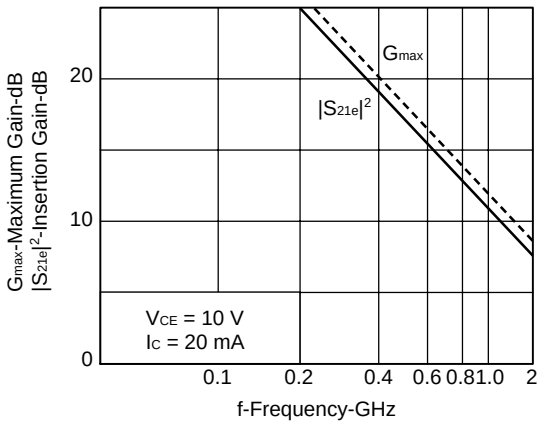
INSERTION GAIN vs.
COLLECTOR CURRENT



GAIN BANDWIDTH PRODUCT vs.
COLLECTOR CURRENT



INSERTION GAIN, MAXIMUM GAIN
vs. FREQUENCY



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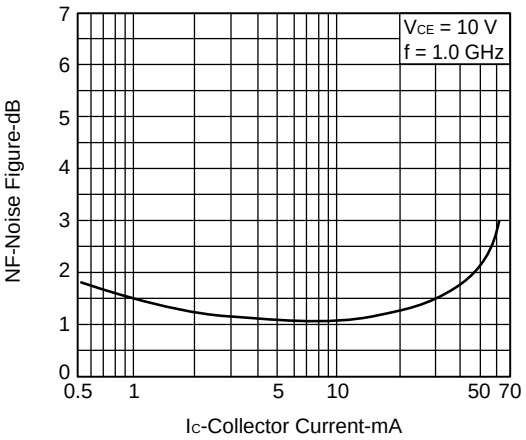
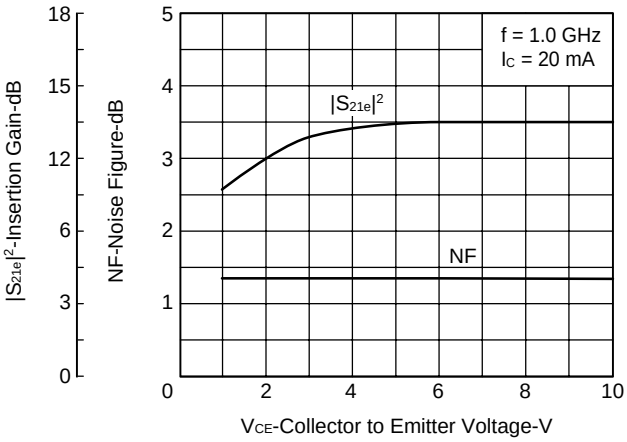
NOISE FIGURE vs.
COLLECTOR CURRENT



NOISE FIGURE, FORWARD INSERTION
GAIN vs. COLLECTOR TO EMITTER VOLTAGE



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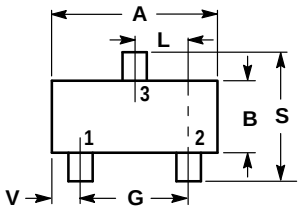
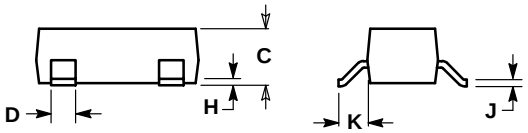
SOT-23





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