

High-Frequency Amplifier Transistor

DESCRIPTION

The L2SC3356LT1 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
L2SC3356LT1G	R24	3000/Tape & Reel
L2SC3356LT3G	R24	10000/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 ($T_A = 25^\circ\text{C}$)

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	$^\circ\text{C}$
Storage Temperature	T_{stg}	-65 to +150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Collector Cutoff Current	I_{CBO}			1.0	μA	$V_{CB} = 10 \text{ V}, I_E = 0$
Emitter Cutoff Current	I_{EBO}			1.0	μA	$V_{EB} = 1.0 \text{ V}, I_C = 0$
DC Current Gain	h_{FE}	82	170	270		$V_{CE} = 10 \text{ V}, I_c = 20 \text{ mA}$
Gain Bandwidth Product	f_T		7		GHz	$V_{CE} = 10 \text{ V}, I_c = 20 \text{ mA}$
Feed-Back Capacitance	C_{re}^{**}		0.55	1.0	pF	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1.0 \text{ MHz}$
Insertion Power Gain	$ S_{21e} ^2$		11.5		dB	$V_{CE} = 10 \text{ V}, I_c = 20 \text{ mA}, f = 1.0 \text{ GHz}$
Noise Figure	NF		1.1	2.0	dB	$V_{CE} = 10 \text{ V}, I_c = 7 \text{ mA}, f = 1.0 \text{ GHz}$

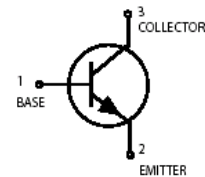
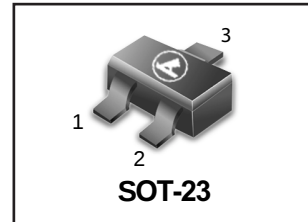
* Pulse Measurement $PW \leq 350 \mu\text{s}$, Duty Cycle $\leq 2\%$

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

Driver Marking

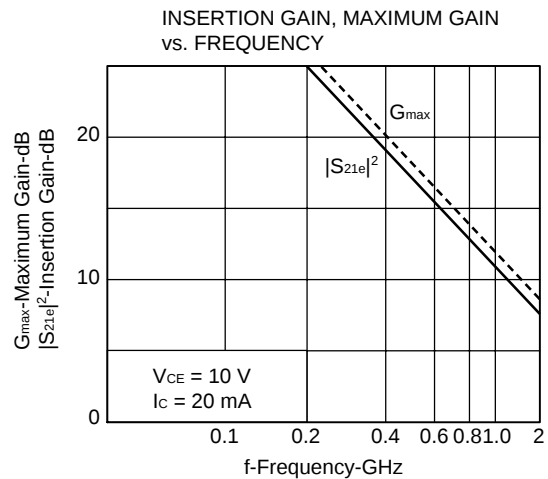
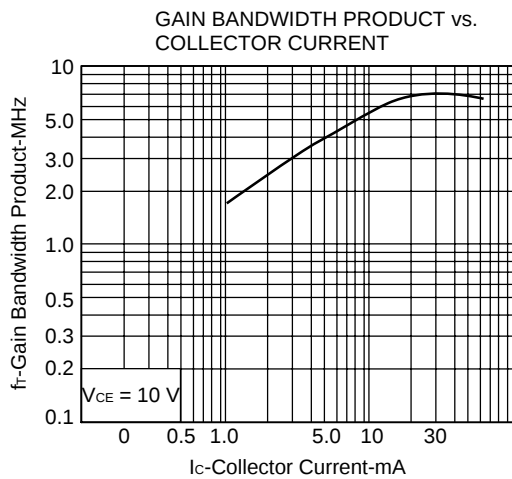
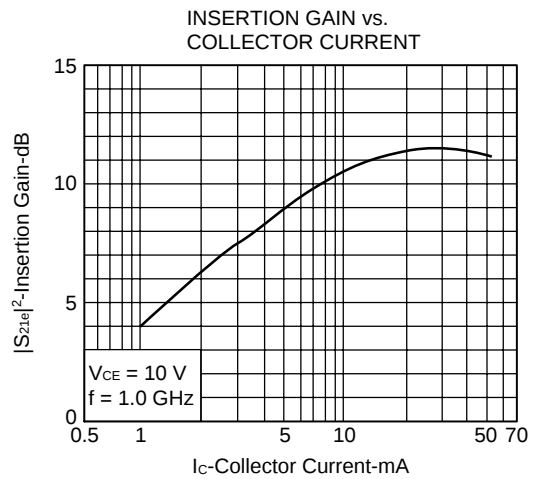
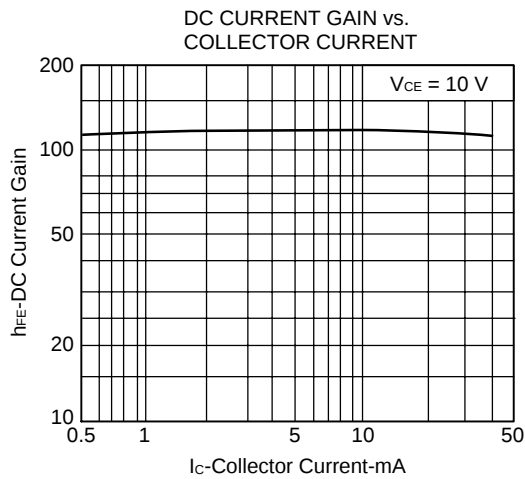
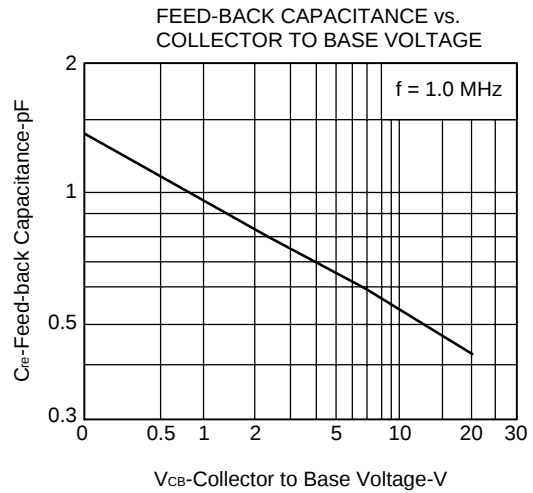
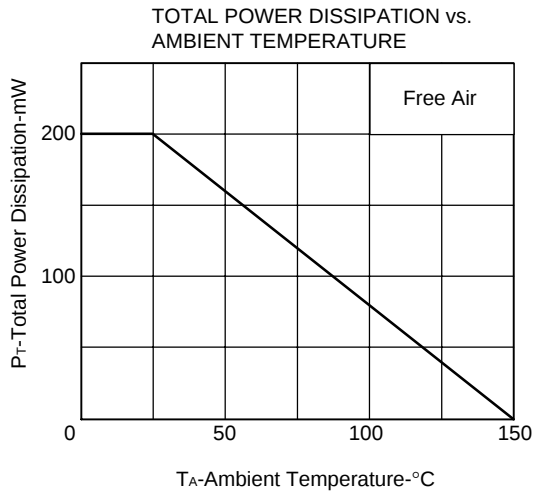
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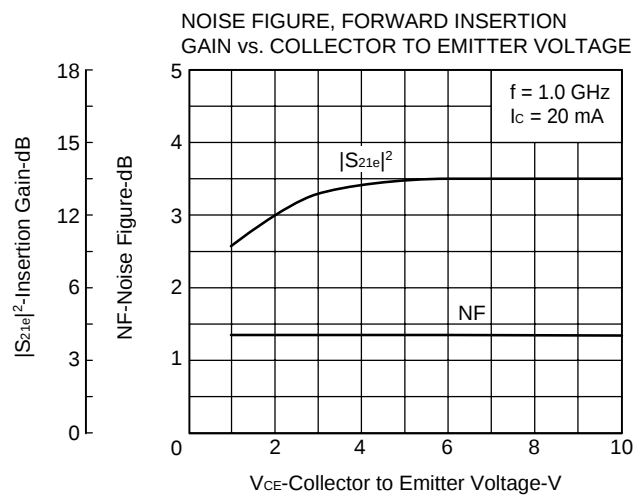
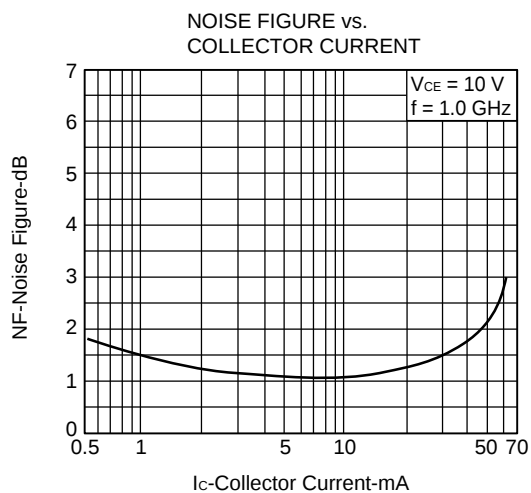


TYPICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$)

L2SC3356LT1G

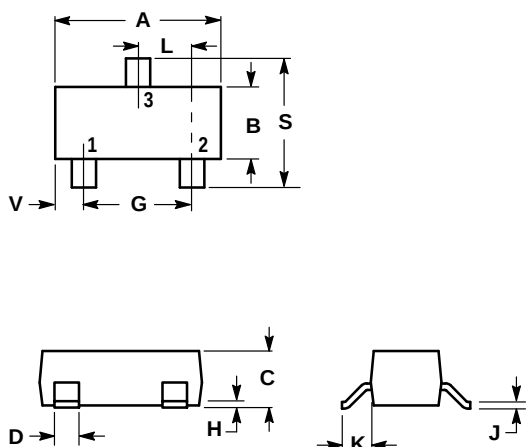


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SOT-23

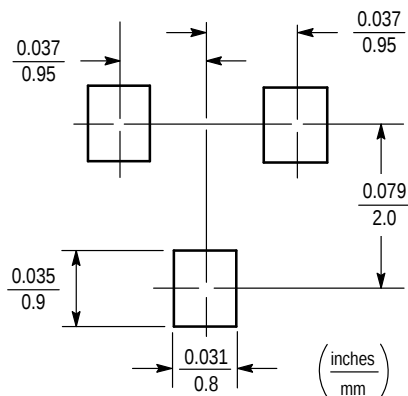


NOTES:

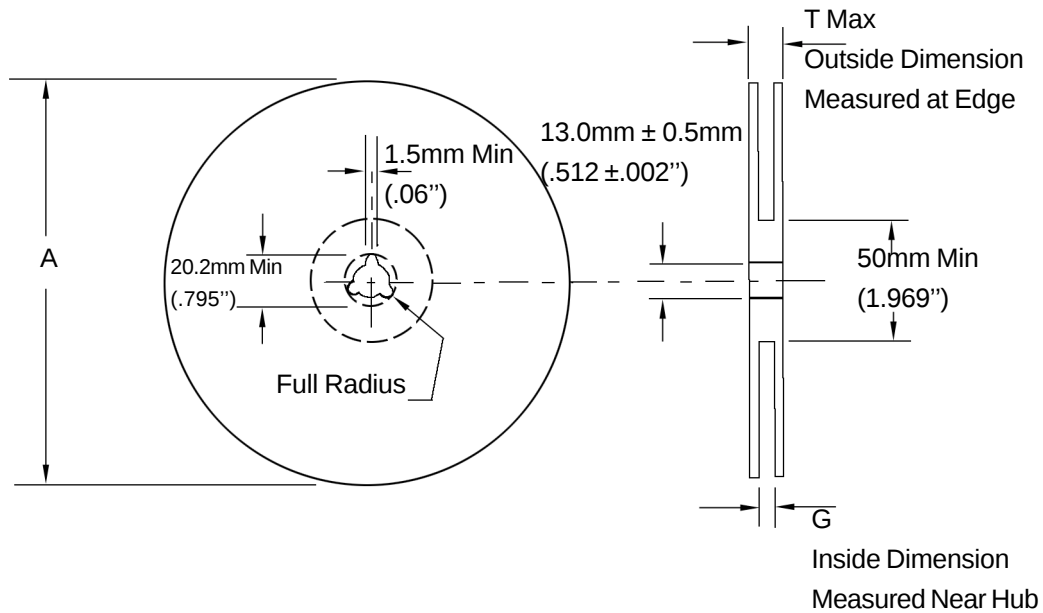
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.

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



EMBOSSED TAPE AND REEL DATA FOR DISCRETES



Size	A Max	G	T Max
8 mm	330mm (12.992")	8.4mm+1.5mm, -0.0 (.33"+.059", -0.00)	14.4mm (.56")

Reel Dimensions

Metric Dimensions Govern — English are in parentheses for reference only

Storage Conditions

Temperature: 5 to 40 Deg.C (20 to 30 Deg. C is preferred)

Humidity: 30 to 80 RH (40 to 60 is preferred)

Recommended Period: One year after manufacturing

(This recommended period is for the soldering condition only. The characteristics and reliabilities of the products are not restricted to this limitation)

Shipment Specification

