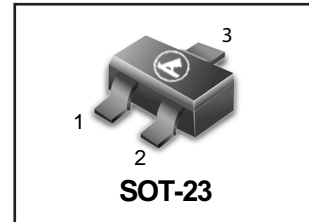


# High-Frequency Amplifier Transistor

**L2SC3356LT1**



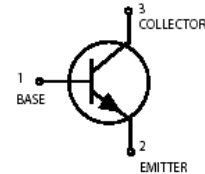
## DESCRIPTION

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.

## 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	$V_{CBO}$	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	$\mu A$	$V_{CB} = 10$ V, $I_E = 0$
Emitter Cutoff Current	$I_{EBO}$			1.0	$\mu A$	$V_{EB} = 1.0$ 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

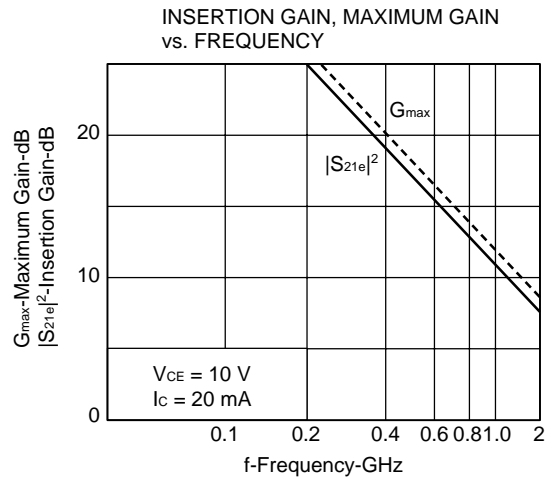
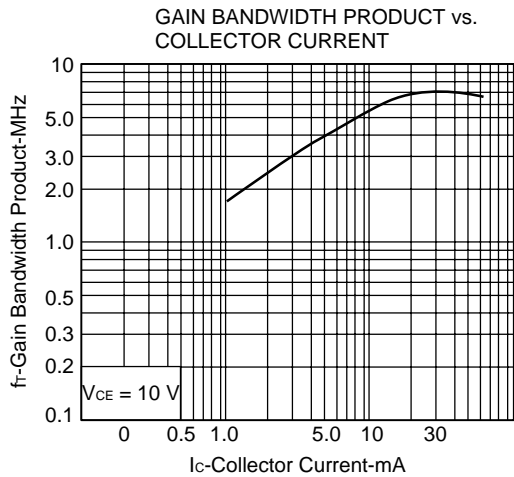
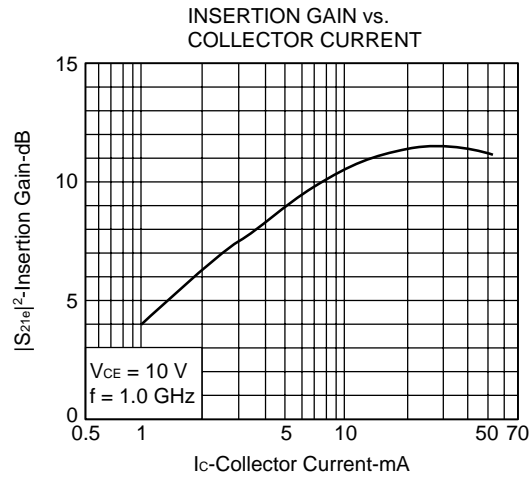
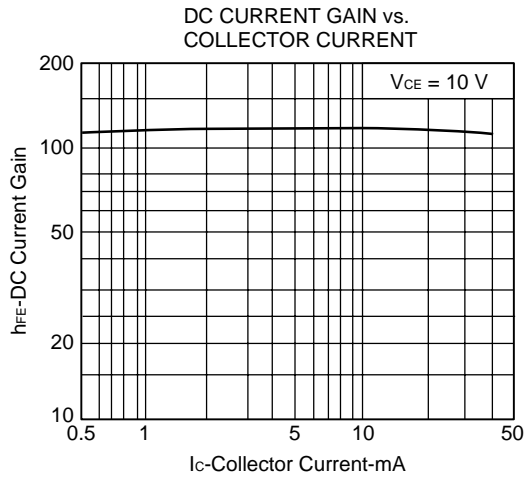
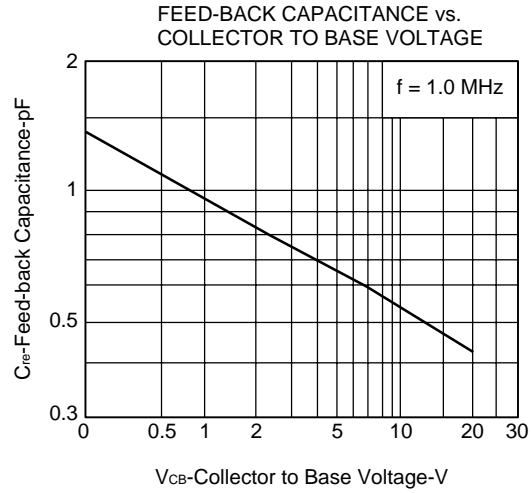
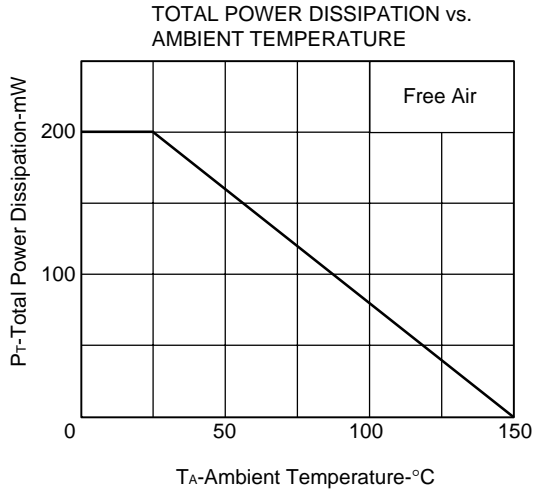
\* Pulse Measurement  $PW \leq 350$   $\mu s$ , Duty Cycle  $\leq 2$  %

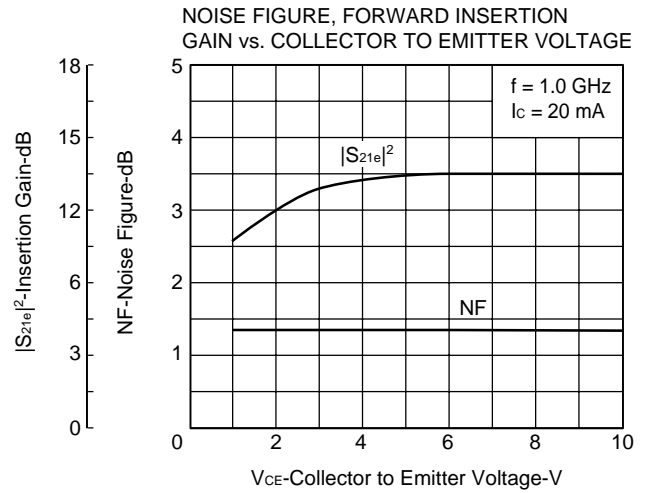
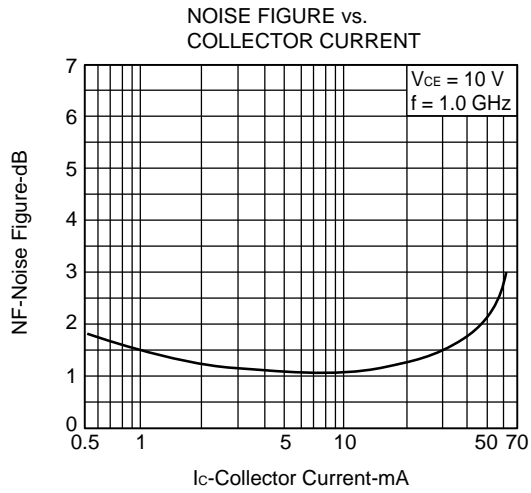
\*\* The emitter terminal and the case shall be connected to the guard terminal of the three-terminal capacitance bridge.

## Driver Marking

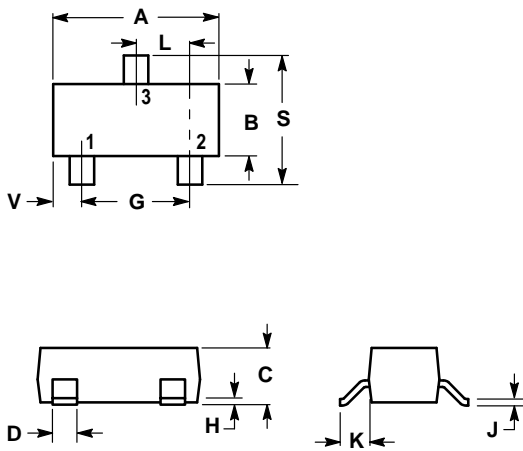
L2SC3356LT1=R24

TYPICAL CHARACTERISTICS (T<sub>A</sub> = 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

