

High-Frequency Amplifier Transistor

DESCRIPTION

The L2SC3356RWT1G 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
L2SC3356RWT1G S-L2SC3356RWT1G	24R	3000/Tape & Reel
L2SC3356RWT3G S-L2SC3356RWT3G	24R	13000/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}	9	V
Emitter to Base Voltage	V_{EBO}	3.0	V
Collector Current	I_c	100	mA
Total Power Dissipation	P_T	150	mW
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-65 to +150	°C

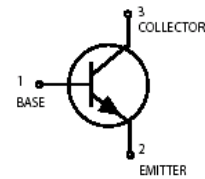
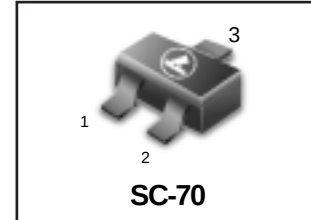
ELECTRICAL CHARACTERISTICS ($T_A = 25$ °C)

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}	75	170	290		$V_{CE} = 8$ V, $I_C = 25$ 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 $PW \leq 350$ μs , Duty Cycle ≤ 2 %

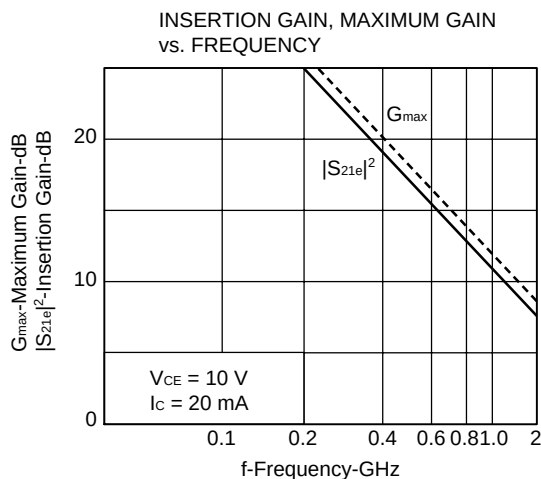
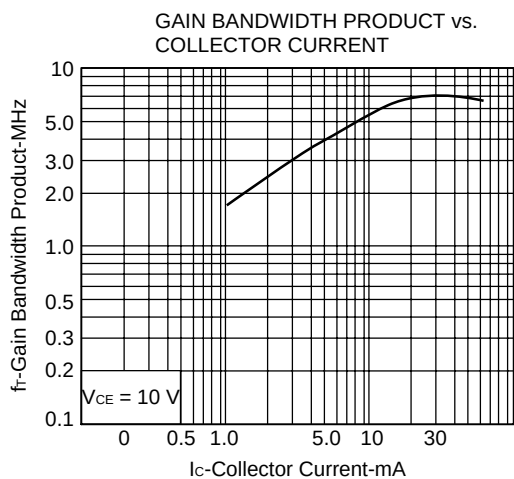
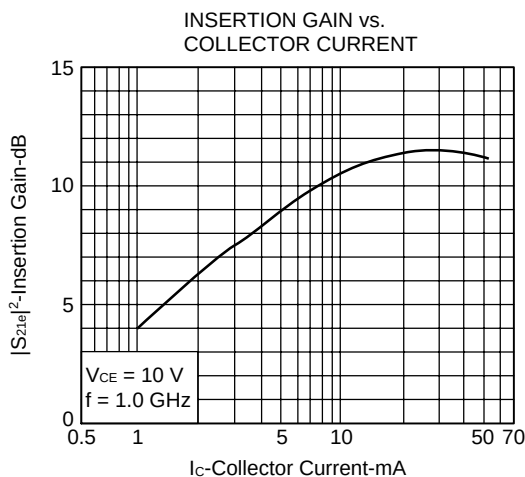
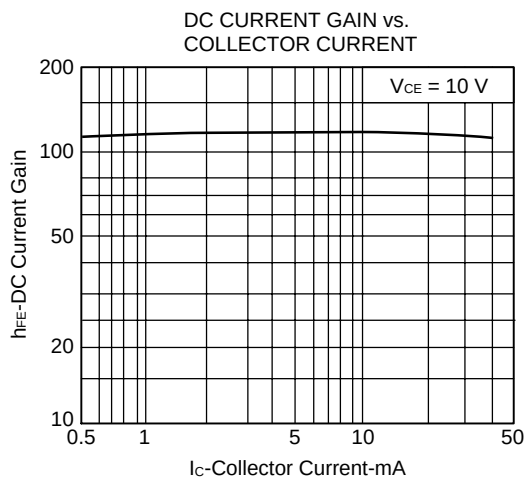
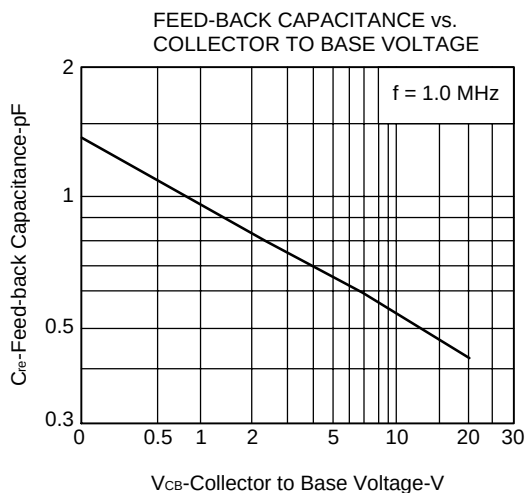
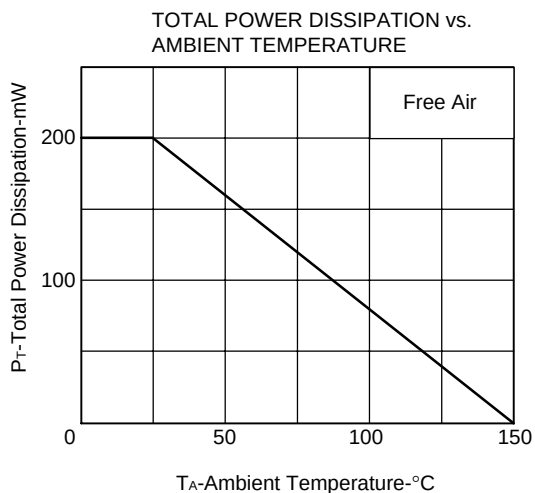
* The emitter terminal and the case shall be connected to the guard terminal of the three-terminal capacitance bridge.

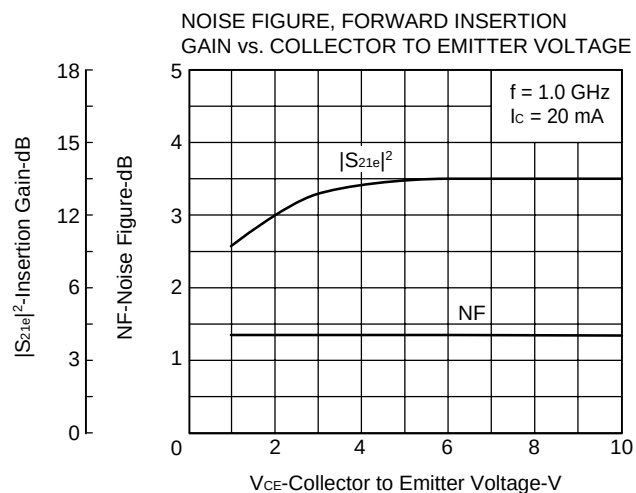
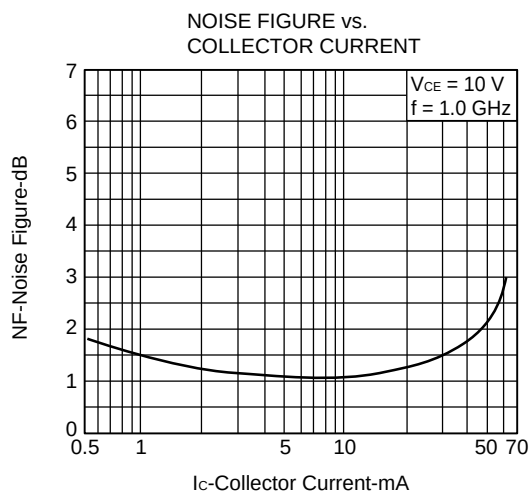
L2SC3356RWT1G
S-L2SC3356RWT1G



L2SC3356RWT1G;S-L2SC3356RWT1G

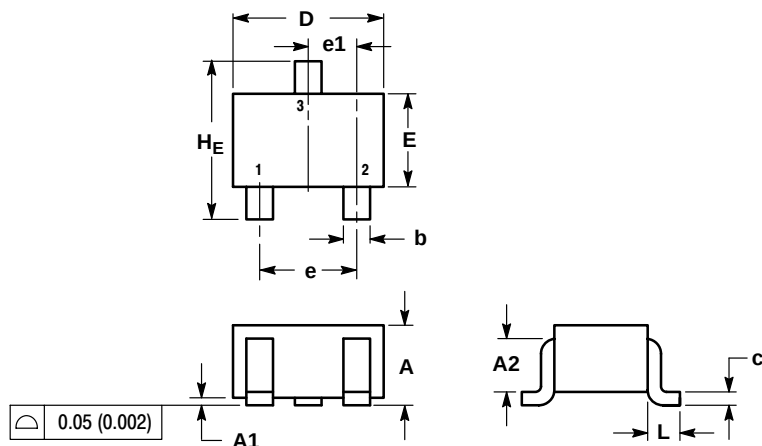
TYPICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$)



L2SC3356RWT1G;S-L2SC3356RWT1G


L2SC3356RWT1G;S-L2SC3356RWT1G

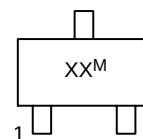
SC-70



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

DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.80	0.90	1.00	0.032	0.035	0.040
A1	0.00	0.05	0.10	0.000	0.002	0.004
A2	0.7 REF			0.028 REF		
b	0.30	0.35	0.40	0.012	0.014	0.016
c	0.10	0.18	0.25	0.004	0.007	0.010
D	1.80	2.10	2.20	0.071	0.083	0.087
E	1.15	1.24	1.35	0.045	0.049	0.053
e	1.20	1.30	1.40	0.047	0.051	0.055
e1	0.65 BSC			0.026 BSC		
L	0.425 REF			0.017 REF		
He	2.00	2.10	2.40	0.079	0.083	0.095

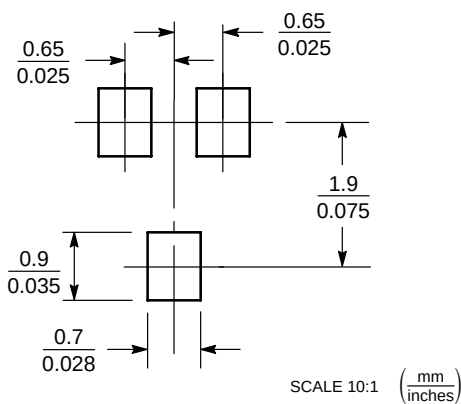
GENERIC MARKING DIAGRAM



- XX = Specific Device Code
M = Date Code
▪ = Pb-Free Package

*This information is generic. Please refer to device data sheet for actual part marking. Pb-Free indicator, "G" or microdot "▪", may or may not be present.

SOLDERING FOOTPRINT*



DISCLAIMER

- Curve guarantee in the specification. The curve of test items with electric parameter is used as quality guarantee. The curve of test items without electric parameter is used as reference only.
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