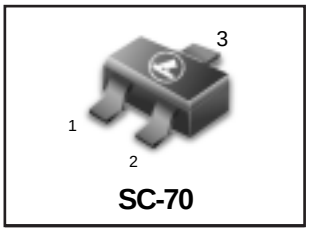
High-Frequency Amplifier Transistor

L2SC3356WT1G
S-L2SC3356WT1G



DESCRIPTION

The L2SC3356WT1is an NPN silicon epitaxial transistor designed for low noise amplifier at VHF, UHF and CATV band.

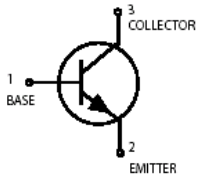
It has dynamic range and good current characteristic.
S- Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable.

ORDERING INFORMATION

Device	Marking	Shipping
L2SC3356WT1G S-L2SC3356WT1G	24	3000/Tape & Reel
L2SC3356WT3G S-L2SC3356WT3G	24	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	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}	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

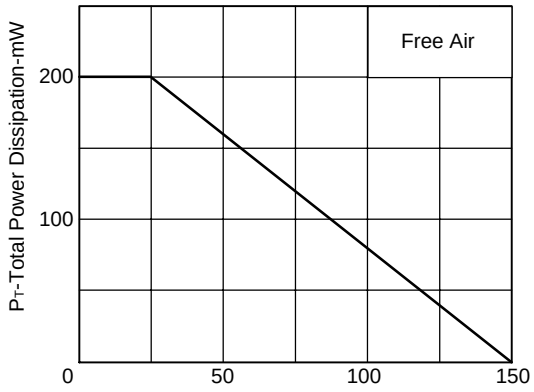
* Pulse Measurement PW ≤ 350 μs, Duty Cycle ≤ 2 %

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

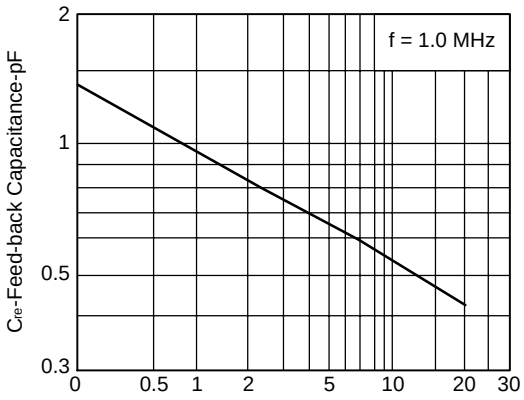
L2SC3356WT1G ;S-L2SC3356WT1G

TYPICAL CHARACTERISTICS (T_A = 25 °C)

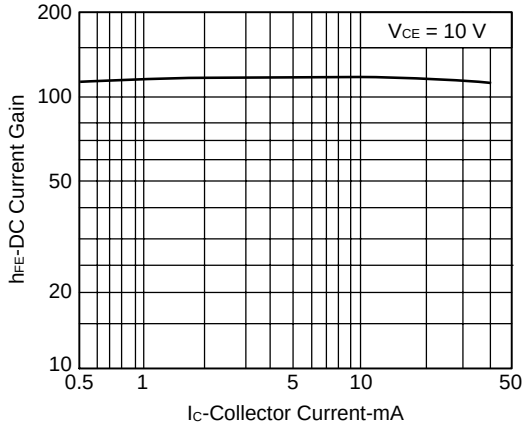
TOTAL POWER DISSIPATION vs.
AMBIENT TEMPERATURE



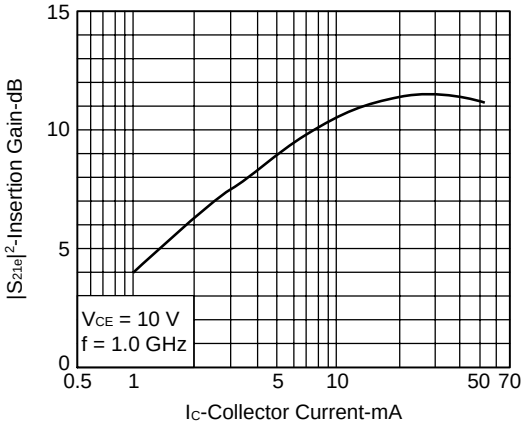
FEED-BACK CAPACITANCE vs.
COLLECTOR TO BASE VOLTAGE



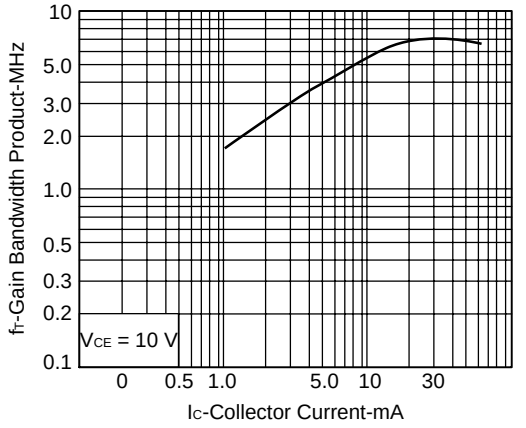
DC CURRENT GAIN vs.
COLLECTOR CURRENT



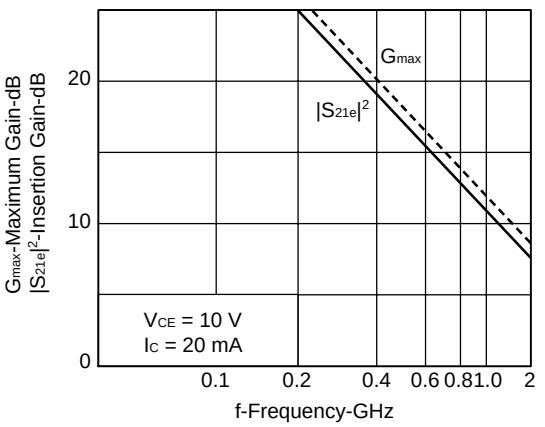
INSERTION GAIN vs.
COLLECTOR CURRENT



GAIN BANDWIDTH PRODUCT vs.
COLLECTOR CURRENT

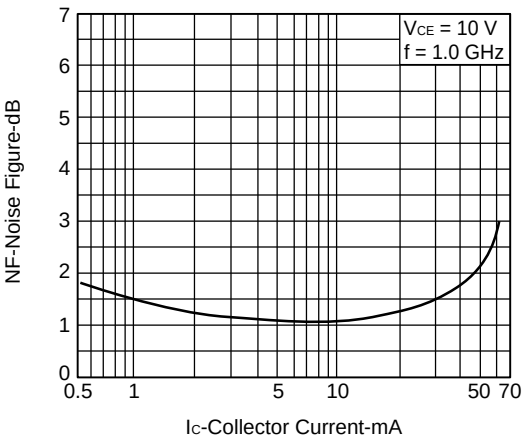


INSERTION GAIN, MAXIMUM GAIN
vs. FREQUENCY

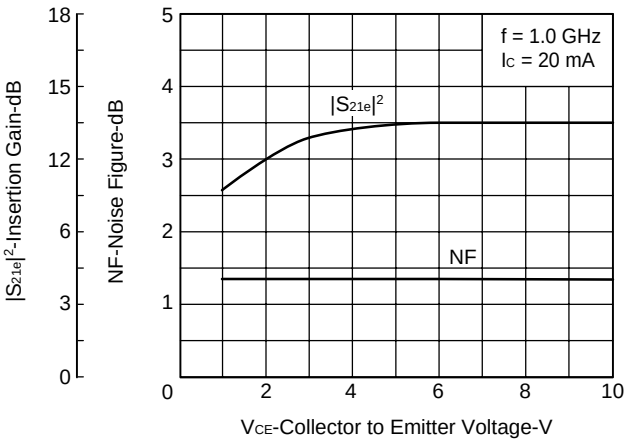


L2SC3356WT1G ;S-L2SC3356WT1G

NOISE FIGURE vs.
COLLECTOR CURRENT

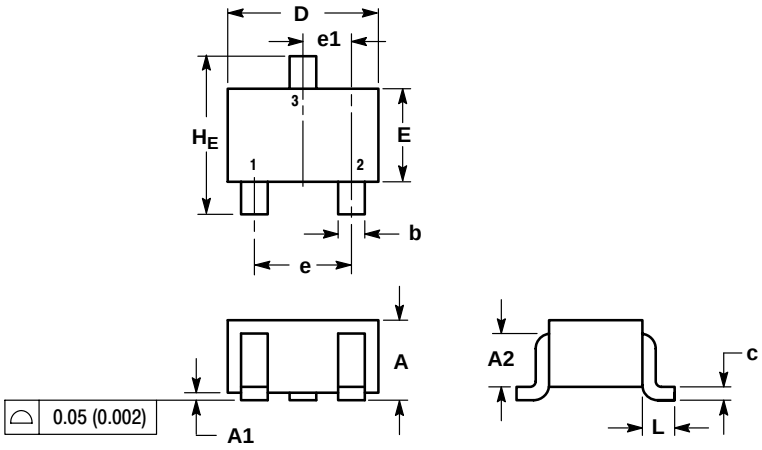


NOISE FIGURE, FORWARD INSERTION
GAIN vs. COLLECTOR TO EMITTER VOLTAGE



L2SC3356WT1G ;S-L2SC3356WT1G

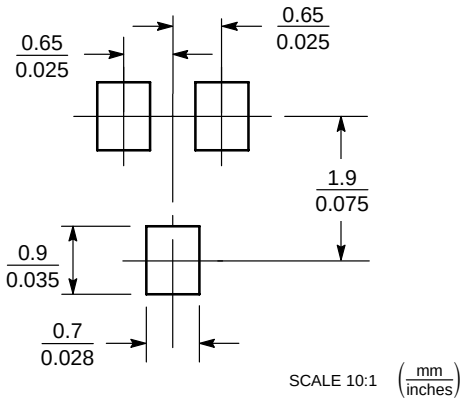
SC−70



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

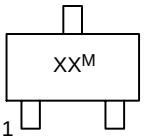
	MILLIMETERS			INCHES		
DIM	MIN	NOM	MAX	MIN	NOM	MAX
A	0.80	0.90	1.00	0.032	0.035	0.040
A1	0.00	0.05	0.10	0.000	0.002	0.004
A2		0.7 REF			0.028 REF	
b	0.30	0.35	0.40	0.012	0.014	0.016
c	0.10	0.18	0.25	0.004	0.007	0.010
D	1.80	2.10	2.20	0.071	0.083	0.087
E	1.15	1.24	1.35	0.045	0.049	0.053
e	1.20	1.30	1.40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

SOLDERING FOOTPRINT*



SCALE 10:1 $\left(\frac{mm}{inches}\right)$

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.

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Bipolar Transistors - BJT ***category:***

Click to view products by Leshan ***manufacturer:***

Other Similar products are found below :

619691C MCH4017-TL-H MMBT-2369-TR BC546/116 BC557/116 BSW67A NJVMJD148T4G NTE123AP-10 NTE153MCP NTE16 NTE195A NTE92 C4460 2N4401-A 2N6728 2SA1419T-TD-H 2SA2126-E 2SB1204S-TL-E 2SC2712S-GR,LF 2SC5488A-TL-H 2SD2150T100R SP000011176 2N2907A 2N3904-NS 2N5769 2SC2412KT146S 2SD1816S-TL-E CPH6501-TL-E MCH4021-TL-E MJE340 US6T6TR NJL0281DG 732314D CPH3121-TL-E CPH6021-TL-H 873787E IMZ2AT108 UMX21NTR MCH6102-TL-E NJL0302DG 2N3583 30A02MH-TL-E NSV40301MZ4T1G NTE13 NTE26 NTE282 NTE323 NTE350 NTE81 STX83003-AP