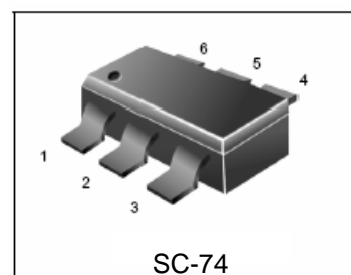


High-Frequency Amplifier Transistor

• Features

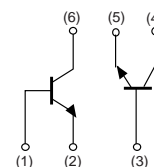
- 1.High transition frequency.(Typ. $f_T=1.5\text{GHz}$)
- 2.Small $r_{bb'}$ Cc and high gain.(Typ.6ps)
- 3.Small NF.
- 4.We declare that the material of product compliance with RoHS requirements.
- 5.S- Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable.

L2SC3837T1G
S-L2SC3837T1G



MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	30	V
Collector-Emitter Voltage	V_{CEO}	18	V
Emitter-base voltage	V_{EBO}	3	V
Collector Current	I_C	50	mA
Collector power dissipation	P_C	0.2	W
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{sig}	-55~+150	$^\circ\text{C}$



DEVICE MARKING

L2SC3837T1G;S-L2sc3837T1G=H15

• ORDERING INFORMATION

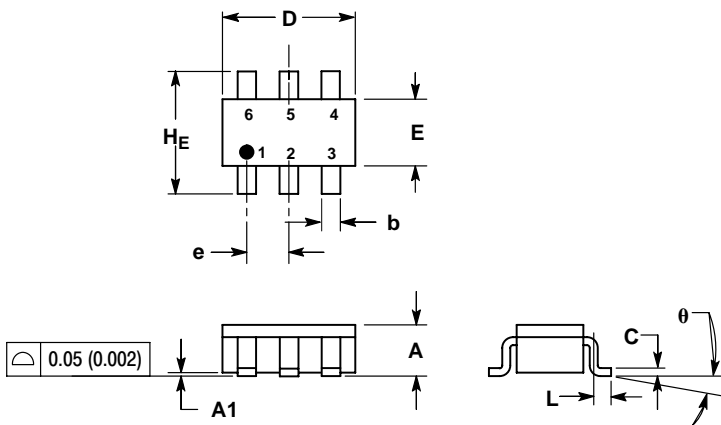
Device	Package	Shipping
L2SC3837T1G S-L2SC3837T1G	SC-74	3000/Tape & Reel
L2SC3837T3G S-L2SC3837T3G	SC-74	10000/Tape & Reel

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

Parameter	Symbol	Min.	Typ	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	30	-	-	V	$I_C=10\mu\text{A}$
Collector-emitter breakdown voltage	BV_{CEO}	18	-	-	V	$I_C=1\text{mA}$
Emitter-base breakdown voltage	BV_{EBO}	3	-	-	V	$I_E=10\mu\text{A}$
Collector cutoff current	I_{CBO}	-	-	0.5	μA	$V_{CB}=10\text{V}$
Emitter cutoff current	I_{EBO}	-	-	0.5	μA	$V_{EB}=2\text{V}$
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	-	0.5	V	$I_C/I_B=20\text{mA}/4\text{mA}$
DC current transfer ratio	h_{FE}	56	-	180	-	$V_{CE}/I_C=10\text{V}/10\text{mA}$
Transition frequency	f_T	600	1500	-	MHz	$V_{CB}=10\text{V}$, $I_C=10\text{mA}$, $f=200\text{MHz}$
Output capacitance	C_{ob}	-	0.9	1.5	pF	$V_{CB}=10\text{V}$, $I_E=0\text{A}$, $f=1\text{MHz}$
Collector-base time constant	$r_{bb'}$ Cc	-	6	13	ps	$V_{CB}=10\text{V}$, $I_C=10\text{mA}$, $f=31.8\text{MHz}$
Noise factor	NF	-	4.5	-	dB	$V_{CE}=12\text{V}$, $I_C=2\text{mA}$, $f=200\text{MHz}$, $R_g=50\Omega$

L2SC3837T1G ;S-L2SC3837T1G

SC-74



DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.90	1.00	1.10	0.035	0.039	0.043
A1	0.01	0.06	0.10	0.001	0.002	0.004
b	0.25	0.37	0.50	0.010	0.015	0.020
c	0.10	0.18	0.26	0.004	0.007	0.010
D	2.90	3.00	3.10	0.114	0.118	0.122
E	1.30	1.50	1.70	0.051	0.059	0.067
e	0.85	0.95	1.05	0.034	0.037	0.041
L	0.20	0.40	0.60	0.008	0.016	0.024
HE	2.50	2.75	3.00	0.099	0.108	0.118
θ	0°	-	10°	0°	-	10°

