

# High-Frequency Amplifier Transistor

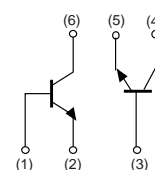
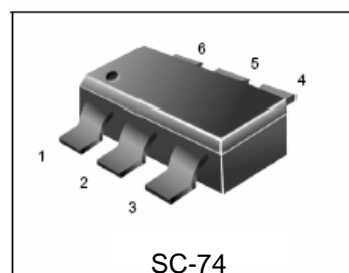
## L2SC3837T1G

### ● 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.

### 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=H15

### ● ORDERING INFORMATION

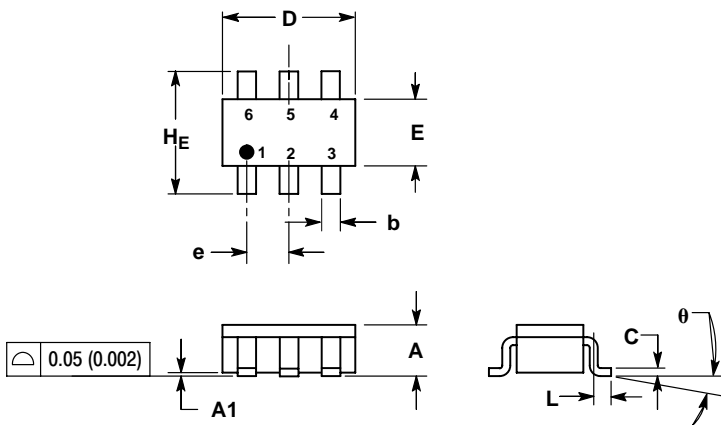
Device	Package	Shipping
L2SC3837T1G	SC-74	3000/Tape & Reel
L2SC3837T3G	SC-74	10000/Tape & Reel

### 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	$\mu\text{A}$	$V_{CB}=10\text{V}$
Emitter cutoff current	$I_{EBO}$	-	-	0.5	$\mu\text{A}$	$V_{EB}=2\text{V}$
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	Cob	-	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	$V_{CE}=12\text{V}, I_C=2\text{mA}, f=200\text{MHz}, R_g=50\Omega$

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## 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°

