

High-Frequency Amplifier Transistor

- We declare that the material of product compliance with RoHS requirements.
- 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
L2SC4083NT1G S-L2SC4083NT1G	N01	3000/Tape&Reel
L2SC4083NT3G S-L2SC4083NT3G	N01	10000/Tape&Reel
L2SC4083PT1G S-L2SC4083PT1G	H01	3000/Tape&Reel
L2SC4083PT3G S-L2SC4083PT3G	H01	10000/Tape&Reel
L2SC4083QT1G S-L2SC4083QT1G	P01	3000/Tape&Reel
L2SC4083QT3G S-L2SC4083QT3G	P01	10000/Tape&Reel

Absolute maximum ratings (Ta=25 °C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	20	V
Collector-emitter voltage	V_{CEO}	11	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	°C
Storage temperature	T_{stg}	- 55~+150	°C

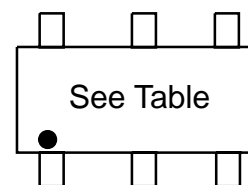
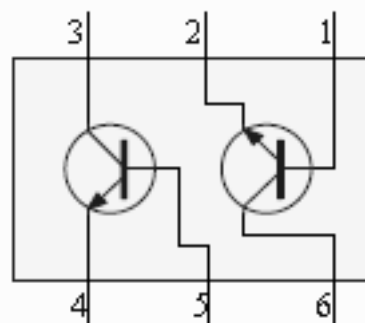
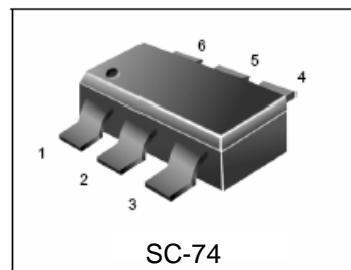
Electrical characteristics (Ta=25 °C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	20			V	$I_C = 10\mu A$
Collector-emitter breakdown voltage	BV_{CEO}	11			V	$I_C = 1mA$
Emitter-base breakdown voltage	BV_{EBO}	3			V	$I_E = 10\mu A$
Collector cutoff current	I_{CBO}			0.5	uA	$V_{CB} = 10V$
Emitter cutoff current	I_{EBO}			0.5	uA	$V_{EB} = 2V$
Collector-emitter saturation voltage	$V_{CE(sat)}$			0.5	V	$I_C/I_B = 10mA/5mA$
DC current transfer ratio	h_{FE}	56		270		$V_{CE}/I_C = 10V/5mA$
Transition frequency	f_T	1.4	3.2		GHz	$V_{CB} = 10V, I_C = 10mA, f = 500MHz$
Output capacitance	C_{ob}		0.8	1.5	pF	$V_{CB} = 10V, I_E = 0A, f = 1MHz$
Collector-base time constant	$rb_b \cdot C_c$		4	12	ps	$V_{CB} = 10V, I_C = 10mA, f = 31.8MHz$
Noise factor	NF		3.5		dB	$V_{CE} = 6V, I_C = 2mA, f = 500MHz, R_g = 50\Omega$

CLASSIFICATION OF h_{FE}

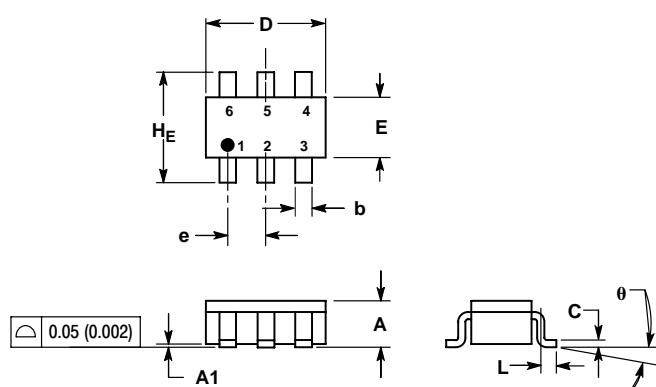
Rank	N	P	Q
Range	56-120	82-180	120-270

L2SC4083NT1G
Series
S-L2SC4083NT1G
Series



L2SC4083NT1G Series S-L2SC4083NT1G Series

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°

