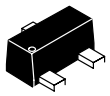
General Purpose Transistors

PNP Silicon

L2SA1774QT1G Series
S-L2SA1774QT1G Series

- 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.



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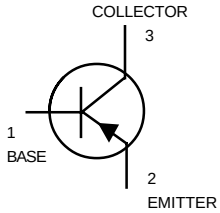

● DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
L2SA1774QT1G S-L2SA1774QT1G	FQ	3000/Tape&Reel
L2SA1774QT3G S-L2SA1774QT3G	FQ	10000/Tape&Reel
L2SA1774RT1G S-L2SA1774RT1G	FR	3000/Tape&Reel
L2SA1774RT3G S-L2SA1774RT3G	FR	10000/Tape&Reel
L2SA1774ST1G S-L2SA1774ST1G	FS	3000/Tape&Reel
L2SA1774ST3G S-L2SA1774ST3G	FS	10000/Tape&Reel

●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	–60	V
Collector-emitter voltage	V_{CEO}	–50	V
Emitter-base voltage	V_{EBO}	–6	V
Collector current	I_C	–0.15	A (DC)
Collector power dissipation	P_C	0.15	W
Junction temperature	Tj	150	˚C
Storage temperature	Tstg	–55~+150	˚C

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	–60	–	–	V	I_C=–50μA
Collector-emitter breakdown voltage	BV_{CEO}	–50	–	–	V	I_C=–1μA
Emitter-base breakdown voltage	BV_{EBO}	–6	–	–	V	I_E=–50μA
Collector cutoff current	I_{CBO}	–	–	–0.1	μA	V_{CB}=–60V
Emitter cutoff current	I_{EBO}	–	–	–0.1	μA	V_{EB}=–6V
Collector-emitter saturation voltage	$V_{CE(sat)}$	–	–	–0.5	V	I_C/I_B=–50mA/–5mA
DC current transfer ratio	h_{FE}	120	–	560	–	V_{CE}=–6V, I_C=–1mA
Transition frequency	f_T	–	140	–	MHz	V_{CE}=–12V, I_E=2mA, f=30MHz
Output capacitance	Cob	–	4.0	5.0	pF	V_{CB}=–12V, I_E=0A, f=1MHz

● h_{FE} values are classified as follows:

Item	Q	R	S
h_{FE}	120~270	180~390	270~560

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Series

●Electrical characteristic curves

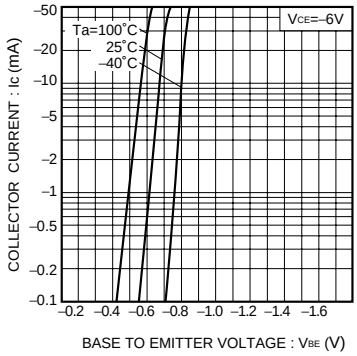

Fig.1 Grounded emitter propagation characteristics

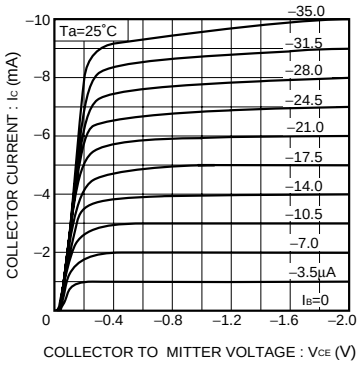

Fig.2 Grounded emitter output characteristics (I)

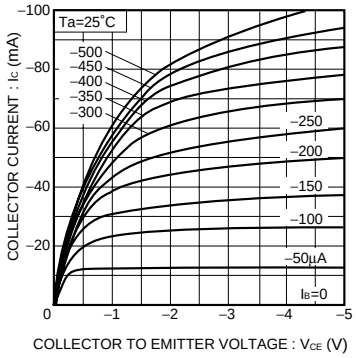

Fig.3 Grounded emitter output characteristics (II)

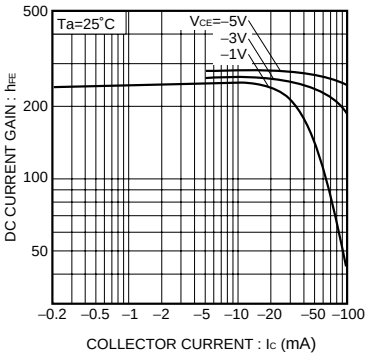

Fig.4 DC current gain vs. collector current (I)

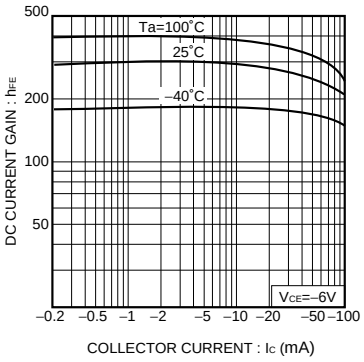

Fig.5 DC current gain vs. collector current (II)

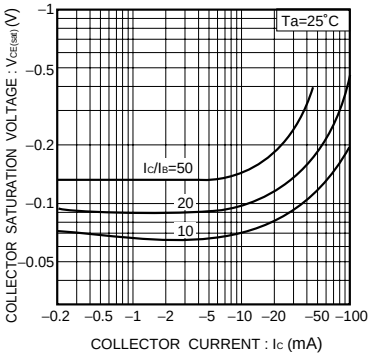

Fig.6 Collector-emitter saturation voltage vs. collector current (I)

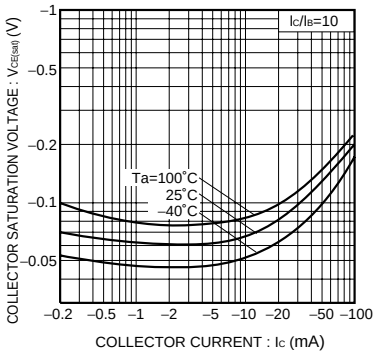

Fig.7 Collector-emitter saturation voltage vs. collector current (II)

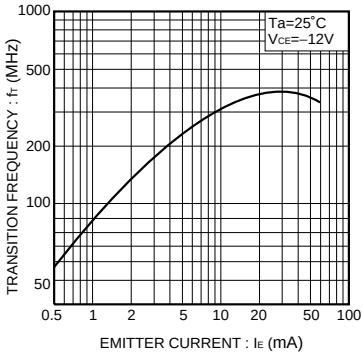

Fig.8 Gain bandwidth product vs. emitter current

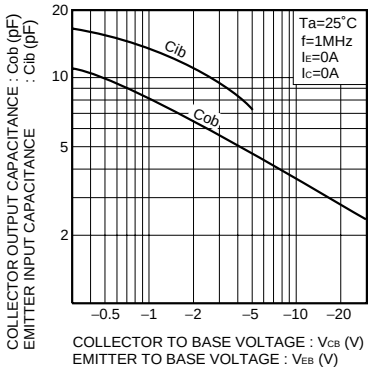

Fig.9 Collector output capacitance vs. collector-base voltage
Emitter inputcapacitance vs. emitter-base voltage

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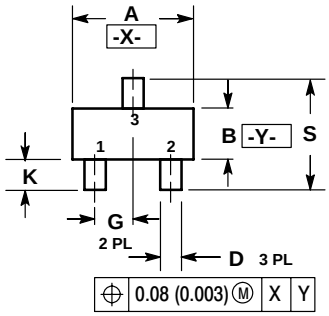
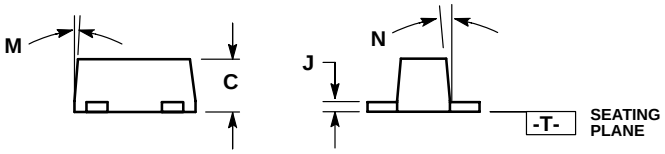
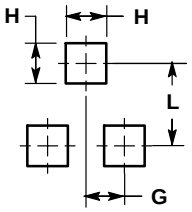




NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. 463C-01 OBSOLETE, NEW STANDARD 463C-02.

	MILLIMETERS			INCHES		
DIM	MIN	NOM	MAX	MIN	NOM	MAX
A	1.50	1.60	1.70	0.059	0.063	0.067
B	0.75	0.85	0.95	0.030	0.034	0.040
C	0.60	0.70	0.80	0.024	0.028	0.031
D	0.23	0.28	0.33	0.009	0.011	0.013
G		0.50 BSC			0.020 BSC	
H		0.53 REF			0.021 REF	
J	0.10	0.15	0.20	0.004	0.006	0.008
K	0.30	0.40	0.50	0.012	0.016	0.020
L		1.10 REF			0.043 REF	
M	---	---	10 °	---	---	10 °
N	---	---	10 °	---	---	10 °
S	1.50	1.60	1.70	0.059	0.063	0.067



RECOMMENDED PATTERN OF SOLDER PADS