

General Purpose Transistors

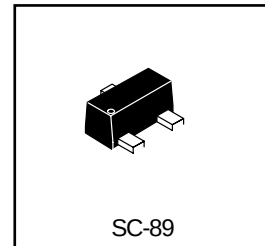
NPN Silicon

- 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

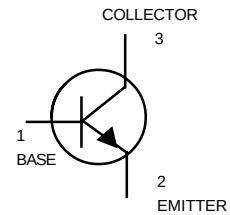
Device	Marking	Shipping
L2SC4617QT1G S-L2SC4617QT1G	BQ	3000 Tape & Reel
L2SC4617QT3G S-L2SC4617QT3G	BQ	10000 Tape & Reel
L2SC4617RT1G S-L2SC4617RT1G	BR	3000 Tape & Reel
L2SC4617RT3G S-L2SC4617RT3G	BR	10000 Tape & Reel
L2SC4617ST1G S-L2SC4617ST1G	BS	3000 Tape & Reel
L2SC4617ST3G S-L2SC4617ST3G	BS	10000 Tape & Reel

L2SC4617QT1G
Series
S-L2SC4617QT1G
Series



●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V _{CB0}	60	V
Collector-emitter voltage	V _{CE0}	50	V
Emitter-base voltage	V _{EB0}	7	V
Collector current	I _c	0.15	A
Collector power dissipation	P _c	0.15	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 _{CB0}	60	—	—	V	I _c =50μA
Collector-emitter breakdown voltage	BV _{CE0}	50	—	—	V	I _c =1mA
Emitter-base breakdown voltage	BV _{EB0}	7	—	—	V	I _E =50μA
Collector cutoff current	I _{CB0}	—	—	0.1	μA	V _{CB} =60V
Emitter cutoff current	I _{EB0}	—	—	0.1	μA	V _{EB} =7V
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	—	180	—	MHz	V _{CE} =12V, I _E =2mA, f=30MHz
Output capacitance	C _{ob}	—	2.0	3.5	pF	V _{CB} =12V, I _E =0A, f=1MHz

●Device marking

(S-)L2SC4617QT1G=BQ (S-)L2SC4617RT1G=BR (S-)L2SC4617ST1G=BS

●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

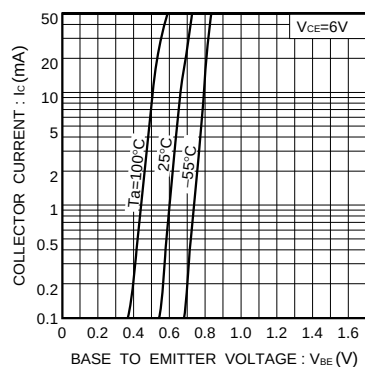


Fig.1 Grounded emitter propagation characteristics

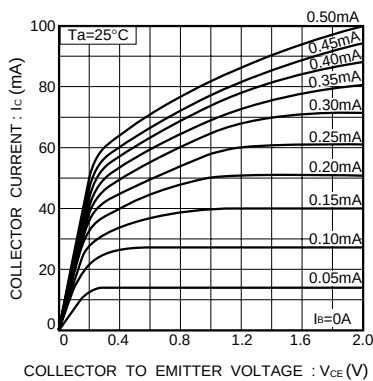


Fig.2 Grounded emitter output characteristics (I)

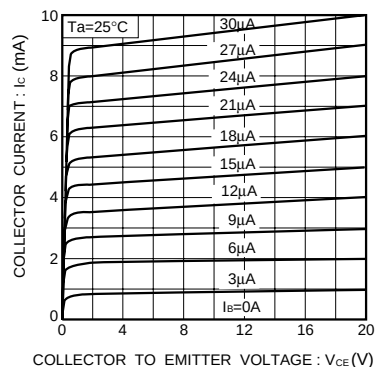


Fig.3 Grounded emitter output characteristics (II)

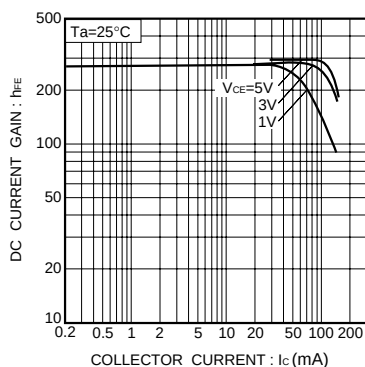


Fig.4 DC current gain vs. collector current (I)

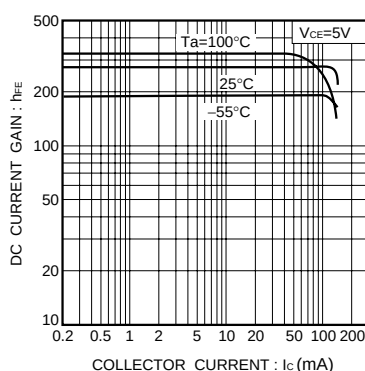


Fig.5 DC current gain vs. collector current (II)

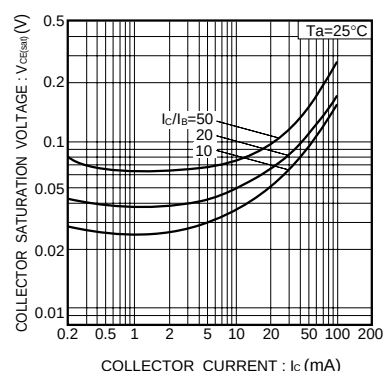


Fig.6 Collector-emitter saturation voltage vs. collector current

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Series

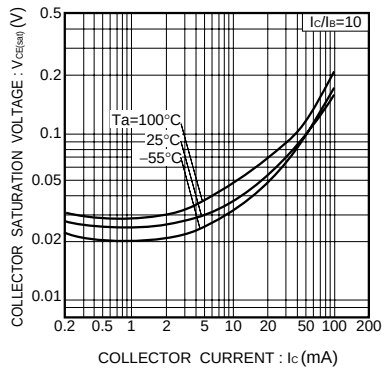


Fig.7 Collector-emitter saturation voltage vs. collector current (I)

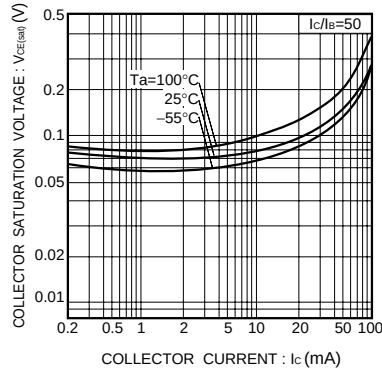


Fig.8 Collector-emitter saturation voltage vs. collector current (II)

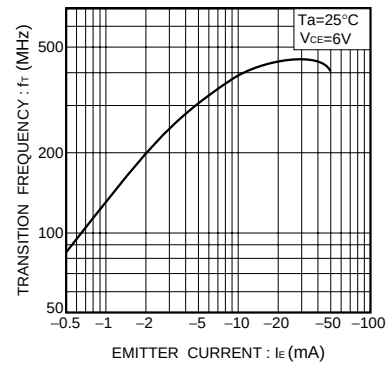


Fig.9 Gain bandwidth product vs. emitter current

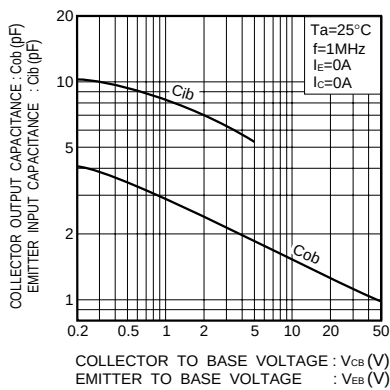


Fig.10 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage

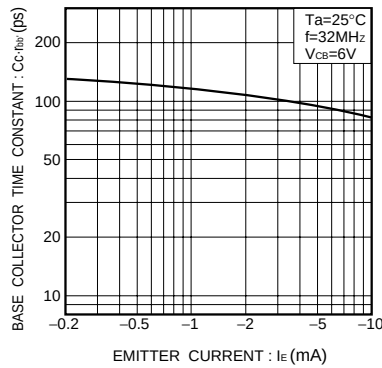
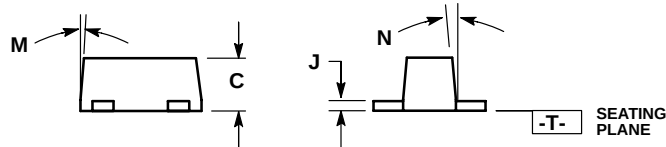
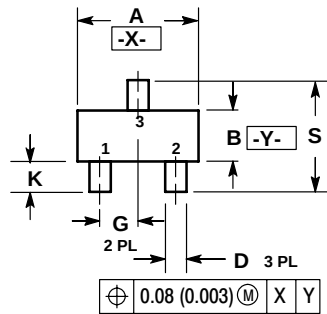


Fig.11 Base-collector time constant vs. emitter current

L2SC4617QT1G
 Series
S-L2SC4617QT1G
 Series

SC-89



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.

DIM	MILLIMETERS			INCHES		
	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

