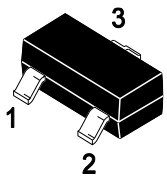
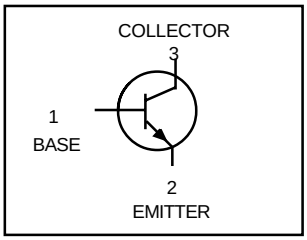
S-LH8050QLT1G

General Purpose Transistors NPN Silicon



SOT23



1. FEATURES

- We declare that the material of product compliance with RoHS requirements and Halogen Free.
- S- prefix for automotive and other applications requiring unique site and control change requirements; AEC-Q101 qualified and PPAP capable.
- High current capacity in compact package. IC =1.5A.
- Epitaxial planar type.
- Pb-Free Package is available.

2. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
S-LH8050QLT1G	KEY	3000/Tape&Reel
S-LH8050QLT3G	KEY	13000/Tape&Reel

3. MAXIMUM RATINGS(Ta = 25ºC)

Parameter	Symbol	Limits	Unit
Collector-Emitter Voltage	VCEO	50	V
Collector-Base voltage	VCBO	50	V
Emitter-Base Voltage	VEBO	6	V
Collector current	IC	1500	mA

4. THERMAL CHARACTERISTICS

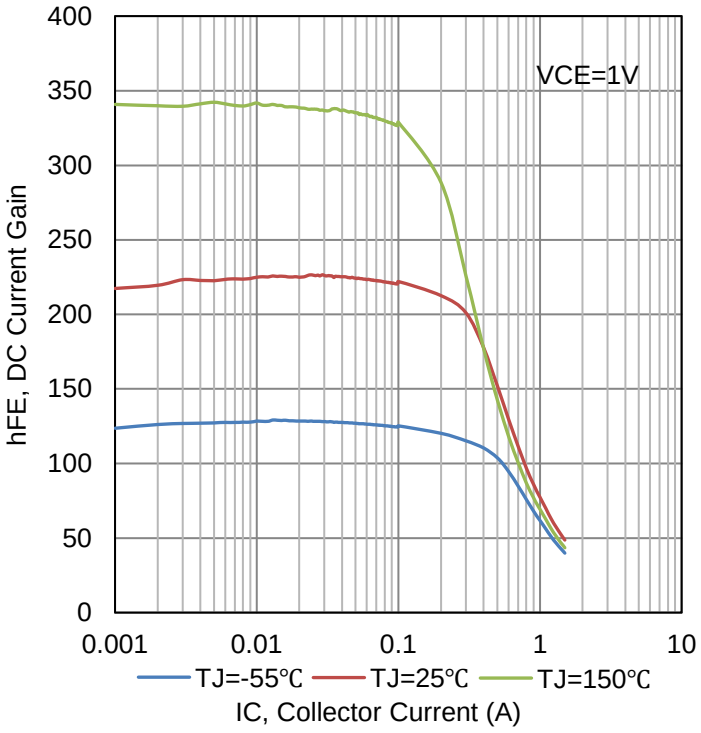
Parameter	Symbol	Limits	Unit
Total Device Dissipation FR-5 Board(Note 1) TA =25°C Derate above 25°C	PD	 225 1.8	 mW mW/°C
Thermal Resistance,Junction to Ambient	RθJA	556	°C/W
Thermal Resistance,Junction to Case	RθJC	300	
Junction and Storage temperature	TJ,Tstg	−55~+150	℃

1. FR–5 = 1.0 x 0.75 x 0.062 in.

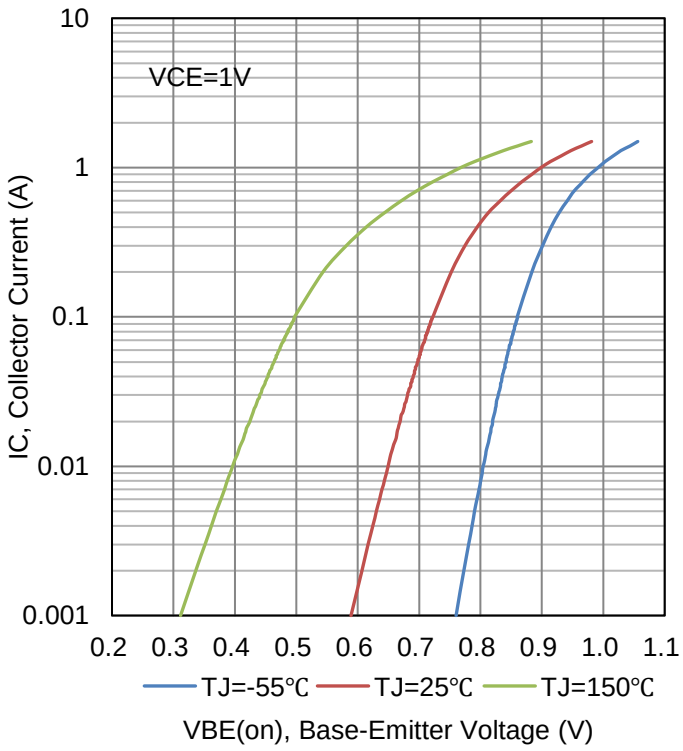
5. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Collector-Emitter Breakdown Voltage (IC =2.0mA,IB =0)	V(BR)CEO	50	-	-	V
Emitter-Base Breakdown Voltage (IE = 100μA,IC=0)	V(BR)EBO	6	-	-	V
Collector-Base Breakdown voltage (IC = 100μA,IE=0)	V(BR)CBO	50	-	-	V
Collector Cutoff Current (VCB = 35 V,IE=0)	ICBO	-	-	100	nA
Emitter Cutoff Current (VEB = 6V,IC=0)	IEBO	-	-	100	nA
Base-Emitter Voltage (VCE =1V,IC =10mA)	VBE	-	0.66	1	V
DC Current Gain (IC =100mA, VCE =1V) (IC=800mA, VCE =1V)	hFE	 160 40	 - -	 320 -	
Collector-Emitter Saturation Voltage (IC =800mA, IB =80mA)	VCE(S)	-	-	0.5	V
Base-Emitter Saturation Voltage (IC =800mA, IB =80mA)	VBE(S)	-	-	1.2	V

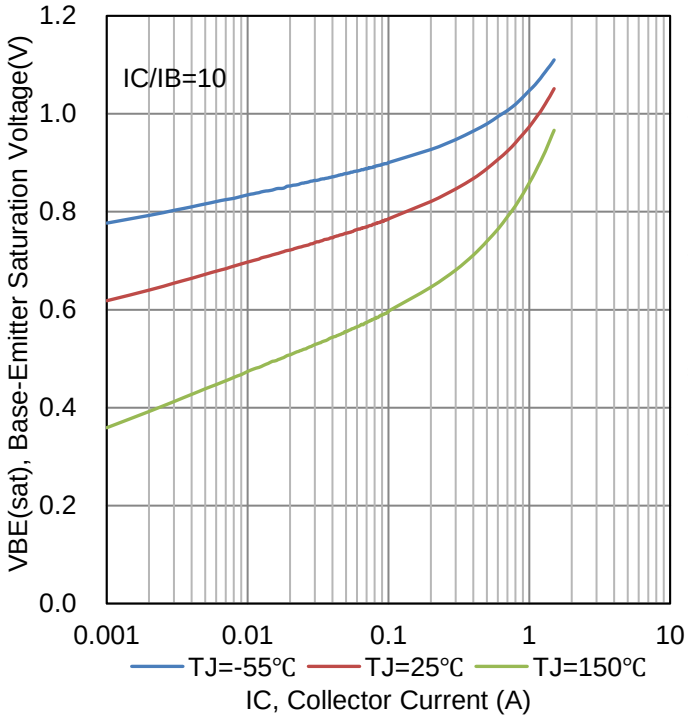
6. ELECTRICAL CHARACTERISTICS CURVES



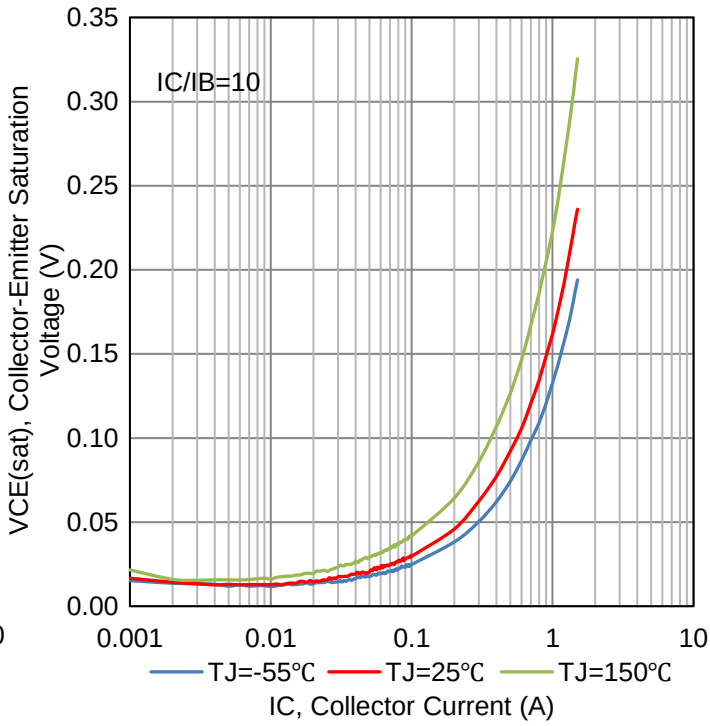
hFE vs. IC



VBE(on) vs. IC

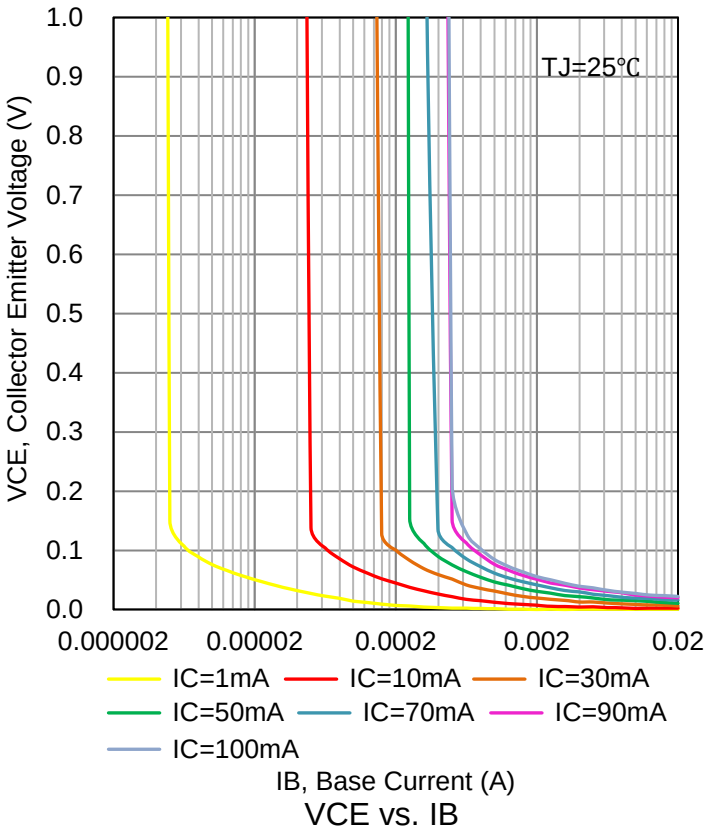


VBE(sat) vs. IC

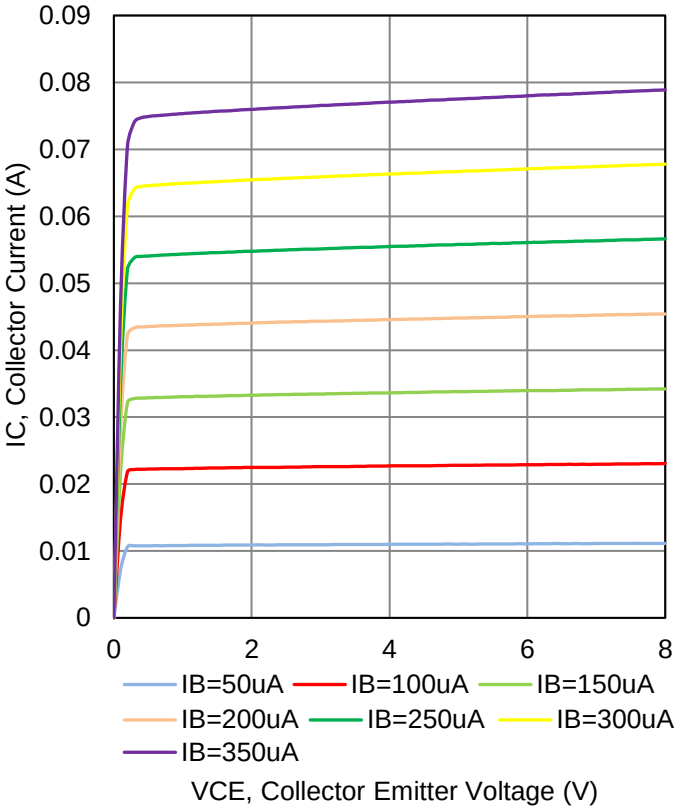


VCE(sat) vs. IC

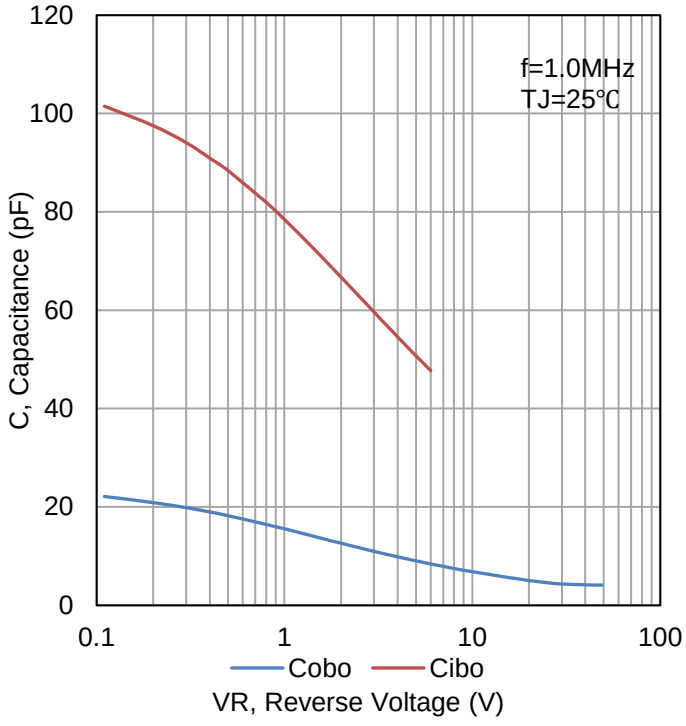
6. ELECTRICAL CHARACTERISTICS CURVES(Con.)



VCE vs. IB

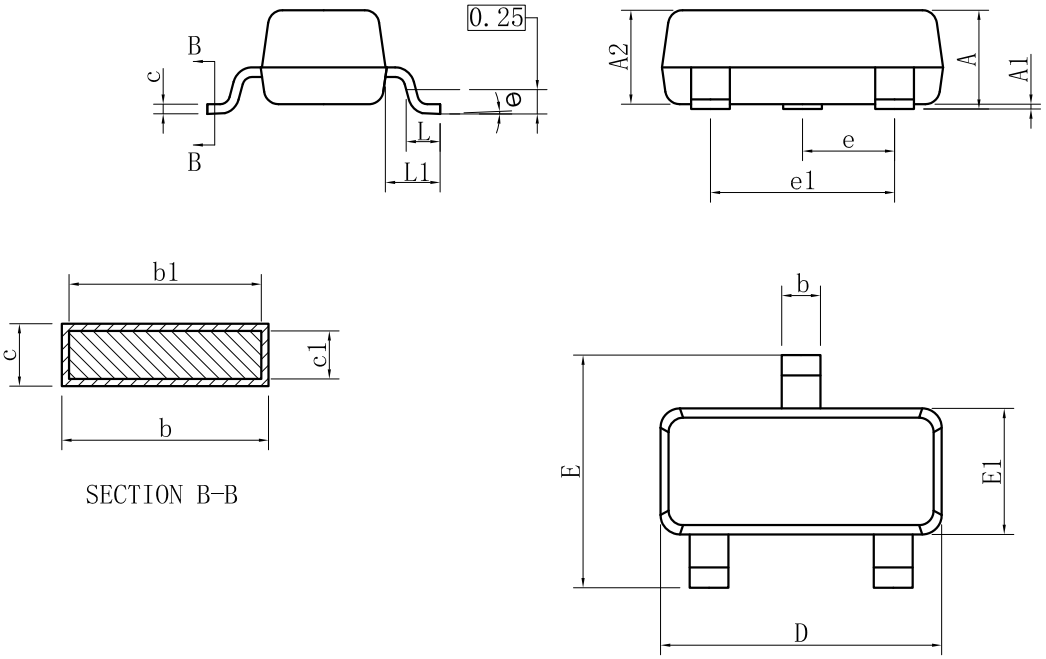


IC vs. VCE



Capacitance

7.OUTLINE AND DIMENSIONS

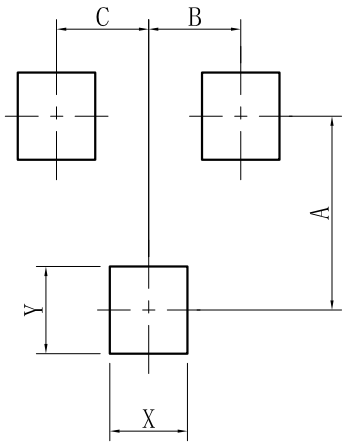


SOT23			
DIM	MIN	NOR	MAX
A	0.89	-	1.12
A1	0.01	-	0.10
A2	0.88	0.95	1.02
b	0.30	-	0.50
b1	0.30	0.40	0.45
c	0.08	-	0.20
c1	0.08	0.10	0.16
D	2.80	2.90	3.04
E	2.10	-	2.64
E1	1.20	1.30	1.40
e	0.95BSC		
e1	1.90BSC		
L	0.40	0.46	0.60
L1	0.54REF		
θ	0°	-	8°
All Dimensions in mm			

GENERAL NOTES

1. Top package surface finish Ra0.4±0.2um
2. Bottom package surface finish Ra0.7±0.2um
3. Side package surface finish Ra0.4±0.2um

8.SOLDERING FOOTPRINT



SOT-23	
DIM	(mm)
X	0.80
Y	0.90
A	2.00
B	0.95
C	0.95

DISCLAIMER

- Curve guarantee in the specification. The curve of test items with electric parameter is used as quality guarantee. The curve of test items without electric parameter is used as reference only.

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