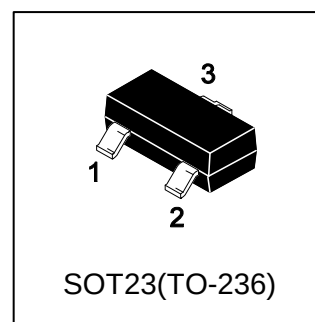


S-LBC817-16LT1G

General Purpose Transistors NPN Silicon

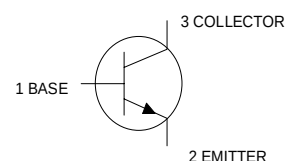
1. FEATURES

- 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.



2. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
S-LBC817-16LT1G	6A	3000/Tape&Reel
S-LBC817-16LT3G	6A	13000/Tape&Reel



3. MAXIMUM RATINGS(Ta = 25°C)

Parameter	Symbol	Limits	Unit
Collector–Emitter Voltage	VCEO	45	V
Collector–Base Voltage	VCBO	50	V
Emitter–Base Voltage	VEBO	5	V
Collector Current — Continuous	IC	500	mA
Junction temperature	Tj	–55 ~ +150	°C
Storage temperature	Tstg	–55 ~ +150	°C

4. THERMAL CHARACTERISTICS

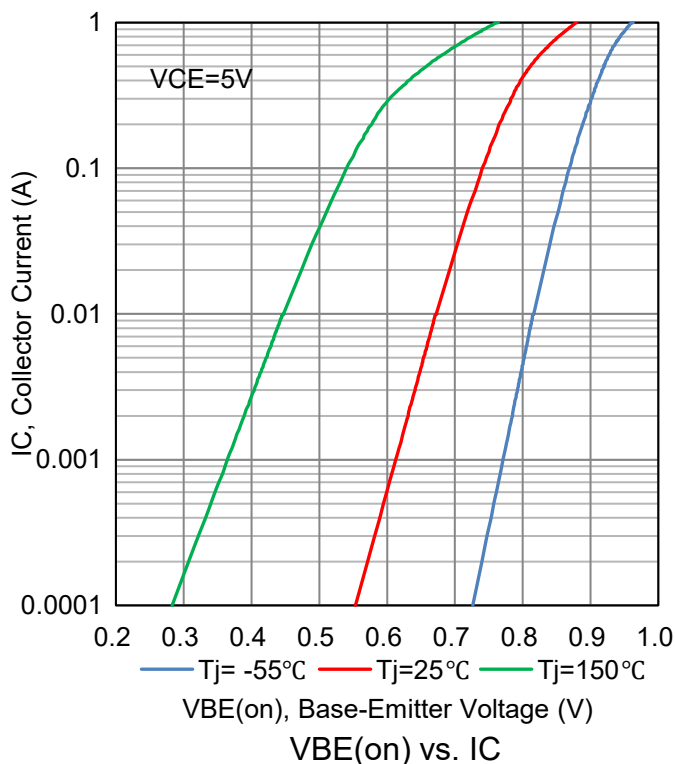
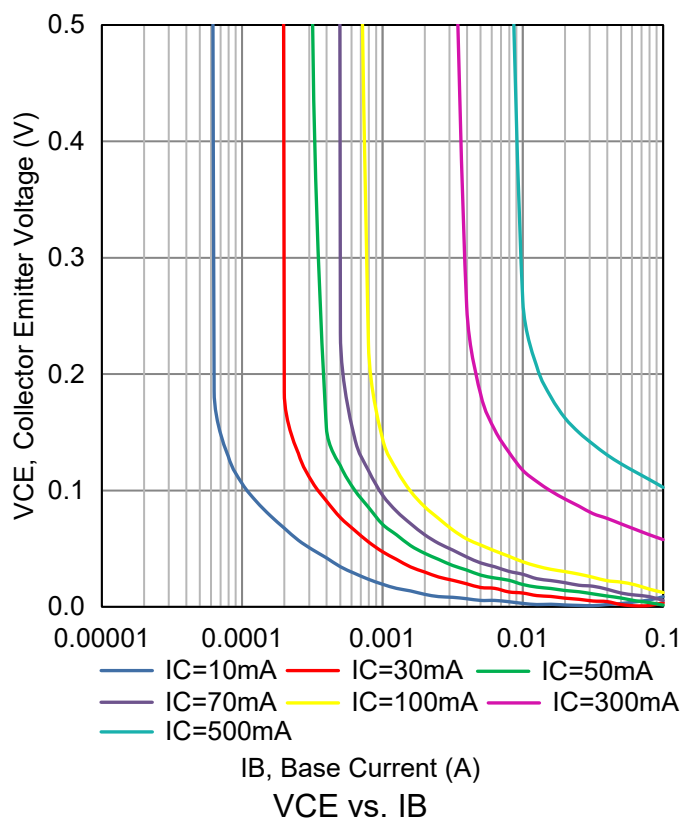
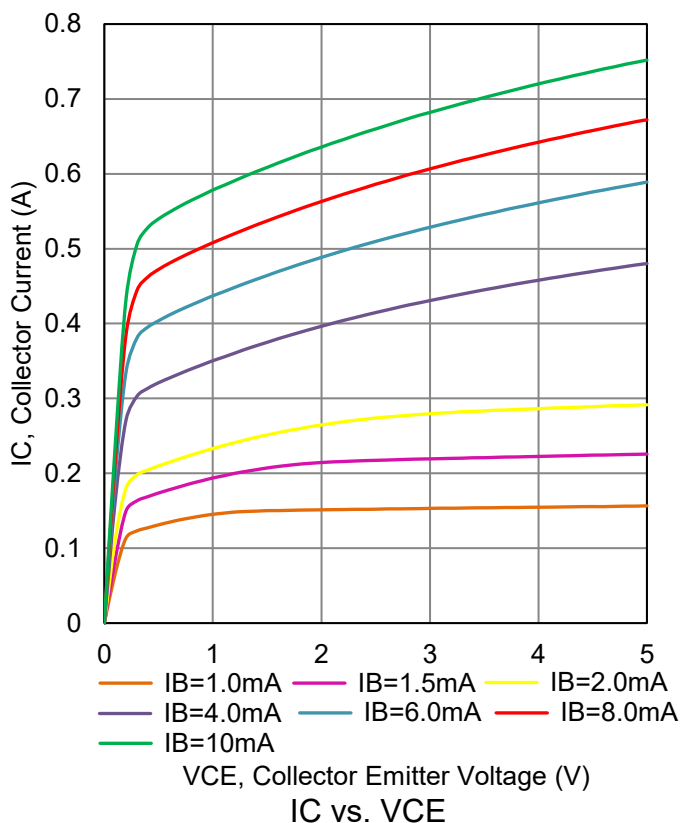
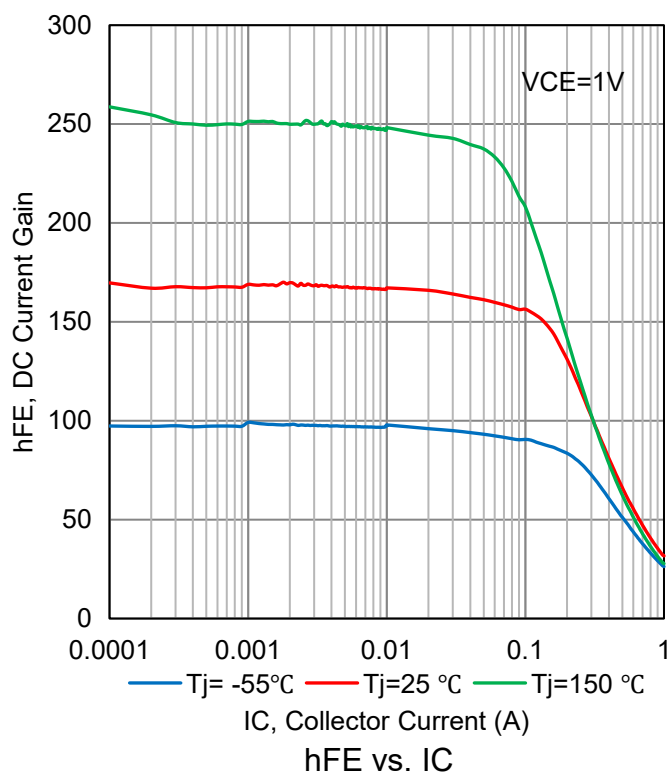
Parameter	Symbol	Limits	Unit
Total Device Dissipation, (Note 1) @ TA = 25°C	PD	325	mW
Derate above 25°C		2.6	mW/°C
Thermal Resistance, Junction–to–Ambient(Note 1)	RθJA	385	°C/W

1. 30.0mm×25.0mm×1.6mm(FR4), Copper foil thickness 35μm;

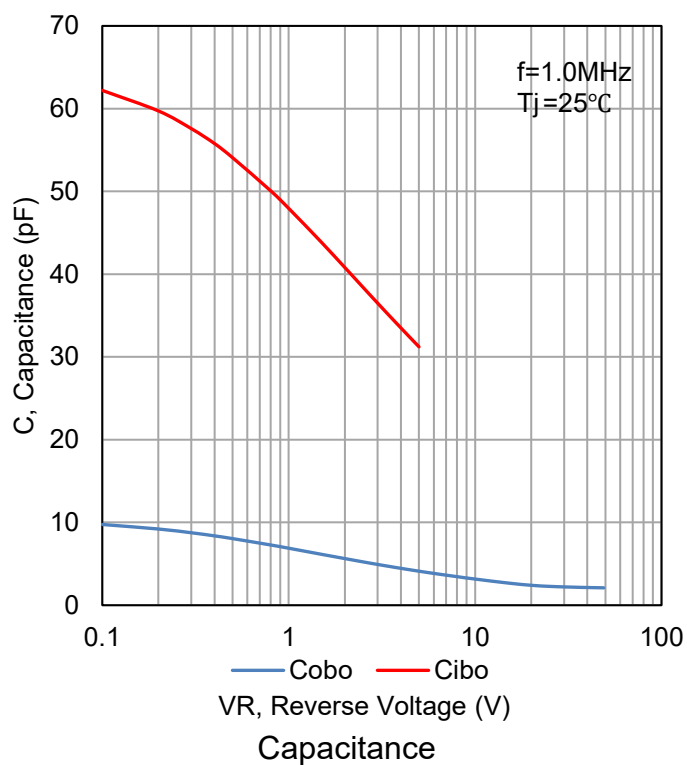
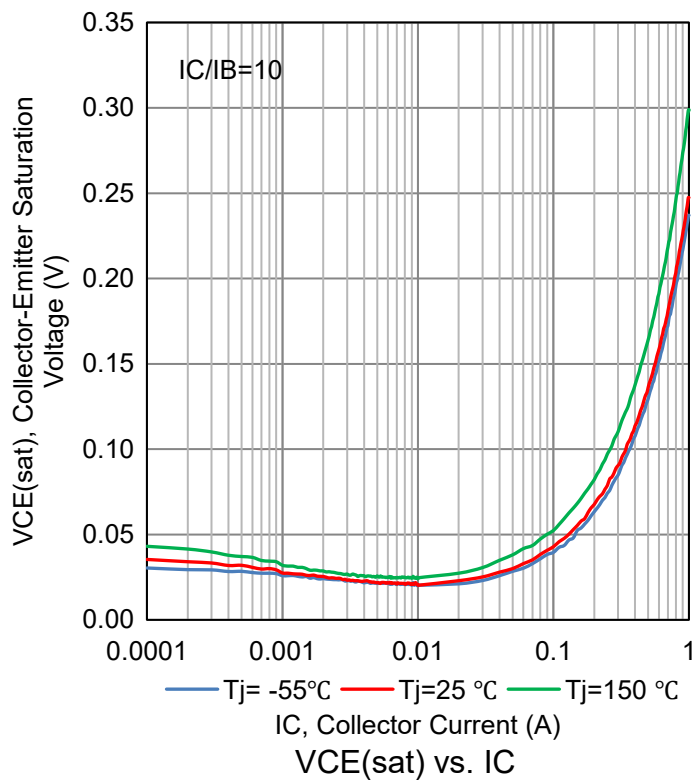
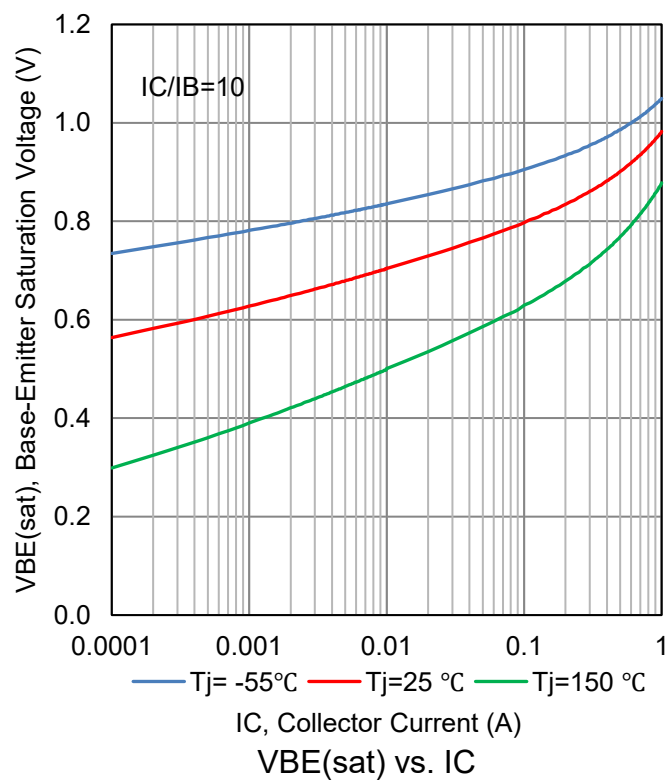
5. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Collector–Emitter Breakdown Voltage (IC = 10 mA)	VBR(CEO)	45	-	-	V
Collector–Base Breakdown Voltage (IC = 10 μA)	VBR(CBO)	50	-	-	V
Emitter–Base Breakdown Voltage (IE = 1.0 μA)	VBR(EBO)	5	-	-	V
Collector Cutoff Current (VCB = 20 V) (VCB = 20 V, TA=150°C)	ICBO	- -	- -	100 5	nA μA
Emitter Cut-off Current (VEB = 7V, IC = 0)	IEBO	-	-	100	nA
Collector-Emitter cutoff Current (VCE= 45V, IB=0)	ICEO	-	-	500	nA
DC Current Gain (IC = 100 mA, VCE = 1.0 V) (IC = 500 mA, VCE = 1.0 V)	HFE	100 40	- -	250 -	
Collector–Emitter Saturation Voltage (IC = 500 mA, IB = 50 mA)	VCE(sat)	-	0.136	0.7	V
Base-Emitter saturation voltage (IC = 500 mA, IB = 50 mA)	VBE(sat)	-	0.90	1.2	V
Base–Emitter on Voltage (IC = 500 mA, VCE = 1.0 V)	VBE(on)	-	-	1.2	V
Current–Gain — Bandwidth Product (IC = 10mA, VCE= 5V, f = 100MHz)	fT	100	-	-	MHz
Output Capacitance (VCB = 10 V, IE = 0, f = 1.0 MHz)	Cobo	-	3.16	-	pF

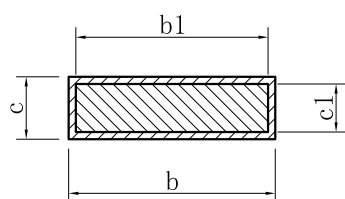
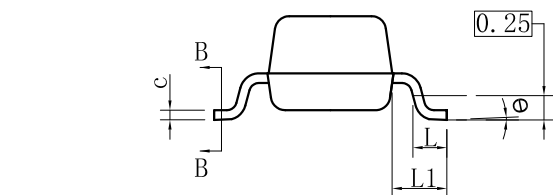
6.ELECTRICAL CHARACTERISTICS CURVES



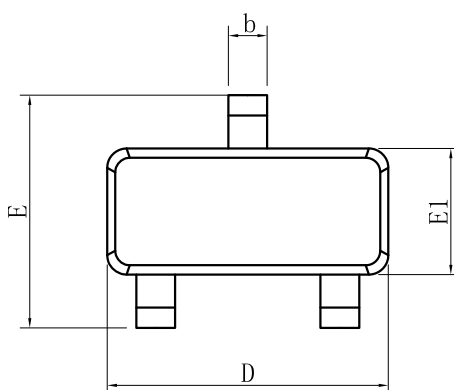
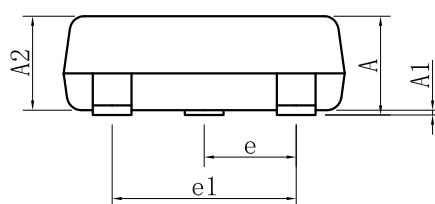
6.ELECTRICAL CHARACTERISTICS CURVES(Con.)



7.OUTLINE AND DIMENSIONS



SECTION B-B

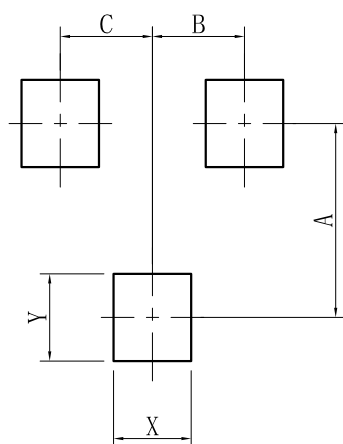


SOT23			
DIM	MIN	NOR	MAX
A	0.89	—	1.12
A1	0.01	—	0.10
A2	0.88	0.95	1.02
b	0.30	—	0.50
b1	0.30	0.40	0.45
c	0.08	—	0.20
c1	0.08	0.10	0.16
D	2.80	2.90	3.04
E	2.10	—	2.64
E1	1.20	1.30	1.40
e	0.95BSC		
e1	1.90BSC		
L	0.40	0.46	0.60
L1	0.54REF		
θ	0°	—	8°
All Dimensions in mm			

GENERAL NOTES

- 1.Top package surface finish $Ra0.4 \pm 0.2\mu m$
- 2.Bottom package surface finish $Ra0.7 \pm 0.2\mu m$
- 3.Side package surface finish $Ra0.4 \pm 0.2\mu m$

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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