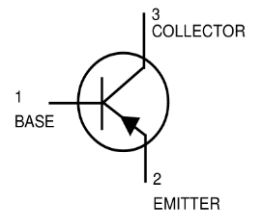
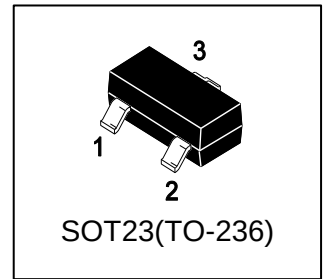


S-LBC807-40LT1G

General Purpose Transistors PNP 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.
- Collector current capability $I_C = -500$ mA.
- Collector-emitter voltage V_{CEO} (max) = -45 V.
- General purpose switching and amplification.



2. DEVICE MARKING AND RESISTOR VALUES

Device	Marking	Shipping
S-LBC807-40LT1G	5C1	3000/Tape&Reel
S-LBC807-40LT3G	5C1	13000/Tape&Reel

3. MAXIMUM RATINGS($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Limits	Unit
Collector-Emitter Voltage	V_{CEO}	-45	V
Collector-Base Voltage	V_{CBO}	-50	V
Emitter-Base Voltage	V_{EBO}	-5	V
Continuous Collector Current	I_C	-500	mA

4. THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Total Device Dissipation FR-5 Board, (Note 1) $T_A = 25^\circ\text{C}$ Derate above 25°C	PD	225 1.8	mW mW/ $^\circ\text{C}$
Thermal resistance from junction to ambient	$R_{\theta JA}$	556	$^\circ\text{C}/\text{W}$
Total Device Dissipation Alumina Substrate, (Note 2) $T_A = 25^\circ\text{C}$ Derate above 25°C	PD	300 2.4	mW mW/ $^\circ\text{C}$
Thermal resistance from junction to ambient	$R_{\theta JA}$	417	$^\circ\text{C}/\text{W}$
Junction and Storage Temperature	T_J, T_{stg}	-55~+150	$^\circ\text{C}$

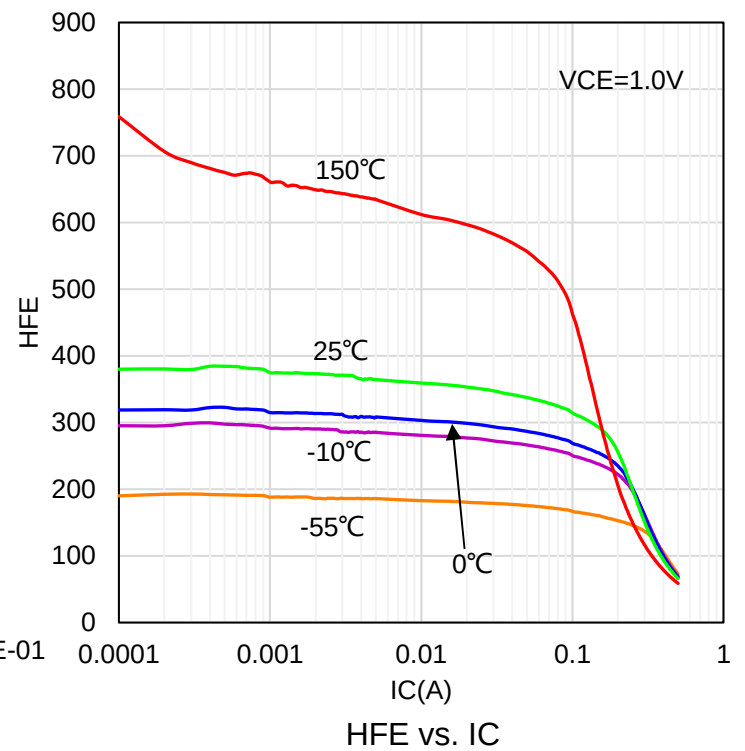
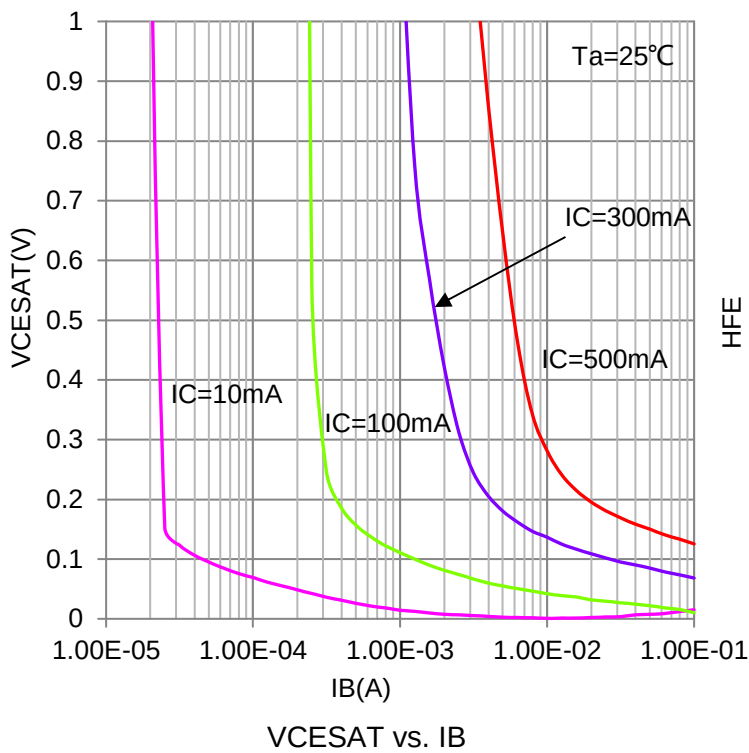
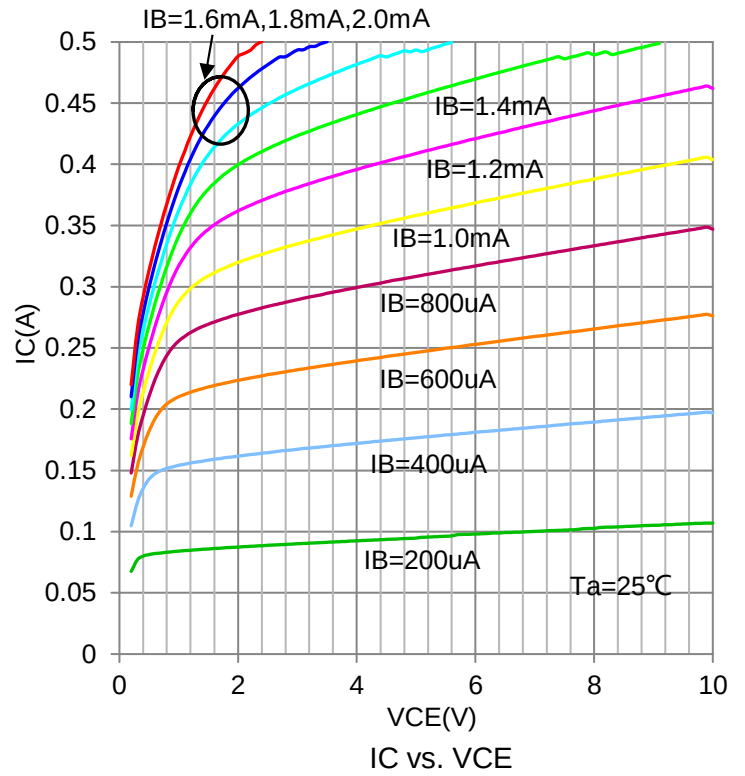
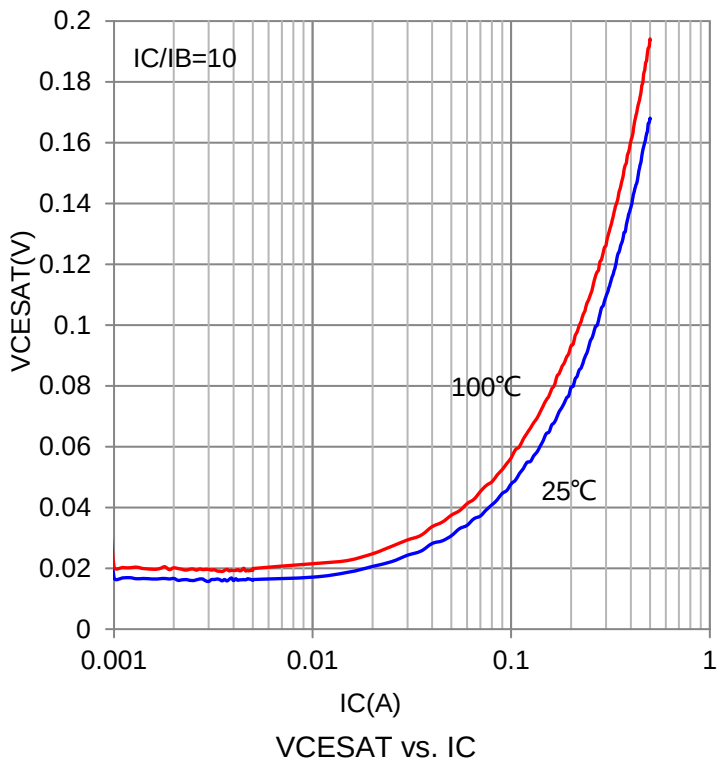
1. FR-5 = 1.0 x 0.75 x 0.062 in.

2. Alumina = 0.4 x 0.3 x 0.024 in. 99.5% alumina.

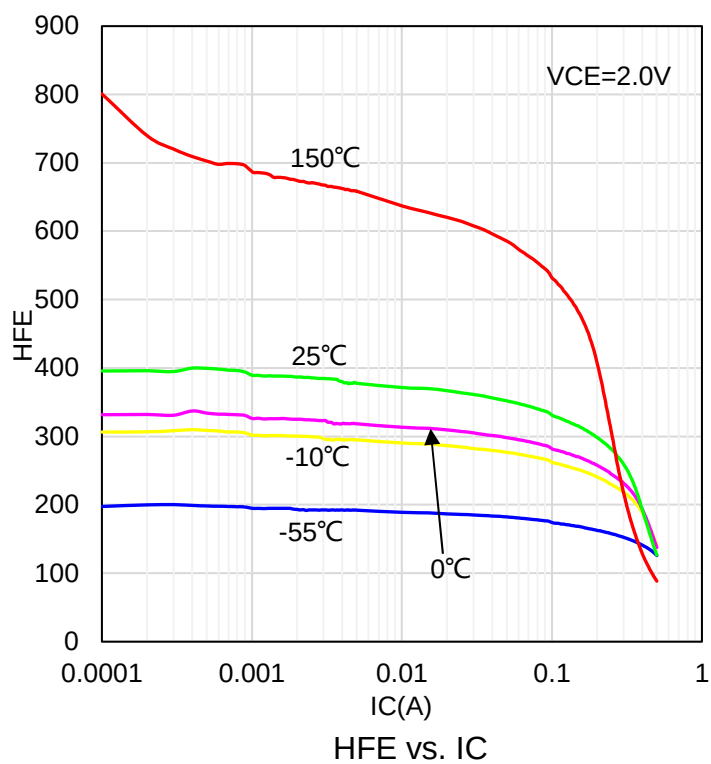
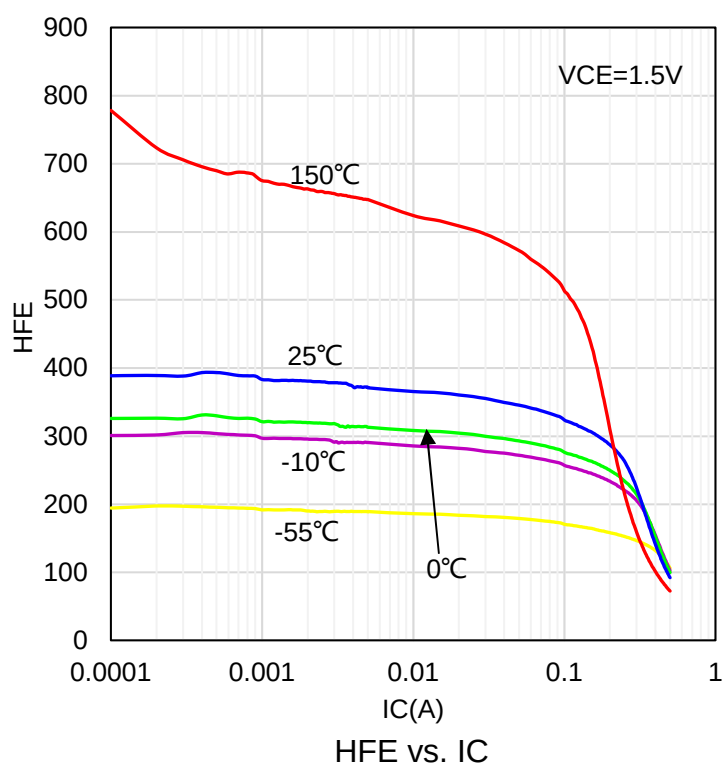
5. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

Characteristic	Symbol	Min.	Typ.	Max.	Unit
OFF CHARACTERISTICS					
Collector-Emitter Breakdown Voltage (IC = -10mA)	BVCEO	-45	-	-	V
Collector-Base Breakdown Voltage (IC = -10μA)	BVCBO	-50	-	-	
Emitter-Base Breakdown Voltage (IE = -1μA)	BVEBO	-5	-	-	
Collector Cut-off Current (VCB = -20V) (VCB = -20 V, TJ = 150°C)	ICBO	-	-	-100 -5	nA μA
Emitter Cutoff Current (VEB = -5V)	IEBO	-	-	-100	nA
ON CHARACTERISTICS					
DC Current Gain (IC = -100 mA, VCE = -1.0 V) (IC = -500 mA, VCE = -1.0 V)	hFE	250 40	- -	600 -	
Collector-Emitter saturation Voltage (IC = -500mA, IB = -50mA)	VCE(sat)	-	-	-0.7	V
Base-Emitter On Voltage (IC = -500 mA, VCE = -1.0 V)	VBE(on)	-	-	-1.2	V
Base-Emitter Saturation Voltage (IC = -500mA, IB = -50mA)	VBE(sat)	-	-	-1	V
SMALL-SIGNAL CHARACTERISTICS					
Current-Gain — Bandwidth Product (IC = -10 mA, VCE = -5.0 V, f = 100 MHz)	fT	100	-	-	MHz
Output Capacitance (VCB = -10 V, f = 1.0 MHz)	Cob	-	10	-	pF

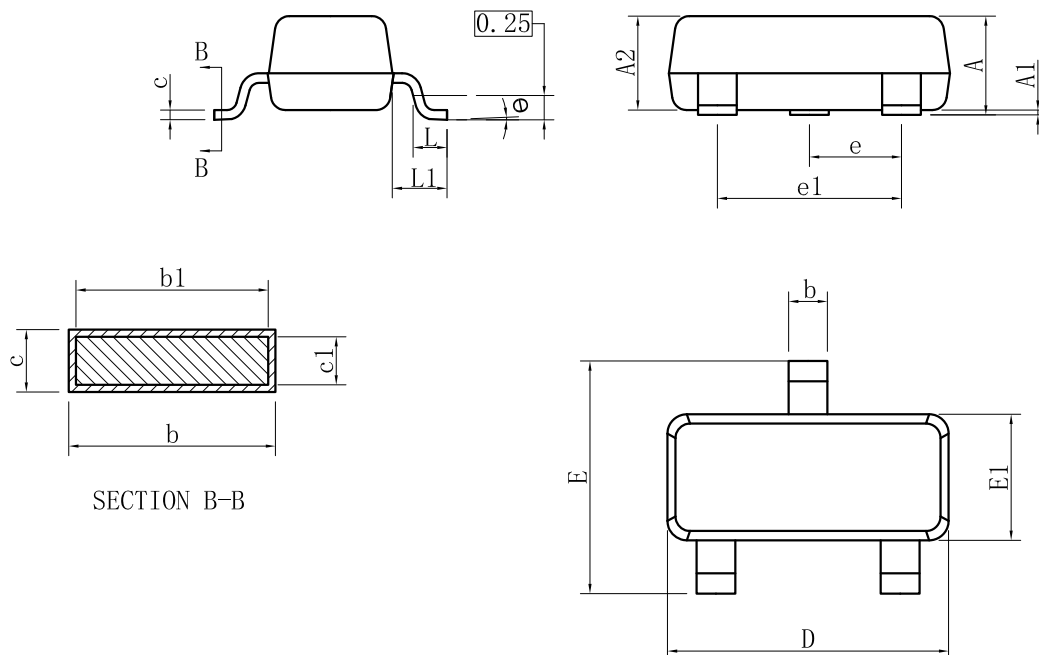
6.ELECTRICAL CHARACTERISTICS CURVES



6.ELECTRICAL CHARACTERISTICS CURVES(Con.)



7.OUTLINE AND DIMENSIONS

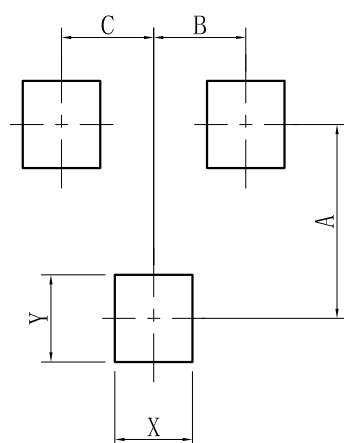


SOT23			
DIM	MIN	NOR	MAX
A	0.89	-	1.12
A1	0.01	-	0.10
A2	0.88	0.95	1.02
b	0.30	-	0.50
b1	0.30	0.40	0.45
c	0.08	-	0.20
c1	0.08	0.10	0.16
D	2.80	2.90	3.04
E	2.10	-	2.64
E1	1.20	1.30	1.40
e	0.95BSC		
e1	1.90BSC		
L	0.40	0.46	0.60
L1	0.54REF		
θ	0°	-	8°
All Dimensions in mm			

GENERAL NOTES

- 1.Top package surface finish $Ra0.4\pm0.2\mu m$
- 2.Bottom package surface finish $Ra0.7\pm0.2\mu m$
- 3.Side package surface finish $Ra0.4\pm0.2\mu m$

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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