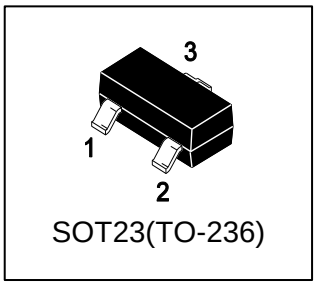
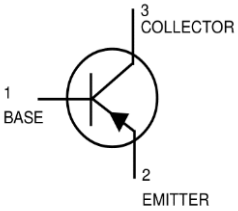
LBC807-40LT1G
S-LBC807-40LT1G

General Purpose Transistors PNP Silicon



SOT23(TO-236)



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 IC = -500 mA.
- Collector-emitter voltage VCEO (max) = -45 V.
- General purpose switching and amplification.

2. DEVICE MARKING AND RESISTOR VALUES

Device	Marking	Shipping
LBC807-40LT1G	5C1	3000/Tape&Reel
LBC807-40LT3G	5C1	10000/Tape&Reel

3. MAXIMUM RATINGS(Ta = 25ºC)

Parameter	Symbol	Limits	Unit
Collector-Emitter Voltage	VCEO	-45	V
Collector-Base Voltage	VCBO	-50	V
Emitter-Base Voltage	VEBO	-5	V
Continuous Collector Current	IC	-500	mA

4. THERMAL CHARACTERISTICS

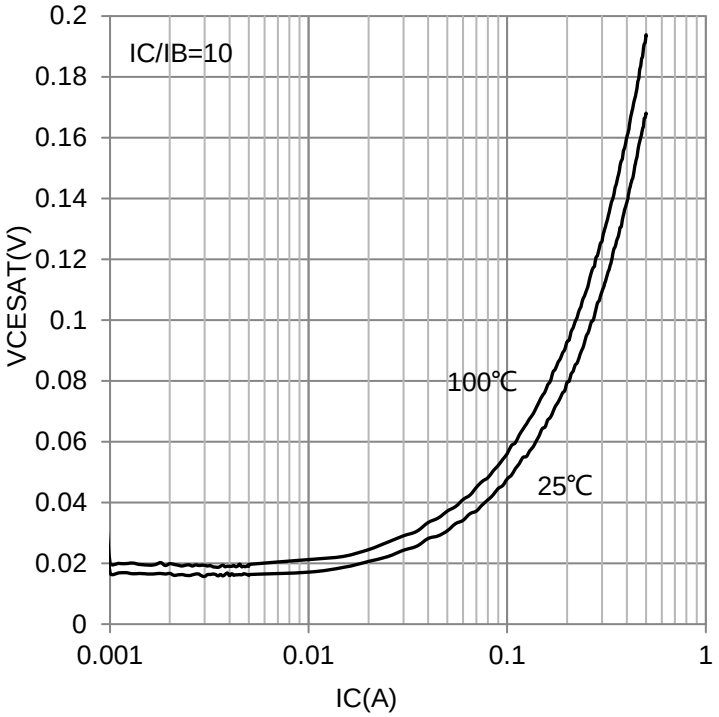
Parameter	Symbol	Limits	Unit
Total Device Dissipation FR– 5 Board, (Note 1) TA = 25°C Derate above 25°C	PD	 225 1.8	 mW mW/℃
Thermal resistance from junction to ambient	RθJA	556	℃/W
Total Device Dissipation Alumina Substrate, (Note 2) TA = 25°C Derate above 25°C	PD	 300 2.4	 mW mW/℃
Thermal resistance from junction to ambient	RθJA	417	℃/W
Junction and Storage Temperature	TJ , Tstg	-55~+150	℃

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.

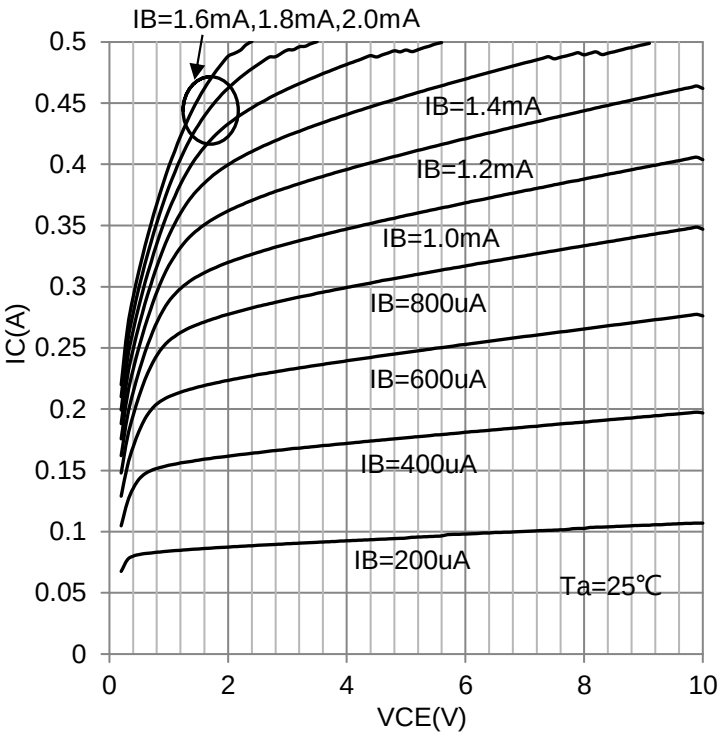
5. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

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

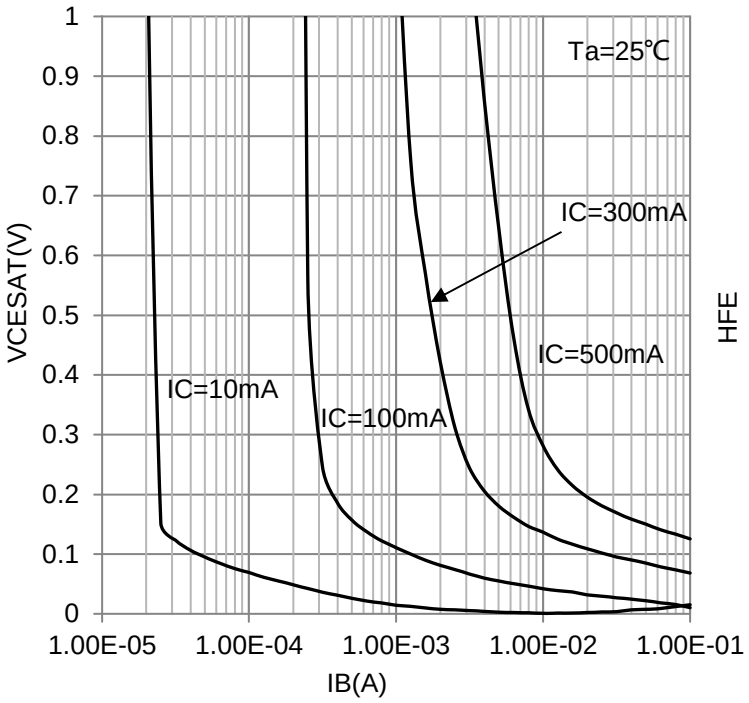
6.ELECTRICAL CHARACTERISTICS CURVES



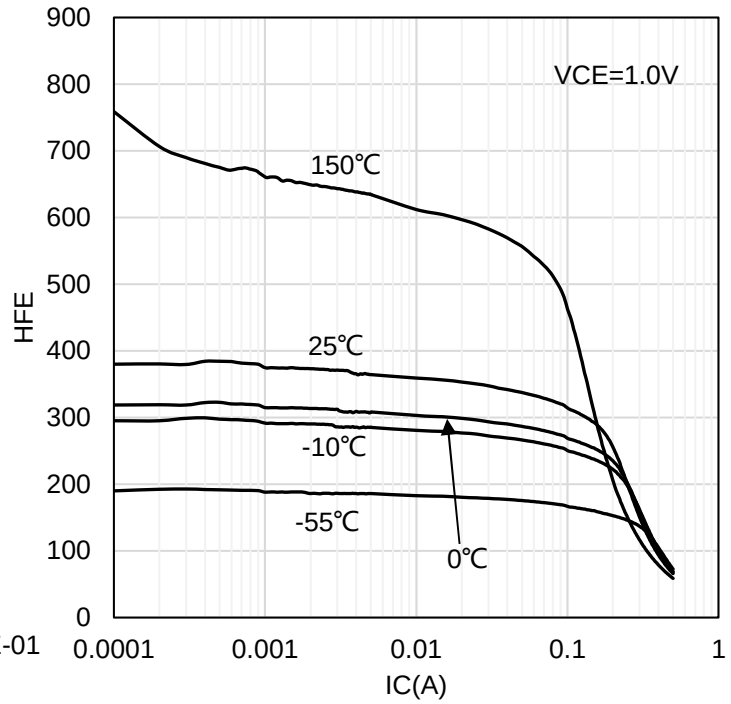
VCESAT vs. IC



IC vs. VCE

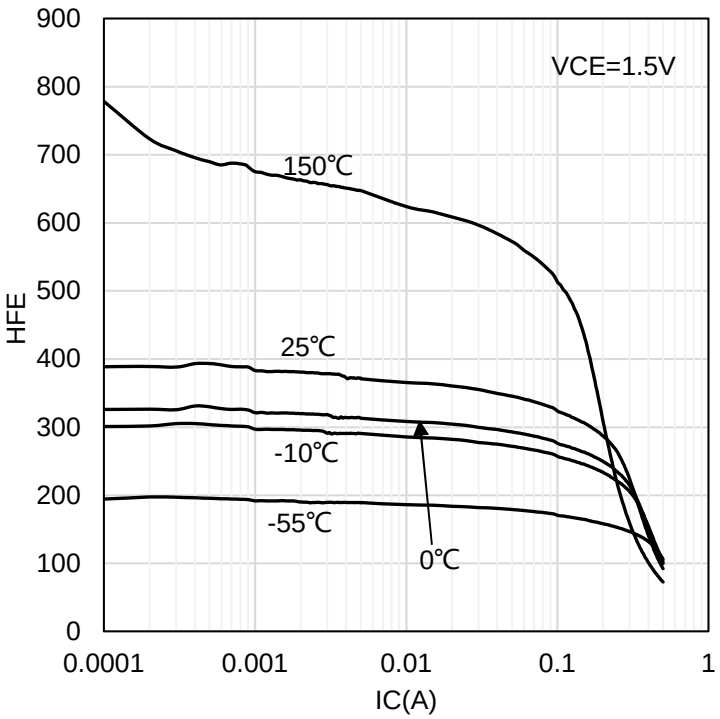


VCESAT vs. IB

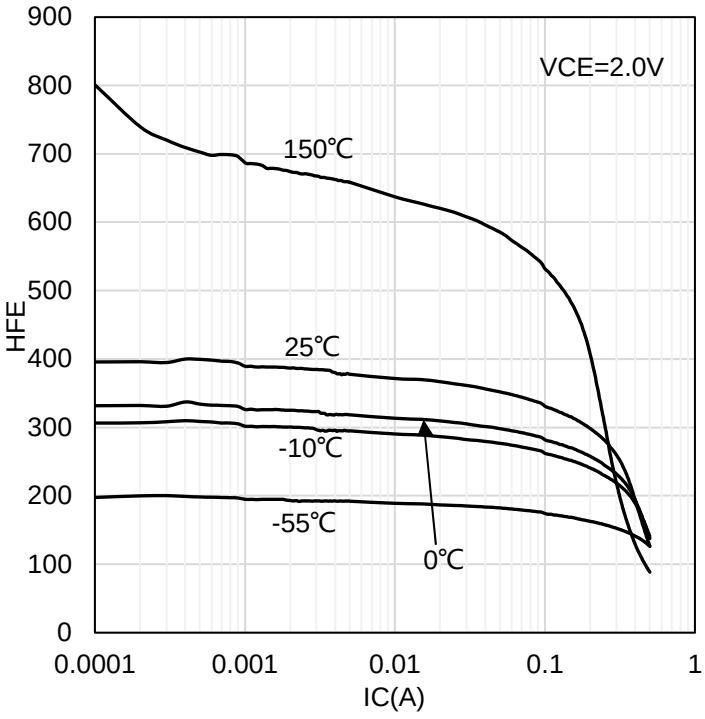


HFE vs. IC

6.ELECTRICAL CHARACTERISTICS CURVES(Con.)

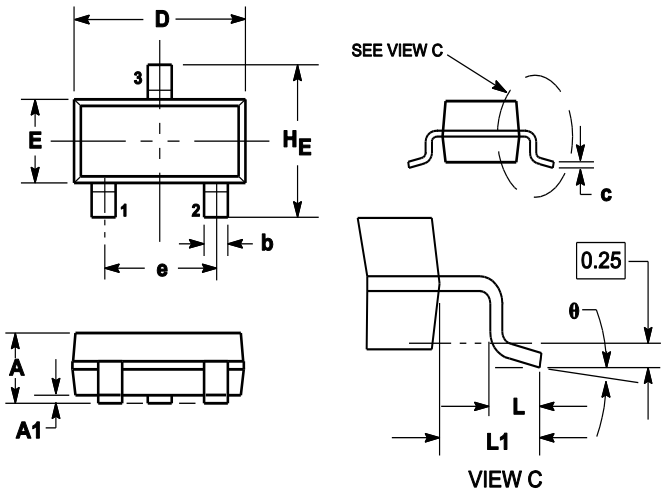


HFE vs. IC



HFE vs. IC

7.OUTLINE AND DIMENSIONS

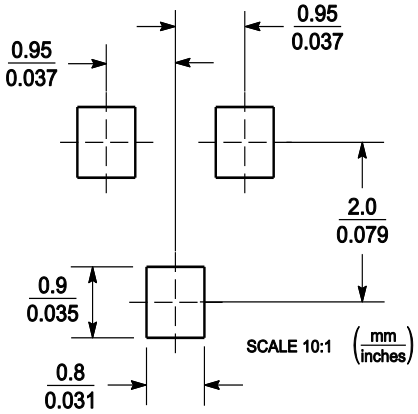


Notes:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.

	MILLIMETERS			INCHES		
DIM	MIN	NOM	MAX	MIN	NOM	MAX
A	0.89	1	1.11	0.035	0.04	0.044
A1	0.01	0.06	0.1	0.001	0.002	0.004
b	0.37	0.44	0.5	0.015	0.018	0.02
c	0.09	0.13	0.18	0.003	0.005	0.007
D	2.80	2.9	3.04	0.11	0.114	0.12
E	1.20	1.3	1.4	0.047	0.051	0.055
e	1.78	1.9	2.04	0.07	0.075	0.081
L	0.10	0.2	0.3	0.004	0.008	0.012
L1	0.35	0.54	0.69	0.014	0.021	0.029
H_E	2.10	2.4	2.64	0.083	0.094	0.104
θ	0°	---	10°	0°	---	10°

8.SOLDERING FOOTPRINT



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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