

## PNP Silicon

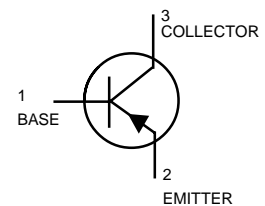
### FEATURE

- Collector current capability  $I_C = -500$  mA.
- Collector-emitter voltage  $V_{CEO(max)} = -45$  V.
- General purpose switching and amplification.
- PNP complement: BC807 Series.
- We declare that the material of product compliance with RoHS requirements.
- RoHS product for packing code suffix "G"
- Halogen free product for packing code suffix "H"

Moisture Sensitivity Level 1

### DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
BC807-16LT1	5A1	3000/Tape&Reel
BC807-25LT1	5B1	3000/Tape&Reel
BC807-40LT1	5C1	3000/Tape&Reel



### MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	$V_{CEO}$	-45	V
Collector-Base Voltage	$V_{CBO}$	-50	V
Emitter-Base Voltage	$V_{EBO}$	-5.0	V
Collector Current — Continuous	$I_C$	-500	mAdc

### THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR-5 Board, (1) $T_A = 25^\circ\text{C}$ Derate above $25^\circ\text{C}$	$P_D$	225 1.8	mW mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	$^\circ\text{C}/\text{W}$
Total Device Dissipation Alumina Substrate, (2) $T_A = 25^\circ\text{C}$ Derate above $25^\circ\text{C}$	$P_D$	300 2.4	mW mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	417	$^\circ\text{C}/\text{W}$
Junction and Storage Temperature	$T_{J, T_{stg}}$	-55 to +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.

**ELECTRICAL CHARACTERISTICS** ( $T_A = 25^\circ\text{C}$  unless otherwise noted.)

Characteristic	Symbol	Min	Typ	Max	Unit
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**OFF CHARACTERISTICS**

Collector–Emitter Breakdown Voltage ( $I_C = -10\text{ mA}$ )	$V_{(BR)CEO}$	-45	—	—	V
Collector–Emitter Breakdown Voltage ( $V_{EB} = 0, I_C = -10\text{ A}$ )	$V_{(BR)CES}$	-50	—	—	V
Emitter–Base Breakdown Voltage ( $I_E = -1.0\text{ A}$ )	$V_{(BR)EBO}$	-5.0	—	—	V
Collector Cutoff Current ( $V_{CB} = -20\text{ V}$ )	$I_{CBO}$	—	—	-100	nA
( $V_{CB} = -20\text{ V}, T_J = 150^\circ\text{C}$ )		—	—	-5.0	A

**ELECTRICAL CHARACTERISTICS** ( $T_A = 25^\circ\text{C}$  unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
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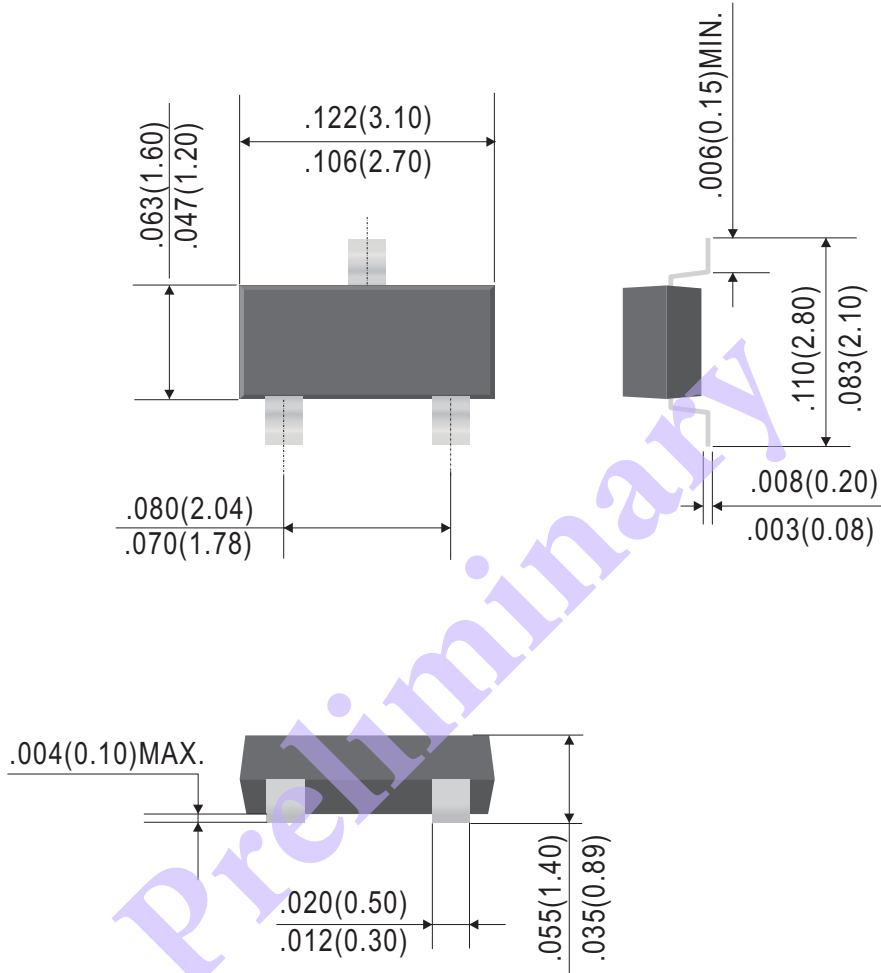
**ON CHARACTERISTICS**

DC Current Gain ( $I_C = -100\text{ mA}, V_{CE} = -1.0\text{ V}$ )	$h_{FE}$				—
	BC807-16	100	—	250	
	BC807-25	160	—	400	
	BC807-40	250	—	600	
( $I_C = -500\text{ mA}, V_{CE} = -1.0\text{ V}$ )		40	—	—	
Collector–Emitter Saturation Voltage ( $I_C = -500\text{ mA}, I_B = -50\text{ mA}$ )	$V_{CE(sat)}$	—	—	-0.7	V
Base–Emitter On Voltage ( $I_C = -500\text{ mA}, V_{CE} = -1.0\text{ V}$ )	$V_{BE(on)}$	—	—	-1.2	V

**SMALL-SIGNAL CHARACTERISTICS**

Current–Gain — Bandwidth Product ( $I_C = -10\text{ mA}, V_{CE} = -5.0\text{ V}_{dc}, f = 100\text{ MHz}$ )	$f_T$	100	—	—	MHz
Output Capacitance ( $V_{CB} = -10\text{ V}, f = 1.0\text{ MHz}$ )	$C_{obo}$	—	10	—	pF

**SOT-23**



Dimensions in inches and (millimeters)

**Ordering Information:**

Device PN	Packing
Part Number G <sup>(1)</sup> -WS	Tape&Reel: 3 Kpcs/Reel

Note: (1) RoHS product for packing code suffix "G" ; Halogen free product for packing code suffix "H"

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