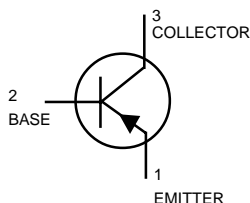


# General Purpose Transistors

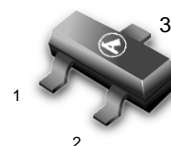
## PNP Silicon



**BC807-16LT1**  
**BC807-25LT1**  
**BC807-40LT1**

### MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector–Emitter Voltage	$V_{CE0}$	–45	V
Collector–Base Voltage	$V_{CBO}$	–50	V
Emitter–Base Voltage	$V_{EBO}$	–5.0	V
Collector Current — Continuous	$I_C$	–500	mAdc



CASE 318–08, STYLE 6  
 SOT–23 (TO–236AB)

### THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR– 5 Board, (1) $T_A = 25^\circ\text{C}$	$P_D$	225	mW
Derate above $25^\circ\text{C}$		1.8	mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	$^\circ\text{C}/\text{W}$
Total Device Dissipation Alumina Substrate, (2) $T_A = 25^\circ\text{C}$	$P_D$	300	mW
Derate above $25^\circ\text{C}$		2.4	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	$^\circ\text{C}$

### DEVICE MARKING

BC807–16LT1 = 5A; BC807–25LT1 = 5B; BC807–40LT1 = 5C

### 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 ( $V_{EB} = 0, I_C = -10\mu\text{A}$ )	$V_{(BR)CES}$	–50	—	—	V
Emitter–Base Breakdown Voltage ( $I_E = -1.0\mu\text{A}$ )	$V_{(BR)EBO}$	–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	$\mu\text{A}$

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.

**BC807-16LT1 BC807-25LT1 BC807-40LT1**

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

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

DC Current Gain ( $I_C = -100\text{ mA}$ , $V_{CE} = -1.0\text{ V}$ )	$h_{FE}$	100	—	250	—
	BC807-16	160	—	400	
	BC807-25	250	—	600	
	BC807-40	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 ( $I_C = -500\text{ mA}$ , $I_B = -1.0\text{ V}$ )	$V_{BE(on)}$	—	—	-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