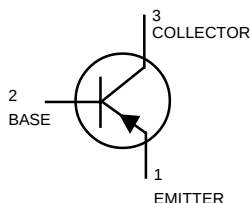


General Purpose Transistors

PNP Silicon



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

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



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°C		1.8	mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	$^\circ\text{C/W}$
Total Device Dissipation Alumina Substrate, (2) $T_A = 25^\circ\text{C}$	P_D	300	mW
Derate above 25°C		2.4	mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	417	$^\circ\text{C/W}$
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	μA

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	
($I_C = -500\text{ mA}$, $V_{CE} = -1.0\text{ V}$)		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 ($I_C = -500\text{ mA}$, $I_B = -1.0\text{ V}$)	$V_{BE(on)}$	—	—	-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