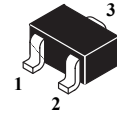
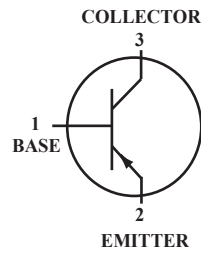


General Purpose Transistor

PNP Silicon

 Lead(Pb)-Free



SOT-323(SC-70)

Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise noted)

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	mA
Total Device Dissipation FR-5 Board ⁽¹⁾ $T_A=25^\circ\text{C}$	P_D	150	mW
Thermal Resistance, Junction to Ambient ⁽¹⁾	$R_{\theta JA}$	833	$^\circ\text{C/W}$
Junction Temperature Range	T_J	-55 to +150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^\circ\text{C}$

Device Marking

BC807-16W = 5A, BC807-25W = 5B, BC807-40W = 5C

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

Electrical Characteristics ($T_A=25^{\circ}\text{C}$ Unless Otherwise noted)

Characteristics	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-Base Breakdown Voltage $I_C=-10\mu\text{A}$	$V_{(BR)CBO}$	-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}	-	-	-0.1	μA
Collector Cutoff Current $V_{CE}=-20\text{V}$	I_{CBO}	-	-	-0.2	μA
Collector Cutoff Current $V_{EB}=-5\text{V}$	I_{CBO}	-	-	-0.1	μA

On Characteristics

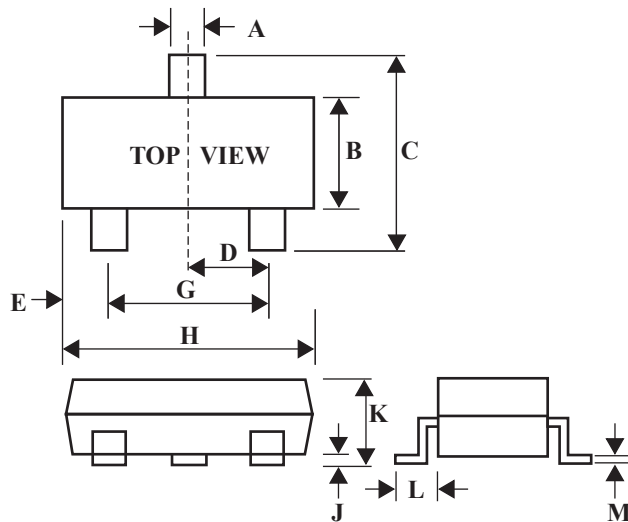
DC Current Gain $I_C=-100\text{mA}, V_{CE}=-1.0\text{V}$	BC807-16W BC807-25W BC807-40W	h_{FE}	100 160 250	- - -	250 400 600	-
$I_C=-500\text{mA}, V_{CE}=-1.0\text{V}$			40	-	-	
Collector-Emitter Saturation Voltage $I_C=-500\text{mA}, I_B=-50\text{mA}$		$V_{CE(sat)}$	-	-	-0.7	V
Base-Emitter On Voltage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

Small-signal Characteristics

Current-Gain-Band width Product $I_C=-10\text{mA}, V_{CE}=-5.0\text{V}, f=100\text{MHz}$	f_T	80	-	-	MHz
Output Capacitance $V_{CB}=-10\text{V}, f=1.0\text{MHz}$	C_{ob}	-	-	10	pF

SOT-323 Outline Demensions

Unit:mm



SOT-323		
Dim	Min	Max
A	0.30	0.40
B	1.15	1.35
C	2.00	2.40
D	-	0.65
E	0.30	0.40
G	1.20	1.40
H	1.80	2.20
J	0.00	0.10
K	0.80	1.00
L	0.42	0.53
M	0.10	0.25