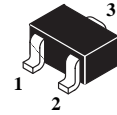
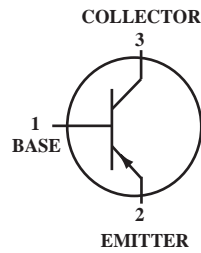


## General Purpose Transistor

### 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 <sup>(1)</sup> $T_A=25^\circ\text{C}$	$P_D$	150	mW
Thermal Resistance, Junction to Ambient <sup>(1)</sup>	$R_{\theta JA}$	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 = K>

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

### Electrical Characteristics (T<sub>A</sub>=25°C Unless Otherwise noted)

Characteristics	Symbol	Min	Typ	Max	Unit
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#### Off Characteristics

Collector-Emitter Breakdown Voltage I <sub>C</sub> =-10mA	V <sub>(BR)CEO</sub>	-45	-	-	V
Collector-Base Breakdown Voltage I <sub>C</sub> =-10μA	V <sub>(BR)CBO</sub>	-50	-	-	V
Emitter-Base Breakdown Voltage I <sub>E</sub> =-1.0μA	V <sub>(BR)EBO</sub>	-5.0	-	-	V
Collector Cutoff Current V <sub>CB</sub> =-20V	I <sub>CBO</sub>	-	-	-0.1	μA
Collector Cutoff Current V <sub>CE</sub> =-20V	I <sub>CBO</sub>	-	-	-0.2	μA
Collector Cutoff Current V <sub>EB</sub> =-5V	I <sub>CBO</sub>	-	-	-0.1	μA

#### On Characteristics

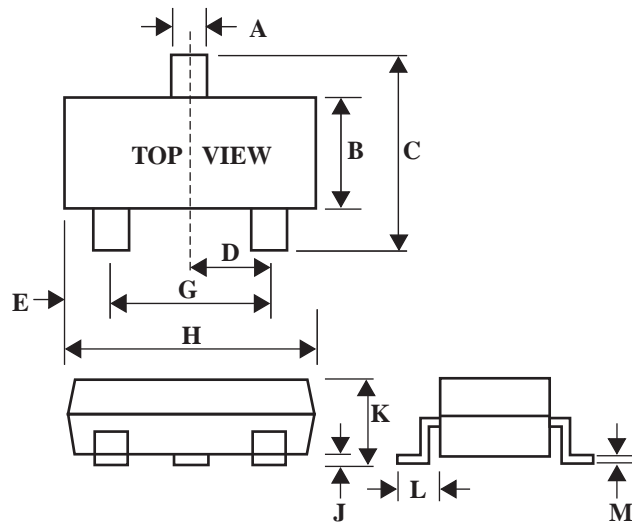
DC Current Gain I <sub>C</sub> =-100mA, V <sub>CE</sub> =-1.0V	BC807-16W BC807-25W BC807-40W	100 160 250	- - -	250 400 600	-
I <sub>C</sub> =-500mA, V <sub>CE</sub> =-1.0V)		40	-	-	
Collector-Emitter Saturation Voltage I <sub>C</sub> =-500mA, I <sub>B</sub> =-50mA	V <sub>CE(sat)</sub>	-	-	-0.7	V
Base-Emitter On Voltage I <sub>C</sub> =-500mA, V <sub>CE</sub> =-1.0V	V <sub>BE(on)</sub>	-	-	-1.2	V

#### Small-signal Characteristics

Current-Gain-Band width Product I <sub>C</sub> =-10mA, V <sub>CE</sub> =-5.0V, f=100MHz	f <sub>T</sub>	80	-	-	MHz
Output Capacitance V <sub>CB</sub> =-10V, f=1.0MHz	C <sub>ob</sub>	-	-	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