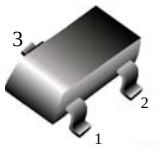
General Purpose Transistors
PNP Silicon

FEATURE

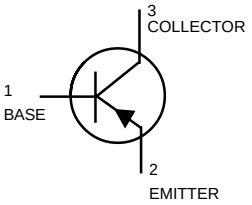
- Collector current capability I_C = -800 mA.
- Collector-emitter voltage V_{CEO}(max) = -45 V.
- General purpose switching and amplification.
- NPN complement : BC817 Series.



SOT–23

DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
BC807S-A	5A1	3000/Tape&Reel
BC807S-B	H5B	3000/Tape&Reel
BC807S-C	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	I_C	–800	mAdc

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR– 5 Board, (1)	P_D		
T_A = 25°C		225	mW
Derate above 25°C		1.8	mW/°C
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	°C/W
Total Device Dissipation	P_D		
Alumina Substrate, (2) T_A = 25°C		300	mW
Derate above 25°C		2.4	mW/°C
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	417	°C/W
Junction and Storage Temperature	T_J , T_{stg}	–55 to +150	°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.

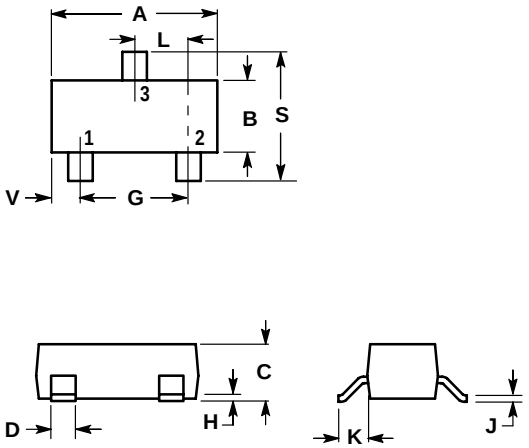
ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted.)

Characteristic	Symbol	Min	Typ	Max	Unit
OFF CHARACTERISTICS					
Collector–Emitter Breakdown Voltage (I_C = –10 mA)	$V_{(BR)CEO}$	–45	—	—	V
Collector–Emitter Breakdown Voltage (V_{EB} = 0, I_C = –10 μA)	$V_{(BR)CES}$	–50	—	—	V
Emitter–Base Breakdown Voltage (I_E = –1.0 μA)	$V_{(BR)EBO}$	–5.0	—	—	V
Collector Cutoff Current	I_{CBO}				
(V_{CB} = –20 V)		—	—	–100	nA
(V_{CB} = –20 V, T_J = 150°C)		—	—	–5.0	μA

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

Characteristic		Symbol	Min	Typ	Max	Unit
ON CHARACTERISTICS						
DC Current Gain		h_{FE}				—
(I_C= –100 mA, V_{CE} = –1.0 V)	BC807–A		100	—	250	
	BC807–B		160	—	400	
	BC807–C		250	—	600	
(I_C = –500 mA, V_{CE} = –1.0 V)			40	—	—	
Collector–Emitter Saturation Voltage (I_C = –500 mA, I_B = –50 mA)		$V_{CE(sat)}$	—	—	–0.7	V
Base–Emitter On Voltage (I_C = –500 mA, I_B= –1.0 V)		$V_{BE(on)}$	—	—	–1.2	V
SMALL–SIGNAL CHARACTERISTICS						
Current–Gain — Bandwidth Product (I_C = –10 mA, V_{CE} = –5.0 V_{dc}, f = 100 MHz)		f_T	100	—	—	MHz
Output Capacitance (V_{CB} = –10 V, f = 1.0 MHz)		C_{obo}	—	10	—	pF

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NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.1102	0.1197	2.80	3.04
B	0.0472	0.0551	1.20	1.40
C	0.0350	0.0440	0.89	1.11
D	0.0150	0.0200	0.37	0.50
G	0.0701	0.0807	1.78	2.04
H	0.0005	0.0040	0.013	0.100
J	0.0034	0.0070	0.085	0.177
K	0.0140	0.0285	0.35	0.69
L	0.0350	0.0401	0.89	1.02
S	0.0830	0.1039	2.10	2.64
V	0.0177	0.0236	0.45	0.60

