

# SOT23 PNP SILICON PLANAR MEDIUM POWER TRANSISTOR

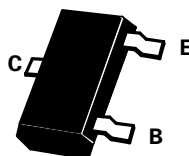
## BC807

ISSUE 3 – MARCH 2001

### PARTMARKING DETAILS

BC80716 – 5AZ  
BC80725 – 5BZ  
BC80740 – 5CZ

COMPLEMENTARY TYPE BC817



SOT23

### ABSOLUTE MAXIMUM RATINGS.

| PARAMETER                                  | SYMBOL         | VALUE       | UNIT        |
|--------------------------------------------|----------------|-------------|-------------|
| Collector-Base Voltage                     | $V_{CBO}$      | -50         | V           |
| Collector-Emitter Voltage                  | $V_{CEO}$      | -45         | V           |
| Emitter-Base Voltage                       | $V_{EBO}$      | -5          | V           |
| Peak Pulse Current                         | $I_{CM}$       | -1          | A           |
| Continuous Collector Current               | $I_C$          | -500        | mA          |
| Base Current                               | $I_B$          | -100        | mA          |
| Peak Base Current                          | $I_{BM}$       | -200        | mA          |
| Power Dissipation at $T_{amb}=25^{\circ}C$ | $P_{tot}$      | 330         | mW          |
| Operating and Storage Temperature Range    | $T_j, T_{stg}$ | -55 to +150 | $^{\circ}C$ |

### ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^{\circ}C$ unless otherwise stated).

| PARAMETER                             | SYMBOL        | MIN. | TYP. | MAX.         | UNIT    | CONDITIONS.                                                        |
|---------------------------------------|---------------|------|------|--------------|---------|--------------------------------------------------------------------|
| Collector Cut-Off Current             | $I_{CBO}$     |      |      | -0.1<br>-0.5 | $\mu A$ | $V_{CB}=-20V, I_E=0$<br>$V_{CB}=-20V, I_E=0, T_{amb}=150^{\circ}C$ |
| Emitter Cut-Off Current               | $I_{EBO}$     |      |      | -10          | $\mu A$ | $V_{EB}=-5V, I_C=0$                                                |
| Collector-Emitter Saturation Voltage  | $V_{CE(sat)}$ |      |      | -700         | mV      | $I_C=-500mA, I_B=-50mA^*$                                          |
| Base-Emitter Saturation Voltage       | $V_{BE(on)}$  |      |      | -1.2         | V       | $I_C=-500mA, V_{CE}=-1V^*$                                         |
| Static Forward Current Transfer Ratio | $h_{FE}$      |      |      |              |         |                                                                    |
|                                       | BC80716       | 100  |      | 250          |         | $I_C=-100mA, V_{CE}=-1V^*$                                         |
|                                       | BC80725       | 160  |      | 400          |         | $I_C=-100mA, V_{CE}=-1V^*$                                         |
|                                       | BC80740       | 250  |      | 600          |         | $I_C=-100mA, V_{CE}=-1V^*$                                         |
| All bands                             |               | 40   |      |              |         | $I_C=-500mA, V_{CE}=-1V^*$                                         |
| Transition Frequency                  | $f_T$         |      | 100  |              | MHz     | $I_C=-10mA, V_{CE}=-5V$<br>$f=35MHz$                               |
| Output Capacitance                    | $C_{obo}$     |      | 8.0  |              | pF      | $V_{CB}=-10V, f=1MHz$                                              |

\*Measured under pulsed conditions.

Spice parameter data is available upon request for these devices

