

# SOT23 PNP SILICON PLANAR MEDIUM POWER TRANSISTORS

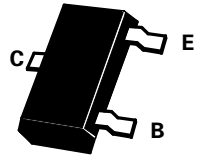
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## PARTMARKING DETAILS

|                |                |
|----------------|----------------|
| BC807 – 5DZ    | BC808 – 5HZ    |
| BC807-16 – 5AZ | BC808-16 – 5EZ |
| BC807-25 – 5BZ | BC808-25 – 5FZ |
| BC807-40 – 5CZ | BC808-40 – 5GZ |

|                     |       |   |       |
|---------------------|-------|---|-------|
| COMPLEMENTARY TYPES | BC807 | – | BC817 |
|                     | BC808 | – | BC818 |

**BC807**  
**BC808**



**SOT23**

## ABSOLUTE MAXIMUM RATINGS.

| PARAMETER                                  | SYMBOL         | BC807       | BC808 | UNIT        |
|--------------------------------------------|----------------|-------------|-------|-------------|
| Collector-Base Voltage                     | $V_{CBO}$      | -50         | -30   | V           |
| Collector-Emitter Voltage                  | $V_{CEO}$      | -45         | -25   | 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>-5 | $\mu A$<br>$\mu A$ | $V_{CB}=-20V, I_E=0$<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 Turn-on Voltage          | $V_{BE(on)}$  |           |      | -1.2       | V                  | $I_C=-500mA, V_{CE}=-1V^*$                                         |
| Static Forward Current Transfer Ratio | $h_{FE}$      | 100<br>40 |      | 600        |                    | $I_C=-100mA, V_{CE}=-1V^*$<br>$I_C=-500mA, V_{CE}=-1V^*$           |
|                                       | -16           | 100       |      | 250        |                    | $I_C=-100mA, V_{CE}=-1V^*$                                         |
|                                       | -25           | 160       |      | 400        |                    | $I_C=-100mA, V_{CE}=-1V^*$                                         |
|                                       | -40           | 250       |      | 600        |                    | $I_C=-100mA, V_{CE}=-1V^*$                                         |
| Transition Frequency                  | $f_T$         |           | 100  |            | MHz                | $I_C=-10mA, V_{CE}=-5V$<br>$f=35MHz$                               |
| Collector-base Capacitance            | $C_{obo}$     |           | 8.0  |            | pF                 | $I_E=I_C=0, V_{CB}=-10V$<br>$f=1MHz$                               |

\*Measured under pulsed conditions. Pulse width=300 $\mu s$ . Duty cycle  $\leq 2\%$   
Spice parameter data is available upon request for these devices

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