

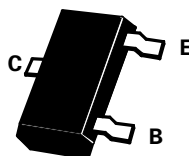
# SOT23 PNP SILICON PLANAR MEDIUM POWER TRANSISTOR

ISSUE 4 – MARCH 2001

**BCX17**

PARTMARKING DETAILS – BCX17 – T1  
BCX17R – T4

COMPLIMENTARY TYPES - BCX19



**SOT23**

## ABSOLUTE MAXIMUM RATINGS.

| PARAMETER                                          | SYMBOL         | VALUE       | UNIT             |
|----------------------------------------------------|----------------|-------------|------------------|
| Collector-Emitter Voltage                          | $V_{CES}$      | -50         | V                |
| Collector-Emitter Voltage ( $I_C = -10\text{mA}$ ) | $V_{CEO}$      | -45         | V                |
| Emitter-Base Voltage                               | $V_{EBO}$      | -5          | V                |
| Collector Current                                  | $I_C$          | -500        | mA               |
| Peak Collector Current                             | $I_{CM}$       | -1000       | mA               |
| Peak Emitter Current                               | $I_{EM}$       | -1000       | mA               |
| Base Current                                       | $I_B$          | -100        | mA               |
| Peak Base Current                                  | $I_{BM}$       | -200        | mA               |
| Power Dissipation at $T_{amb}=25^\circ\text{C}$    | $P_{tot}$      | 330         | mW               |
| Operating and Storage Temperature Range            | $T_j: T_{stg}$ | -55 to +150 | $^\circ\text{C}$ |

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

| PARAMETER                             | SYMBOL        | MIN.            | TYP. | MAX.         | UNIT                | CONDITIONS.                                                                                                                                         |
|---------------------------------------|---------------|-----------------|------|--------------|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Collector-Base Cut-Off Current        | $I_{CBO}$     |                 |      | -100<br>-200 | nA<br>$\mu\text{A}$ | $I_E = 0$ , $V_{CB} = -20\text{V}$<br>$I_E = 0$ , $V_{CB} = -20\text{V}$ , $T_j = 150^\circ\text{C}$                                                |
| Emitter-Base Cut-Off Current          | $I_{EBO}$     |                 |      | -10          | $\mu\text{A}$       | $I_C = 0$ , $V_{EB} = -1\text{V}$                                                                                                                   |
| Base-Emitter Voltage                  | $V_{BE}$      |                 |      | -1.2         | V                   | $I_C = -500\text{mA}$ , $V_{CE} = -1\text{V}^*$                                                                                                     |
| Collector-Emitter Saturation Voltage  | $V_{CE(sat)}$ |                 |      | -620         | mV                  | $I_C = -500\text{mA}$ , $I_B = -50\text{mA}^*$                                                                                                      |
| Static Forward Current Transfer Ratio | $h_{FE}$      | 100<br>70<br>40 |      | 600          |                     | $I_C = -100\text{mA}$ , $V_{CE} = -1\text{V}$<br>$I_C = -300\text{mA}$ , $V_{CE} = -1\text{V}^*$<br>$I_C = -500\text{mA}$ , $V_{CE} = -1\text{V}^*$ |
| Transition Frequency                  | $f_T$         |                 | 100  |              | MHz                 | $I_C = -10\text{mA}$ , $V_{CE} = -5\text{V}$<br>$f = 35\text{MHz}$                                                                                  |
| Output Capacitance                    | $C_{obo}$     |                 | 8.0  |              | pF                  | $V_{CB} = -10\text{V}$ , $f = 1\text{MHz}$                                                                                                          |

\*Measured under pulsed conditions.

Spice parameter data is available upon request for this device

