

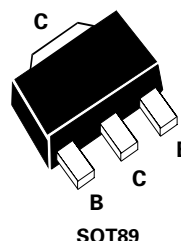
# SOT89 PNP SILICON PLANAR MEDIUM POWER TRANSISTOR

ISSUE 4 – MARCH 2001

**BCX5316**

COMPLIMENTARY TYPE – BCX5616

PARTMARKING DETAIL – AL



## ABSOLUTE MAXIMUM RATINGS.

| PARAMETER                                  | SYMBOL         | VALUE       | UNIT        |
|--------------------------------------------|----------------|-------------|-------------|
| Collector-Base Voltage                     | $V_{CBO}$      | -100        | V           |
| Collector-Emitter Voltage                  | $V_{CEO}$      | -80         | V           |
| Emitter-Base Voltage                       | $V_{EBO}$      | -5          | V           |
| Peak Pulse Current                         | $I_{CM}$       | -1.5        | A           |
| Continuous Collector Current               | $I_C$          | -1          | A           |
| Power Dissipation at $T_{amb}=25^{\circ}C$ | $P_{tot}$      | 1           | W           |
| Operating and Storage Temperature Range    | $T_j; T_{stg}$ | -65 to +150 | $^{\circ}C$ |

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

| PARAMETER                             | SYMBOL        | MIN.            | TYP. | MAX.        | UNIT    | CONDITIONS.                                                                                      |
|---------------------------------------|---------------|-----------------|------|-------------|---------|--------------------------------------------------------------------------------------------------|
| Collector-Base Breakdown voltage      | $V_{(BR)CBO}$ | -100            |      |             | V       | $I_C = -100\mu A$                                                                                |
| Collector-Emitter Breakdown Voltage   | $V_{(BR)CEO}$ | -80             |      |             | V       | $I_C = -10mA$                                                                                    |
| Emitter-Base Breakdown Voltage        | $V_{(BR)EBO}$ | -5              |      |             | V       | $I_E = -10\mu A$                                                                                 |
| Collector Cut-Off Current             | $I_{CBO}$     |                 |      | -0.1<br>-20 | $\mu A$ | $V_{CB} = -30V$<br>$V_{CB} = -30V, T_{amb} = 150^{\circ}C$                                       |
| Emitter Cut-Off Current               | $I_{EBO}$     |                 |      | -10         | $\mu A$ | $V_{EB} = -4V$                                                                                   |
| Collector-Emitter Saturation Voltage  | $V_{CE(sat)}$ |                 |      | -0.5        | V       | $I_C = -500mA, I_B = -50mA^*$                                                                    |
| Base-Emitter Turn-On Voltage          | $V_{BE(on)}$  |                 |      | -1.0        | V       | $I_C = -500mA, V_{CE} = -2V^*$                                                                   |
| Static Forward Current Transfer Ratio | $h_{FE}$      | 25<br>100<br>25 |      | 250         |         | $I_C = -5mA, V_{CE} = -2V^*$<br>$I_C = -150mA, V_{CE} = -2V^*$<br>$I_C = -500mA, V_{CE} = -2V^*$ |
| Transition Frequency                  | $f_T$         | 150             |      |             | MHz     | $I_C = -50mA, V_{CE} = -10V,$<br>$f = 100MHz$                                                    |
| Output Capacitance                    | $C_{obo}$     |                 |      | 25          | pF      | $V_{CB} = -10V, f = 1MHz$                                                                        |

\*Measured under pulsed conditions.

 **ZETEX**