

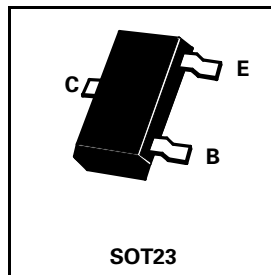
SOT23 NPN SILICON PLANAR MEDIUM POWER TRANSISTOR

BCX19

ISSUE 4 – MARCH 2001

PARTMARKING DETAILS – BCX19 - U1
BCX19R - U4

COMPLEMENTARY TYPES - BCX17



ABSOLUTE MAXIMUM RATINGS.

| PARAMETER | SYMBOL | VALUE | UNIT |
|--|----------------|-------------|-------------|
| Collector-Emitter Voltage | V_{CES} | 50 | V |
| Collector-Emitter Voltage | V_{CEO} | 45 | V |
| Emitter-Base Voltage | V_{EBO} | 5 | V |
| Peak Pulse Current | I_{CM} | 1000 | mA |
| 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-Base Cut-Off Current | I_{CBO} | | | 100 200 | nA μA | $V_{CB}=20V$ $V_{CB}=20V, T_j=150^{\circ}C$ |
| Emitter-Base Cut-Off Current | I_{EBO} | | | 10 | μA | $V_{EB}=5V$ |
| Base-Emitter Voltage | V_{BE} | | | 1.2 | V | $I_C=500mA, V_{CE}=1V^*$ |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | | | 620 | mV | $I_C=500mA, I_B=50mA^*$ |
| Static Forward Current Transfer Ratio | h_{FE} | 100 70 40 | | 600 | | $I_C=100mA, V_{CE}=1V$ $I_C=300mA, V_{CE}=1V^*$ $I_C=500mA, V_{CE}=1V^*$ |
| Transition Frequency | f_T | | 200 | | MHz | $I_C=10mA, V_{CE}=5V$ $f=35MHz$ |
| Output Capacitance | C_{obo} | | 5.0 | | pF | $V_{CB}=10V, f=1MHz$ |

*Measured under pulsed conditions.