

SOT89 NPN SILICON PLANAR MEDIUM POWER TRANSISTORS

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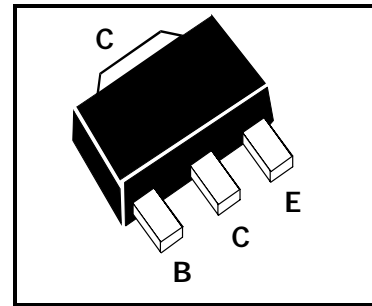
**BCX54
BCX55
BCX56**

PARTMARKING DETAILS:-

| | | |
|------------|---------------|---------------|
| BCX54 – BA | BCX54-10 – BC | BCX54-16 – BD |
| BCX55 – BE | BCX55-10 – BG | BCX55-16 – BM |
| BCX56 – BH | BCX56-10 – BK | BCX56-16 – BL |

COMPLEMENTARY TYPES:-

| | | |
|---------------|---------------|---------------|
| BCX54 – BCX51 | BCX55 – BCX52 | BCX56 – BCX53 |
|---------------|---------------|---------------|



ABSOLUTE MAXIMUM RATINGS.

| PARAMETER | SYMBOL | BCX54 | BCX55 | BCX56 | UNIT |
|--|----------------|-------------|-------|-------|-------------|
| Collector-Base Voltage | V_{CBO} | 45 | 60 | 100 | V |
| Collector-Emitter Voltage | V_{CEO} | 45 | 60 | 80 | V |
| Emitter-Base Voltage | V_{EBO} | 5 | | | V |
| Peak Pulse Current | I_{CM} | 2 | | | 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 | BCX54 BCX55 BCX56 $V_{(BR)CBO}$ | 45 60 100 | | | V | $I_C = 100\mu A$ |
| Collector-Emitter Breakdown Voltage | BCX54 BCX55 BCX56 $V_{(BR)CEO}$ | 45 60 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 20 | μA | $V_{CB} = 30V$ $V_{CB} = 30V, T_{amb} = 150^{\circ}C$ |
| Emitter Cut-Off Current | I_{EBO} | | | 20 | nA | $V_{EB} = 4V$ |
| 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 40 25 -10 -16 | | 250 160 250 | | $I_C = 5mA, V_{CE} = 2V^*$ $I_C = 150mA, V_{CE} = 2V^*$ $I_C = 500mA, V_{CE} = 2V^*$ $I_C = 150mA, V_{CE} = 2V^*$ $I_C = 150mA, V_{CE} = 2V^*$ |
| Transition Frequency | f_T | 150 | | | MHz | $I_C = 50mA, V_{CE} = 10V,$ $f = 100MHz$ |
| Output Capacitance | C_{obo} | | | 15 | pF | $V_{CB} = 10V, f = 1MHz$ |

*Measured under pulsed conditions. Pulse width=300 μs . Duty cycle $\leq 2\%$