

SOT223 PNP SILICON PLANAR MEDIUM POWER TRANSISTOR

BCP53

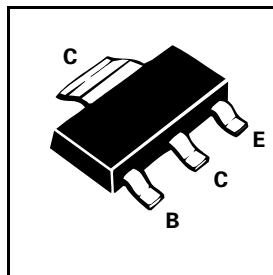
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FEATURES

- * Suitable for AF drivers and output stages
- * High collector current and Low $V_{CE(sat)}$

COMPLEMENTARY TYPE – BCP56

PARTMARKING DETAILS – BCP53
BCP53 – 10
BCP53 – 16



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} | 2 | W |
| 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 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} | | | -100 -20 | nA μA | $V_{CB} = -30V$ $V_{CB} = -30V, T_{amb} = 150^{\circ}C$ |
| Emitter Cut-Off Current | I_{EBO} | | | -10 | μA | $V_{EB} = -5V$ |
| 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} | 40 25 63 100 | 100 160 | 250 160 250 | | $I_C = -150mA, V_{CE} = -2V$ * $I_C = -500mA, V_{CE} = -2V$ * $I_C = -150mA, V_{CE} = -2V$ * $I_C = -150mA, V_{CE} = -2V$ * |
| Transition Frequency | f_T | | 125 | | MHz | $I_C = -50mA, V_{CE} = -10V,$ $f = 100MHz$ |

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