Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!


## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

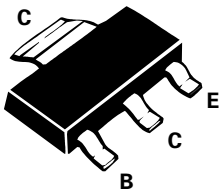
# SOT223 NPN SILICON PLANAR MEDIUM POWER TRANSISTOR

# BCP56

**ISSUE 3 – AUGUST 1995** ✪

FEATURES

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




COMPLEMENTARY TYPE – BCP53

PARTMARKING DETAILS – BCP56
BCP56 – 10
BCP56 – 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°C | $P_{tot}$ | 2 | W |
| Operating and Storage Temperature Range | $T_j$:$T_{stg}$ | -55 to +150 | °C |

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

| PARAMETER | SYMBOL | MIN. | TYP. | MAX. | UNIT | CONDITIONS. |
|---|---|---|---|---|---|---|
| Collector-Base Breakdown Voltage | $V_{(BR)CBO}$ | 100 | | | V | $I_C$=100μA |
| Collector-Emitter Breakdown Voltage | $V_{(BR)CEO}$ | 80 | | | V | $I_C$= 10mA * |
| Emitter-Base Breakdown Voltage | $V_{(BR)EBO}$ | 5 | | | V | $I_E$=10μA |
| Collector Cut-Off Current | $I_{CBO}$ | | | 100<br>20 | nA<br>μA | $V_{CB}$=30V<br>$V_{CB}$=30V, $T_{amb}$=150°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 | $h_{FE}$<br><br>BCP56-10<br>BCP56-16 | 40<br>25<br>63<br>100 | <br><br>100<br>160 | 250<br><br>160<br>250 | | $I_C$=150mA, $V_{CE}$=2V*<br>$I_C$=500mA, $V_{CE}$=2V*<br>$I_C$=150mA, $V_{CE}$=2V*<br>$I_C$=150mA, $V_{CE}$=2V* |
| Transition Frequency | $f_T$ | | 125 | | MHz | $I_C$=50mA, $V_{CE}$=10V, f=100MHz |

*Measured under pulsed conditions. Pulse width=300μs. Duty cycle ≤2%