

# SOT223 PNP SILICON PLANAR MEDIUM POWER TRANSISTOR

## BCP69

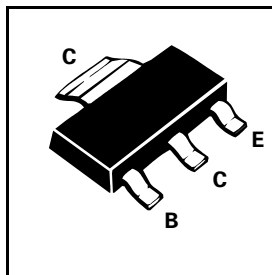
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### FEATURES

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

COMPLEMENTARY TYPE – BCP68

PARTMARKING DETAIL – BCP69  
BCP69 – 25



### ABSOLUTE MAXIMUM RATINGS.

| PARAMETER                                       | SYMBOL         | VALUE       | UNIT             |
|---|----------------|-------------|------------------|
| Collector-Base Voltage                          | $V_{CBO}$      | -25         | V                |
| Collector-Emitter Voltage                       | $V_{CEO}$      | -20         | 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 $T_{amb}=25^\circ\text{C}$ | $P_{tot}$      | 2           | W                |
| Operating and Storage Temperature Range         | $T_j; T_{stg}$ | -55 to +150 | $^\circ\text{C}$ |

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

| PARAMETER                             | SYMBOL        | MIN.            | TYP. | MAX.        | UNIT                | CONDITIONS.   |
|---------------------------------------|---------------|-----------------|------|-------------|---------------------|---|
| Collector-Base Breakdown Voltage      | $V_{(BR)CBO}$ | -25             |      |             | V                   | $I_C = -10\mu\text{A}$  |
| Collector-Emitter Breakdown Voltage   | $V_{(BR)CEO}$ | -20             |      |             | V                   | $I_C = -30\text{mA}$  |
| Emitter-Base Breakdown Voltage        | $V_{(BR)EBO}$ | -5              |      |             | V                   | $I_E = -10\mu\text{A}$  |
| Collector Cut-Off Current             | $I_{CBO}$     |                 |      | -100<br>-10 | nA<br>$\mu\text{A}$ | $V_{CB} = -25\text{V}$<br>$V_{CB} = -25\text{V}, T_{amb} = 150^\circ\text{C}$   |
| Emitter Cut-Off Current               | $I_{EBO}$     |                 |      | -10         | $\mu\text{A}$       | $V_{EB} = -5\text{V}$   |
| Collector-Emitter Saturation Voltage  | $V_{CE(sat)}$ |                 |      | -0.5        | V                   | $I_C = -1\text{A}, I_B = -100\text{mA}^*$   |
| Base-Emitter Turn-On Voltage          | $V_{BE(on)}$  |                 | -0.6 | -1.0        | V<br>V              | $I_C = -5\text{mA}, V_{CE} = -10\text{V}^*$<br>$I_C = -1\text{A}, V_{CE} = -1\text{V}^*$  |
| Static Forward Current Transfer Ratio | $h_{FE}$      | 50<br>63<br>160 | 250  | 400<br>400  |                     | $I_C = -5\text{mA}, V_{CE} = -10\text{V}^*$<br>$I_C = -500\text{mA}, V_{CE} = -1\text{V}^*$<br>$I_C = -500\text{mA}, V_{CE} = -1\text{V}^*$ |
| Transition Frequency                  | $f_T$         |                 | 100  |             | MHz                 | $I_C = -100\text{mA}, V_{CE} = -5\text{V}$ ,<br>$f = 100\text{MHz}$   |

\*Measured under pulsed conditions. Pulse width=300 $\mu\text{s}$ . Duty cycle  $\leq 2\%$   
For typical characteristics graphs see FMIMT549 datasheet.