

SOT89 NPN SILICON PLANAR MEDIUM POWER TRANSISTOR

BC868

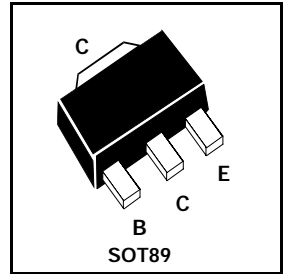
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FEATURES

- * SUITABLE FOR GENERAL AF APPLICATIONS AND CLASS B AUDIO OUTPUT STAGES UPTO 3W
- * HIGH h_{FE} AND LOW SATURATION VOLTAGE

COMPLEMENTARY TYPE - BC869

PARTMARKING DETAILS- BC868 - CAC
BC868-16 - CCC
BC868-25 - CDC



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 $T_{amb}=25^{\circ}C$ | 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 | $V_{(BR)CBO}$ | 25 | | | V | $I_C=100\mu A$ |
| Collector-Emitter Breakdown Voltage | $V_{(BR)CEO}$ | 20 | | | V | $I_C=10mA^*$ |
| Emitter-Base Breakdown Voltage | $V_{(BR)EBO}$ | 5 | | | V | $I_E=10\mu A$ |
| Collector Cut-Off Current | I_{CBO} | | | 10 1 | μA mA | $V_{CB} = 25V$ $V_{CB} = 25V, T_{amb} = 150^{\circ}C$ |
| Emitter Cut-Off Current | I_{EBO} | | | 10 | μA | $V_{EB}=5V$ |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | | | 0.5 | V | $I_C=1A, I_B=100mA^*$ |
| Base-Emitter Turn-On Voltage | $V_{BE(on)}$ | | | 1.0 | V | $I_C=1A, V_{CE}=1V^*$ |
| Static Forward Current Transfer Ratio | h_{FE} | 50 85 60 100 160 | | 375 250 375 | | $I_C=5mA, V_{CE}=10V^*$ $I_C=500mA, V_{CE}=1V^*$ $I_C=1A, V_{CE}=1V^*$ $I_C=500mA, V_{CE}=1V^*$ $I_C=500mA, V_{CE}=1V^*$ |
| Transition Frequency | f_T | | 60 | | MHz | $I_C=10mA, V_{CE}=5V$ $f = 35MHz$ |
| Output Capacitance | C_{obo} | | 45 | | pF | $V_{CB}=10V, f=1MHz$ |

*Measured under pulsed conditions. Pulse width=300 μs . Duty cycle $\leq 2\%$
For typical characteristics graphs see FMMT449 datasheet.