



BC368



NPN General Purpose Amplifier

This device is designed for general purpose medium power amplifiers and switches requiring collector currents to 1.5 A. Sourced from Process 37.

Absolute Maximum Ratings* TA = 25°C unless otherwise noted

| Symbol | Parameter | Value | Units |
|-----------------------------------|--|-------------|-------|
| V _{CEO} | Collector-Emitter Voltage | 20 | V |
| V _{CES} | Collector-Base Voltage | 25 | V |
| V _{EBO} | Emitter-Base Voltage | 5.0 | V |
| I _C | Collector Current - Continuous | 2.0 | А |
| T _J , T _{stg} | Operating and Storage Junction Temperature Range | -55 to +150 | °C |

*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

NOTES:

1) These ratings are based on a maximum junction temperature of 150 degrees C. 2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations

Thermal Characteristics TA = 25°C unless otherwise noted

| Symbol | Characteristic | Max | Units |
|---------------------|---|-------|-------|
| | | BC368 | |
| P _D | Total Device Dissipation | 625 | mW |
| | Derate above 25°C | 5.0 | mW/°C |
| $R_{\theta JC}$ | Thermal Resistance, Junction to Case | 83.3 | °C/W |
| $R_{	ext{	hetaJA}}$ | Thermal Resistance, Junction to Ambient | 200 | °C/W |

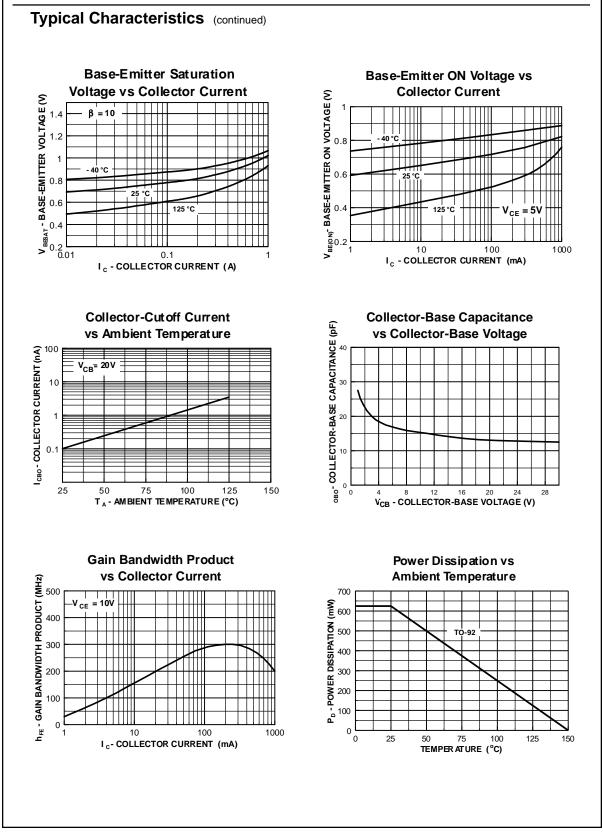
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| Symbol | Parameter | Test Conditions | Min | Max | Units |
|----------|---|--|-----|----------|-------|
|)FF CHAI | RACTERISTICS | | | | |
| (BR)CEO | Collector-Emitter Breakdown Voltage | $I_{\rm C} = 10 \text{ mA}, I_{\rm B} = 0$ | 20 | | V |
| (BR)CES | Collector-Base Breakdown Voltage | $I_{\rm C} = 100 \ \mu \text{A}, I_{\rm E} = 0$ | 25 | | V |
| (BR)EBO | Emitter-Base Breakdown Voltage | $I_{\rm E} = 10 \mu{\rm A}, I_{\rm C} = 0$ | 5.0 | | V |
| BO | Collector-Cutoff Current | $V_{CB} = 25 \text{ V}, I_E = 0$ | | 10 | μA |
| | | $V_{CB} = 25 \text{ V}, \text{ I}_{E} = 0, \text{ T}_{A} = 150^{\circ}\text{C}$ | | 1.0 | mA |
| BO | Emitter-Cutoff Current | $V_{EB} = 5.0 \text{ V}, \text{ I}_{C} = 0$ | | 10 | μA |
|)N CHAR | ACTERISTICS | | | | |
| FE | DC Current Gain | I _C = 5.0 mA, V _{CE} = 10 V | 50 | | |
| | | $I_{C} = 0.5 \text{ A}, V_{CE} = 1.0 \text{ V}$ | 85 | 375 | |
| | | $I_{\rm C} = 1.0 \text{ A}, V_{\rm CE} = 1.0 \text{ V}$ | 60 | 0.5 | |
| CE(sat) | Collector-Emitter Saturation Voltage | $I_{\rm C} = 1.0 \text{ A}, I_{\rm B} = 100 \text{ mA}$ | | 0.5 | V |
| BE(on) | Base-Emitter On Voltage | $I_{C} = 1.0 \text{ A}, V_{CE} = 1.0 \text{ V}$ | | 1.0 | V |
| | | f = 35 MHz | | | |
| Туріса | I Characteristics | f = 35 MHz | | | |
| | Il Characteristics Fypical Pulsed Current Gain vs Collector Current $V_{CE} = 5V$ $-40 \circ C$ 0.01 0.01 0.1 $1_{c} - COLLECTOR CURRENT (A)$ | Collector- Voltage vs $\beta = 10$ $\beta = 10$ $\beta = 10$ 125 °C 0.01 | | r Curren | |

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|--------------------------|---------------------------|---|
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