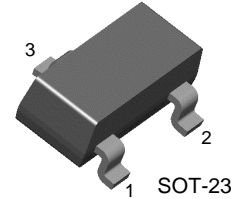


BC807/BC808

Switching and Amplifier Applications

- Suitable for AF-Driver stages and low power output stages
- Complement to BC817/BC818



1. Base 2. Emitter 3. Collector

PNP Epitaxial Silicon Transistor

Absolute Maximum Ratings $T_a=25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Value | Units |
|-----------|-----------------------------|-----------|------------------|
| V_{CES} | Collector-Emitter Voltage | | |
| | : BC807 | -50 | V |
| | : BC808 | -30 | V |
| V_{CEO} | Collector-Emitter Voltage | | |
| | : BC807 | -45 | V |
| | : BC808 | -25 | V |
| V_{EBO} | Emitter-Base Voltage | -5 | V |
| I_C | Collector Current (DC) | -800 | mA |
| P_C | Collector Power Dissipation | -310 | mW |
| T_J | Junction Temperature | 150 | $^\circ\text{C}$ |
| T_{STG} | Storage Temperature | -65 ~ 150 | $^\circ\text{C}$ |

Electrical Characteristics $T_a=25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Test Condition | Min. | Typ. | Max. | Units |
|----------------------|--------------------------------------|---|------|------|------|-------|
| BV_{CEO} | Collector-Emitter Breakdown Voltage | $I_C = -10\text{mA}, I_B = 0$ | | | | |
| | : BC807 | | -45 | | | V |
| | : BC808 | | -25 | | | V |
| BV_{CES} | Collector-Emitter Breakdown Voltage | $I_C = -0.1\text{mA}, V_{BE} = 0$ | | | | |
| | : BC807 | | -50 | | | V |
| | : BC808 | | -30 | | | V |
| BV_{EBO} | Emitter-Base Breakdown Voltage | $I_E = -0.1\text{mA}, I_C = 0$ | -5 | | | V |
| I_{CES} | Collector Cut-off Current | $V_{CE} = -25\text{V}, V_{BE} = 0$ | | | -100 | nA |
| I_{EBO} | Emitter Cut-off Current | $V_{EB} = -4\text{V}, I_C = 0$ | | | -100 | nA |
| h_{FE1} | DC Current Gain | $V_{CE} = -1\text{V}, I_C = -100\text{mA}$ | 100 | | 630 | |
| h_{FE2} | | $V_{CE} = -1\text{V}, I_C = -300\text{mA}$ | 60 | | | |
| $V_{CE}(\text{sat})$ | Collector-Emitter Saturation Voltage | $I_C = -500\text{mA}, I_B = -50\text{mA}$ | | | -0.7 | V |
| $V_{BE}(\text{on})$ | Base-Emitter On Voltage | $V_{CE} = -1\text{V}, I_C = -300\text{mA}$ | | | -1.2 | V |
| f_T | Current Gain Bandwidth Product | $V_{CE} = -5\text{V}, I_C = -10\text{mA}$ $f = 50\text{MHz}$ | | 100 | | MHz |
| C_{ob} | Output Capacitance | $V_{CB} = -10\text{V}, f = 1\text{MHz}$ | | | 12 | pF |

h_{FE} Classification

| Classification | 16 | 25 | 40 |
|----------------|-----------|-----------|-----------|
| h_{FE1} | 100 ~ 250 | 160 ~ 400 | 250 ~ 630 |
| h_{FE2} | 60- | 100- | 170- |

Marking Code

| Type | 807-16 | 807-25 | 807-40 | 808-16 | 808-25 | 808-40 |
|---------|--------|--------|--------|--------|--------|--------|
| Marking | 9FA | 9FB | 9FC | 9GA | 9GB | 9GC |

Typical Characteristics

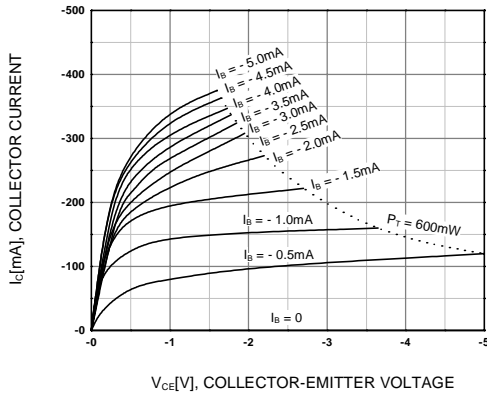


Figure 1. Static Characteristic

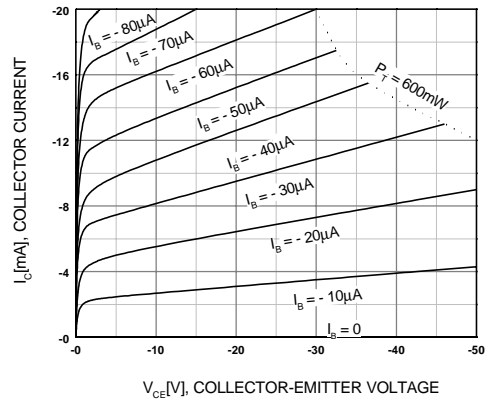


Figure 2. Static Characteristic

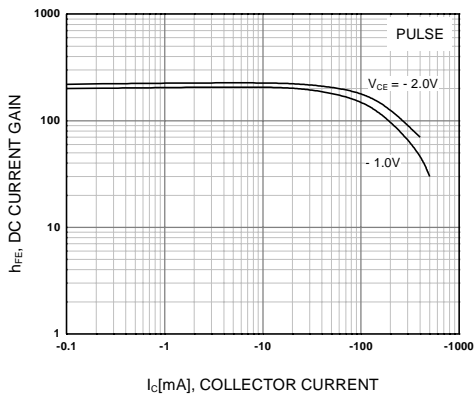


Figure 3. DC current Gain

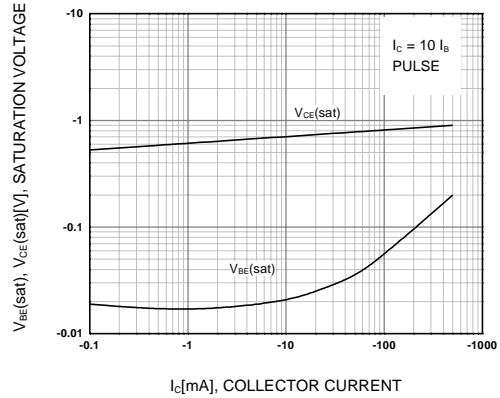


Figure 4. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

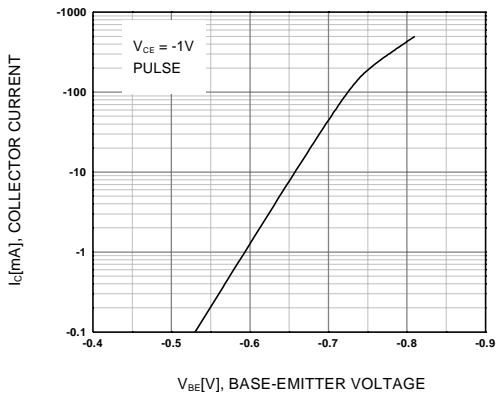


Figure 5. Base-Emitter On Voltage

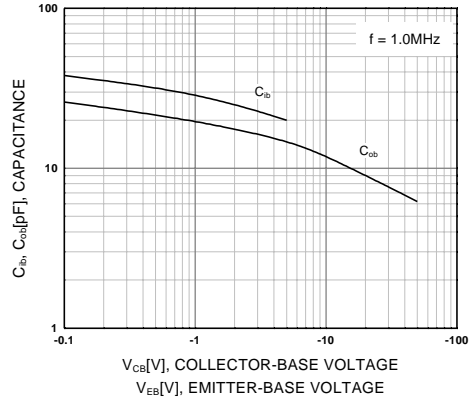


Figure 6. Input Output Capacitance

Typical Characteristics (Continued)

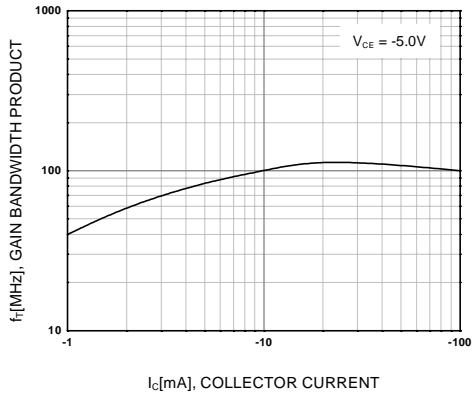
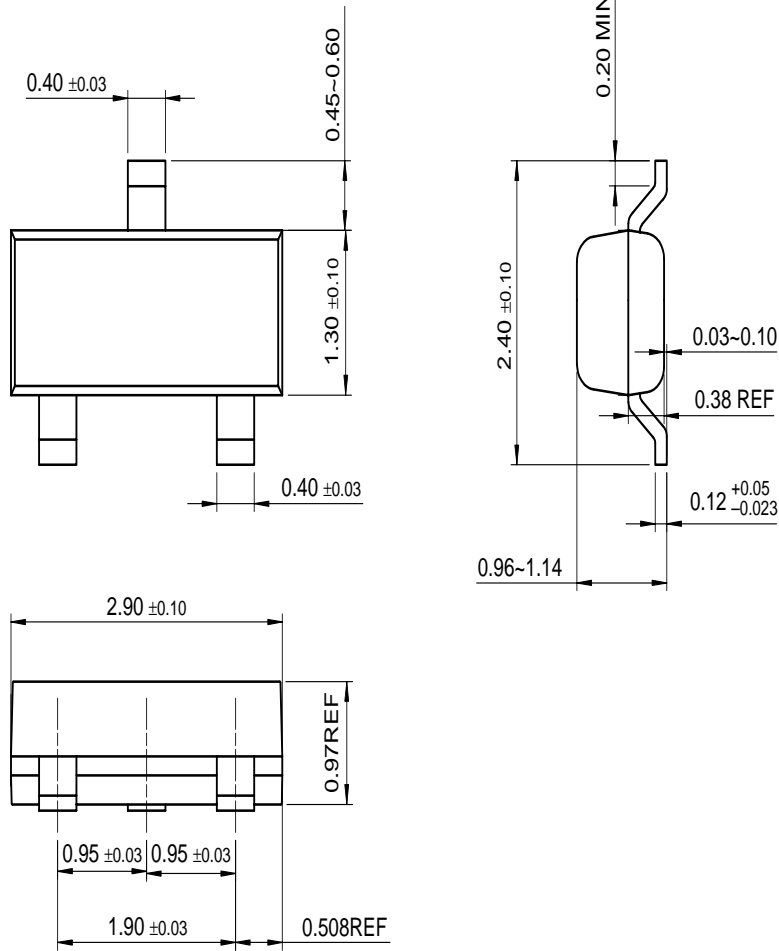


Figure 7. Current Gain Bandwidth Product

Package Dimensions

BC807/BC808

SOT-23



Dimensions in Millimeters

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| Bottomless [™] | FAST [®] | LittleFET [™] | Power247 [™] | SuperSOT [™] -3 |
| CoolFET [™] | FAST ^r [™] | MicroFET [™] | PowerTrench [®] | SuperSOT [™] -6 |
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