



Micro Commercial Components

Micro Commercial Components  
20736 Marilla Street Chatsworth  
CA 91311  
Phone: (818) 701-4933  
Fax: (818) 701-4939

**BC808-16**  
**BC808-25**  
**BC808-40**

## Features

- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Capable of 0.3Watts of Power Dissipation.
- Collector-current 0.8A
- Operating and storage junction temperature range: -65°C to +150°C
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

**PNP Silicon**  
**General Purpose**  
**Transistors**

## Mechanical Data

- Case: SOT-23 Molded Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Weight: 0.008 grams (approx.)
- Device Marking: BC808-16 5E  
BC808-25 5F  
BC808-40 5G

### Electrical Characteristics @ 25°C Unless Otherwise Specified

| Symbol                     | Parameter  | Min  | Max  | Units         |
|----------------------------|--|------|------|---------------|
| <b>OFF CHARACTERISTICS</b> |  |      |      |               |
| $V_{(BR)CEO}$              | Collector-Emitter Breakdown Voltage<br>( $I_C=-10\text{mAdc}$ , $I_E=0$ )  | -25  | ---  | Vdc           |
| $V_{(BR)CBO}$              | Collector-Base Breakdown Voltage<br>( $I_C=-100\text{uAdc}$ , $I_E=0$ )    | -30  | ---  | Vdc           |
| $V_{(BR)EBO}$              | Collector-Emitter Breakdown Voltage<br>( $I_E=-100\text{uAdc}$ , $I_C=0$ ) | -5.0 | ---  | Vdc           |
| $I_{CBO}$                  | Collector Cutoff Current<br>( $V_{CB}=-25\text{Vdc}$ , $I_E=0$ )           | ---  | -0.1 | $\text{uAdc}$ |
| $I_{EBO}$                  | Emitter Cutoff Current<br>( $V_{EB}=-4.0\text{Vdc}$ , $I_C=0$ )            | ---  | -0.1 | $\text{uAdc}$ |

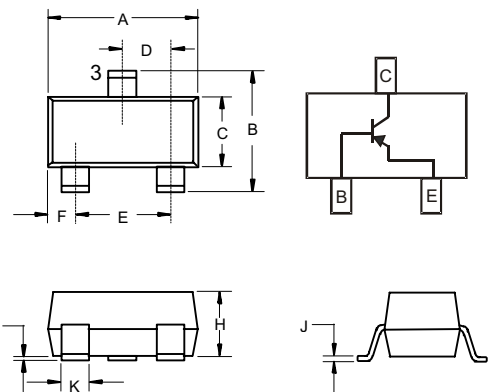
### ON CHARACTERISTICS

|               |  |                   |                   |     |
|---------------|--|-------------------|-------------------|-----|
| $h_{FE(1)}$   | DC Current Gain<br>( $I_C=-100\text{mAdc}$ , $V_{CE}=-1.0\text{Vdc}$ )<br>BC808-16<br>BC808-25<br>BC808-40 | 100<br>160<br>250 | 250<br>400<br>630 | --- |
| $h_{FE(2)}$   | DC Current Gain<br>( $I_C=-300\text{mAdc}$ , $V_{CE}=-1.0\text{Vdc}$ )                                     | 60                | ---               | --- |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage<br>( $I_C=-500\text{mAdc}$ , $I_E=-50\text{mAdc}$ )                   | ---               | -0.7              | Vdc |
| $V_{BE}$      | Base-Emitter Voltage<br>( $V_{CE}=-1\text{Vdc}$ , $I_C=-300\text{mAdc}$ )                                  | ---               | -1.2              | Vdc |

### SMALL SIGNAL CHARACTERISTICS

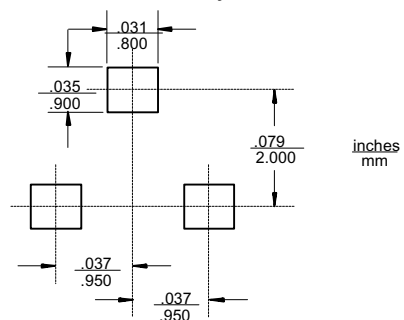
|          |   |     |     |     |
|----------|---|-----|-----|-----|
| $f_T$    | Transition frequency<br>( $V_{CE}=-5.0\text{V}$ , $f=50\text{MHz}$ , $I_C=-10\text{mA}$ )         | 100 | --- | MHz |
| $C_{ob}$ | Collector output capacitance<br>( $V_{CE}=-5.0\text{V}$ , $f=50\text{MHz}$ , $I_C=-10\text{mA}$ ) | 12  | --- | pF  |

## SOT-23



| DIM | DIMENSIONS |       |      |      | NOTE |
|-----|------------|-------|------|------|------|
|     | INCHES     |       | MM   |      |      |
| A   | .110       | .120  | 2.80 | 3.04 |      |
| B   | .083       | .098  | 2.10 | 2.64 |      |
| C   | .047       | .055  | 1.20 | 1.40 |      |
| D   | .035       | .041  | .89  | 1.03 |      |
| E   | .070       | .081  | 1.78 | 2.05 |      |
| F   | .018       | .024  | .45  | .60  |      |
| G   | .0005      | .0039 | .013 | .100 |      |
| H   | .035       | .044  | .89  | 1.12 |      |
| J   | .003       | .007  | .085 | .180 |      |
| K   | .015       | .020  | .37  | .51  |      |

### Suggested Solder Pad Layout



# BC808-16 thru BC808-40

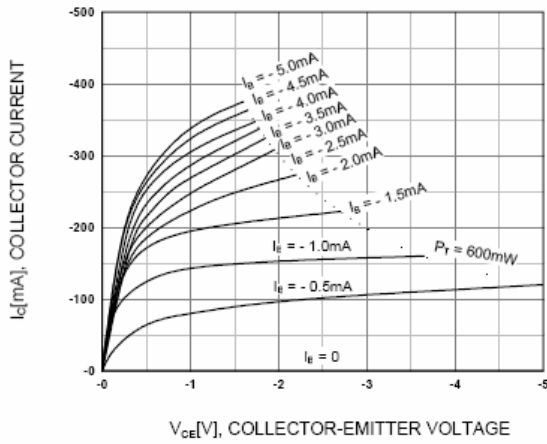


Figure 1. Static Characteristic

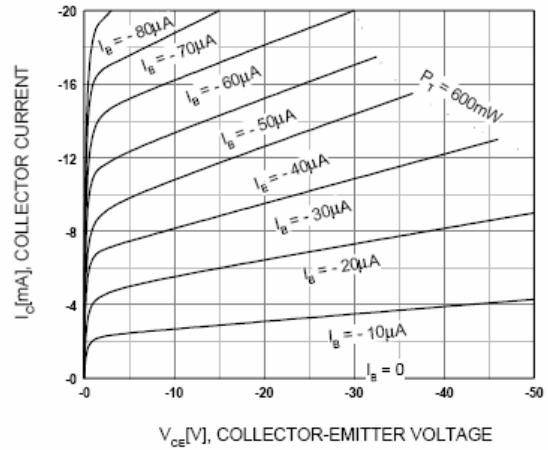


Figure 2. Static Characteristic

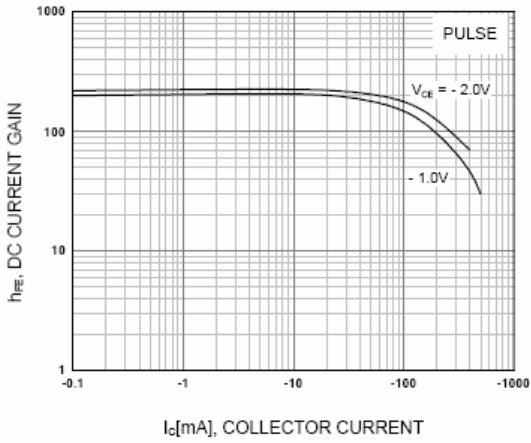


Figure 3. DC current Gain

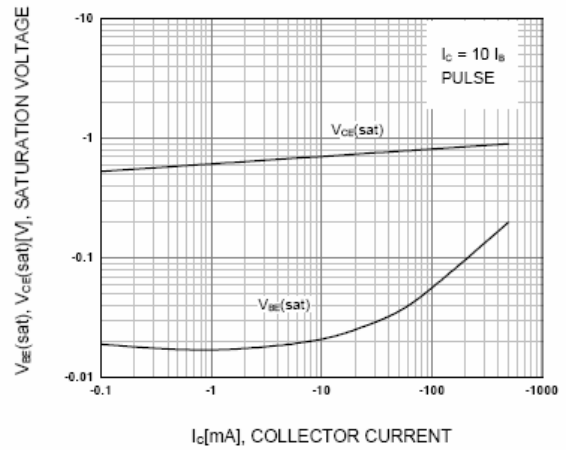


Figure 4. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

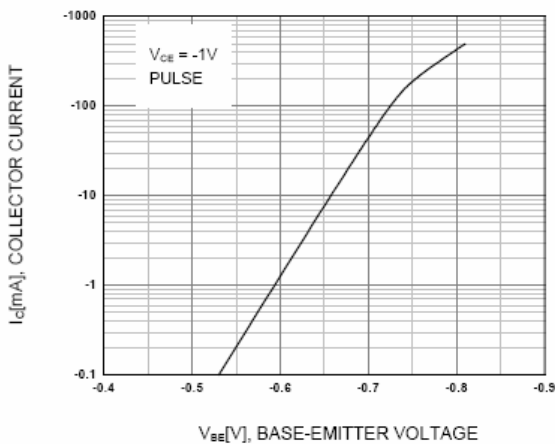


Figure 5. Base-Emitter On Voltage

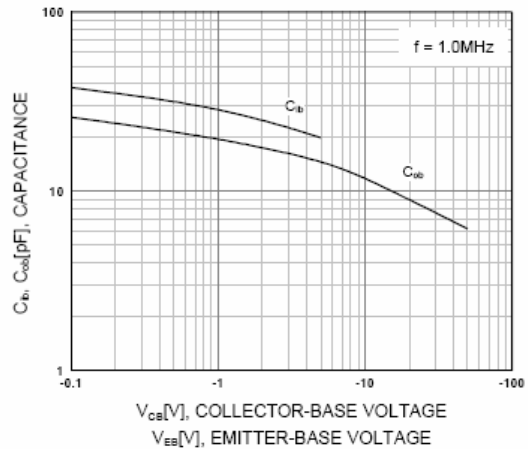


Figure 6. Input Output Capacitance



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### Ordering Information :

| Device         | Packing               |
|----------------|-----------------------|
| Part Number-TP | Tape&Reel; 3Kpcs/Reel |

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