

isc Silicon NPN Power Transistor

BD807

DESCRIPTION

- DC Current Gain -  
:  $h_{FE} = 30(\text{Min.}) @ I_C = 2A$
- Collector-Emitter Sustaining Voltage-  
:  $V_{CEO(SUS)} = 60V(\text{Min})$
- Complement to Type BD808

APPLICATIONS

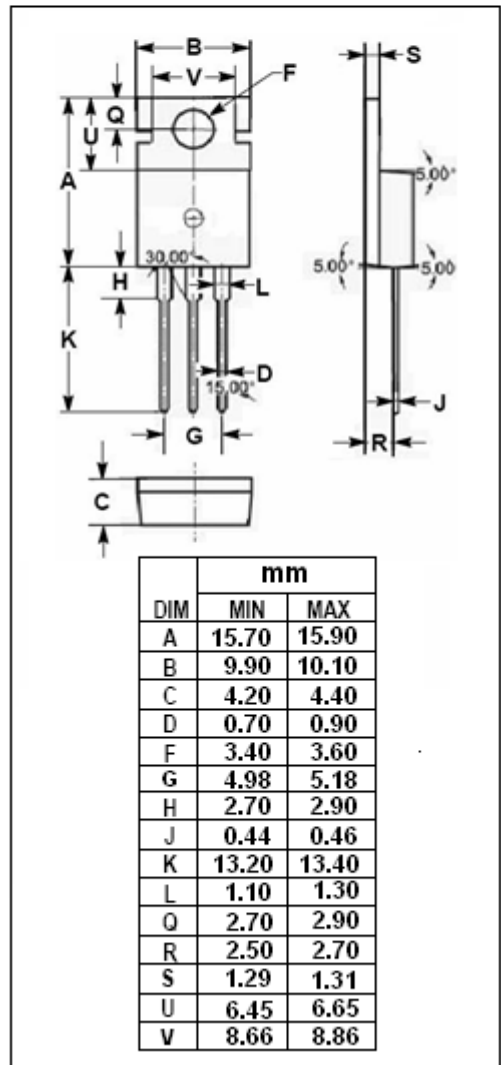
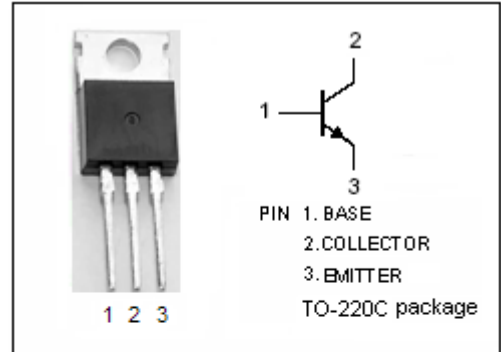
- Designed for use in high power audio amplifiers utilizing complementary or quasi complementary circuits.

ABSOLUTE MAXIMUM RATINGS( $T_a=25^{\circ}C$ )

| SYMBOL    | PARAMETER                                       | VALUE   | UNIT        |
|-----------|---|---------|-------------|
| $V_{CBO}$ | Collector-Base Voltage                          | 70      | V           |
| $V_{CEO}$ | Collector-Emitter Voltage                       | 60      | V           |
| $V_{EBO}$ | Emitter-Base Voltage                            | 5       | V           |
| $I_C$     | Collector Current-Continuous                    | 10      | A           |
| $I_B$     | Base Current                                    | 6       | A           |
| $P_C$     | Collector Power Dissipation @ $T_C=25^{\circ}C$ | 90      | W           |
| $T_J$     | Junction Temperature                            | 150     | $^{\circ}C$ |
| $T_{stg}$ | Storage Temperature Range                       | -55~150 | $^{\circ}C$ |

THERMAL CHARACTERISTICS

| SYMBOL        | PARAMETER                            | MAX  | UNIT          |
|---------------|--------------------------------------|------|---------------|
| $R_{th\ j-c}$ | Thermal Resistance, Junction to Case | 1.39 | $^{\circ}C/W$ |



**isc Silicon NPN Power Transistor****BD807****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$  unless otherwise specified

| SYMBOL         | PARAMETER                            | CONDITIONS  | MIN | MAX | UNIT |
|----------------|--------------------------------------|---|-----|-----|------|
| $V_{CEO(SUS)}$ | Collector-Emitter Sustaining Voltage | $I_C= 200\text{mA}; I_B= 0$                                     | 60  |     | V    |
| $V_{CE(sat)}$  | Collector-Emitter Saturation Voltage | $I_C= 4\text{A}; I_B= 0.4\text{A}$                              |     | 1.1 | V    |
| $V_{BE(on)}$   | Base-Emitter On Voltage              | $I_C= 4\text{A}; V_{CE}= 2\text{V}$                             |     | 1.6 | V    |
| $I_{CBO}$      | Collector Cutoff Current             | $V_{CB}= 70\text{V}; I_E= 0$                                    |     | 1.0 | mA   |
| $I_{EBO}$      | Emitter Cutoff Current               | $V_{EB}= 5\text{V}; I_C= 0$                                     |     | 2.0 | mA   |
| $h_{FE-1}$     | DC Current Gain                      | $I_C= 2\text{A}; V_{CE}= 2\text{V}$                             | 30  |     |      |
| $h_{FE-2}$     | DC Current Gain                      | $I_C= 4\text{A}; V_{CE}= 2\text{V}$                             | 15  |     |      |
| $f_T$          | Current-Gain—Bandwidth Product       | $I_C= 1.0\text{A}; V_{CE}= 10\text{V}; f_{test}= 1.0\text{MHz}$ | 1.5 |     | MHz  |