

**DESCRIPTION**

- DC Current Gain -  
:  $h_{FE} = 30 @ I_C = -2A$
- Collector-Emitter Sustaining Voltage-  
:  $V_{CEO(SUS)} = -80V(\text{Min})$
- Complement to Type BD809

**APPLICATIONS**

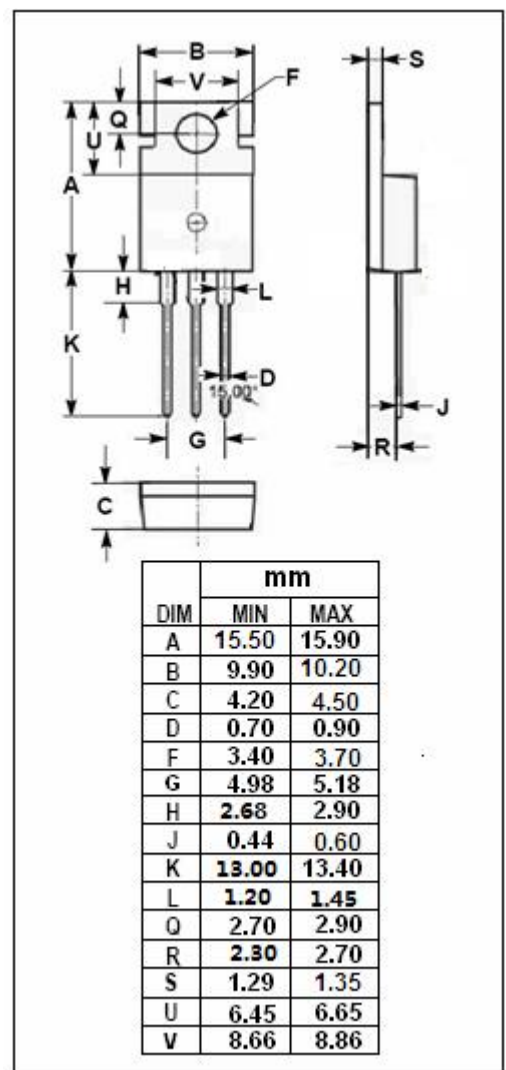
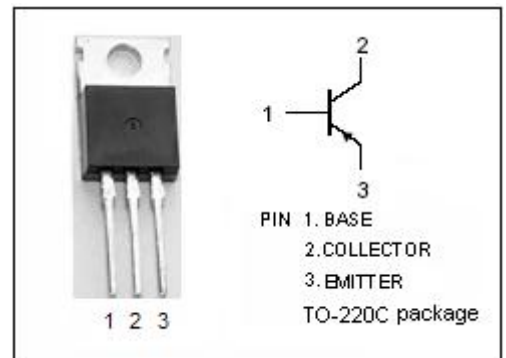
- Designed for use in high power audio amplifiers utilizing complementary or quasi complementary circuits.

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

| SYMBOL    | PARAMETER   | VALUE   | UNIT             |
|-----------|---|---------|------------------|
| $V_{CBO}$ | Collector-Base Voltage                                    | -80     | V                |
| $V_{CEO}$ | Collector-Emitter Voltage                                 | -80     | 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<br>@ $T_C = 25^\circ\text{C}$ | 90      | W                |
| $T_J$     | Junction Temperature                                      | 150     | $^\circ\text{C}$ |
| $T_{stg}$ | Storage Temperature Range                                 | -55~150 | $^\circ\text{C}$ |

**THERMAL CHARACTERISTICS**

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



**ELECTRICAL CHARACTERISTICS**

$T_C=25^{\circ}\text{C}$  unless otherwise specified

| SYMBOL         | PARAMETER                            | CONDITIONS   | MIN | MAX  | UNIT |
|----------------|--------------------------------------|--|-----|------|------|
| $V_{CEO(SUS)}$ | Collector-Emitter Sustaining Voltage | $I_C = -30\text{mA}; I_B = 0$  | -80 |      | 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             | $V_{CB} = -80\text{V}; I_E = 0$                                      |     | -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  |