

isc Silicon PNP Power Transistor

BD738

DESCRIPTION

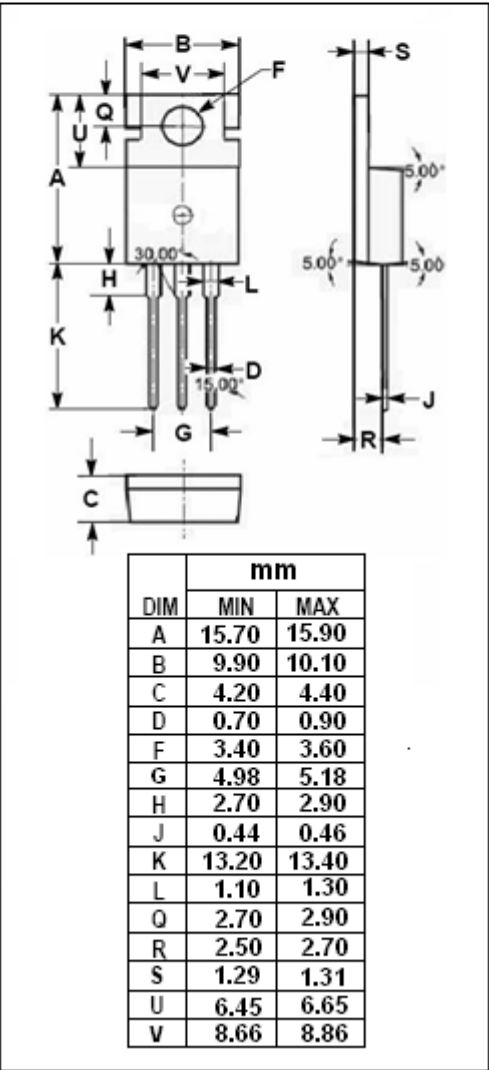
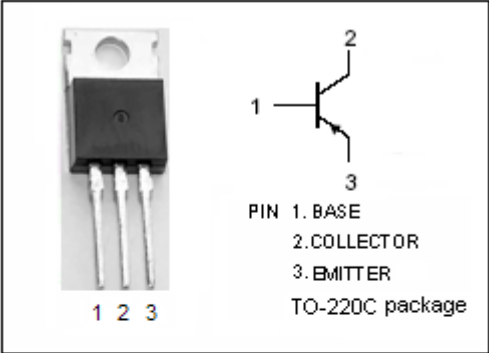
- DC Current Gain -  
:  $h_{FE} = 40(\text{Min.}) @ I_C = -20\text{mA}$
- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = -45\text{V}(\text{Min.})$
- Complement to Type BD737

APPLICATIONS

- Designed for amplifier and switching applications.

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

| SYMBOL    | PARAMETER                                                 | VALUE   | UNIT               |
|-----------|-----------------------------------------------------------|---------|--------------------|
| $V_{CBO}$ | Collector-Base Voltage                                    | -45     | V                  |
| $V_{CEO}$ | Collector-Emitter Voltage                                 | -45     | V                  |
| $V_{EBO}$ | Emitter-Base Voltage                                      | -5      | V                  |
| $I_C$     | Collector Current-Continuous                              | -4      | A                  |
| $I_{CM}$  | Collector Current-Peak                                    | -7      | A                  |
| $I_B$     | Base Current-Continuous                                   | -1      | A                  |
| $P_C$     | Collector Power Dissipation<br>@ $T_a=25^{\circ}\text{C}$ | 2       | W                  |
|           | Collector Power Dissipation<br>@ $T_C=25^{\circ}\text{C}$ | 40      |                    |
| $T_J$     | Junction Temperature                                      | 150     | $^{\circ}\text{C}$ |
| $T_{stg}$ | Storage Temperature Range                                 | -55~150 | $^{\circ}\text{C}$ |



**isc Silicon PNP Power Transistor****BD738****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$  unless otherwise specified

| SYMBOL        | PARAMETER                            | CONDITIONS                                   | MIN | MAX  | UNIT |
|---------------|--------------------------------------|----------------------------------------------|-----|------|------|
| $V_{(BR)CEO}$ | Collector-Emitter Breakdown Voltage  | $I_C = -30\text{mA}$ ; $I_B = 0$             | -45 |      | V    |
| $V_{(BR)CBO}$ | Collector-Base Breakdown Voltage     | $I_C = -0.1\text{mA}$ ; $I_E = 0$            | -45 |      | V    |
| $V_{(BR)EBO}$ | Emitter-Base Breakdown Voltage       | $I_E = -1\text{mA}$ ; $I_C = 0$              | -5  |      | V    |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C = -2\text{A}$ ; $I_B = -0.2\text{A}$    |     | -0.6 | V    |
| $V_{BE(on)}$  | Base-Emitter On Voltage              | $I_C = -2\text{A}$ ; $V_{CE} = -1\text{V}$   |     | -1.1 | V    |
| $I_{CES}$     | Collector Cutoff Current             | $V_{CE} = -45\text{V}$ ; $V_{BE} = 0$        |     | -0.2 | mA   |
| $h_{FE-1}$    | DC Current Gain                      | $I_C = -20\text{mA}$ ; $V_{CE} = -4\text{V}$ | 40  |      |      |
| $h_{FE-2}$    | DC Current Gain                      | $I_C = -2\text{A}$ ; $V_{CE} = -1\text{V}$   | 40  |      |      |