

isc Silicon PNP Power Transistors

BD750/750A

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = -90V(\text{Min})$ - BD750
= $-120V(\text{Min})$ - BD750A
- High Power Dissipation
- Complement to Type BD751/751A

APPLICATIONS

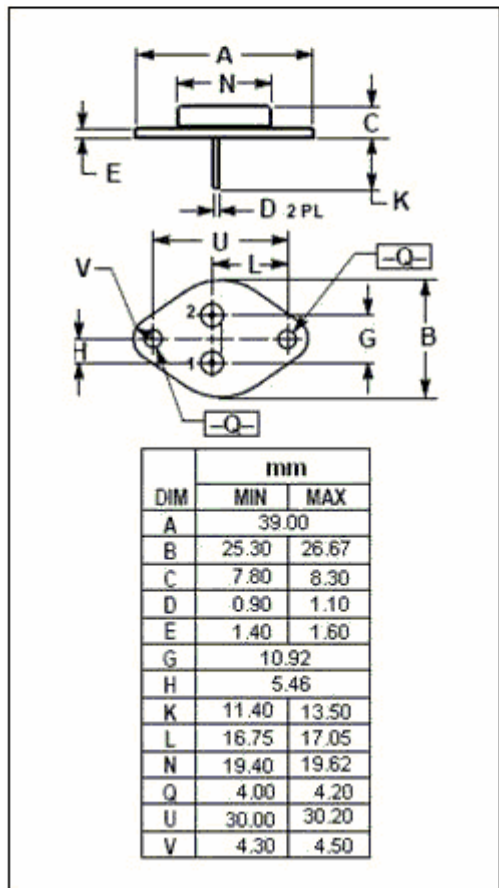
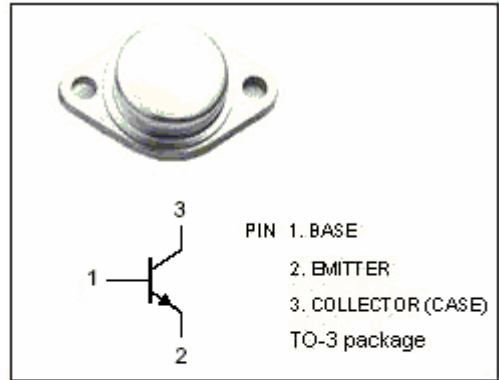
- Designed for high voltage and high power amplifier applications.

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

| SYMBOL | PARAMETER | VALUE | UNIT | |
|----------------|---|---------|------------------|---|
| V_{CEV} | Collector-Emitter Voltage | BD750 | -100 | V |
| | | BD750A | -130 | |
| $V_{CEO(SUS)}$ | Collector-Emitter Voltage | BD750 | -90 | V |
| | | BD750A | -120 | |
| V_{EBO} | Emitter-Base Voltage | -7 | V | |
| I_C | Collector Current-Continuous | -20 | A | |
| I_B | Base Current-Continuous | -5 | A | |
| P_C | Collector Power Dissipation@ $T_C=25^\circ\text{C}$ | 200 | W | |
| T_J | Junction Temperature | 200 | $^\circ\text{C}$ | |
| T_{stg} | Storage Temperature | -65~200 | $^\circ\text{C}$ | |

THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---------------|-------------------------------------|-------|--------------------|
| $R_{th\ j-c}$ | Thermal Resistance,Junction to Case | 0.875 | $^\circ\text{C/W}$ |



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ELECTRICAL CHARACTERISTICS

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

| SYMBOL | PARAMETER | | CONDITIONS | MIN | TYP. | MAX | UNIT |
|----------------|--------------------------------------|--------|--|------|------|------|------|
| $V_{CEO(SUS)}$ | Collector-Emitter Sustaining Voltage | BD750 | $I_C = -100\text{mA}; I_B = 0$ | -90 | | | V |
| | | BD750A | | -120 | | | |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | BD750 | $I_C = -7.5\text{A}; I_B = -0.75\text{A}$ | | | -1.5 | V |
| | | BD750A | $I_C = -5\text{A}; I_B = -0.5\text{A}$ | | | -1.0 | |
| $V_{BE(sat)}$ | Base-Emitter Saturation Voltage | BD750 | $I_C = -7.5\text{A}; I_B = -0.75\text{A}$ | | | -1.8 | V |
| | | BD750A | $I_C = -5\text{A}; I_B = -0.5\text{A}$ | | | -1.8 | |
| I_{CEV} | Collector Cutoff Current | BD750 | $V_{CEV} = -100\text{V}; V_{BE(off)} = -1.5\text{V}$ | | | -0.5 | mA |
| | | BD750A | $V_{CEV} = -130\text{V}; V_{BE(off)} = -1.5\text{V}$ | | | -0.5 | |
| I_{EBO} | Emitter Cutoff Current | | $V_{EB} = -7\text{V}; I_C = 0$ | | | -1.0 | mA |
| h_{FE} | DC Current Gain | BD750 | $I_C = -7.5\text{A}; V_{CE} = -2\text{V}$ | 15 | | 60 | |
| | | BD750A | $I_C = -5\text{A}; V_{CE} = -2\text{V}$ | 25 | | 100 | |
| f_T | Current-Gain—Bandwidth Product | | $I_C = -0.5\text{A}; V_{CE} = -10\text{V}; f_{test} = 1\text{MHz}$ | 4 | | | MHz |