

**isc Silicon NPN Power Transistor**

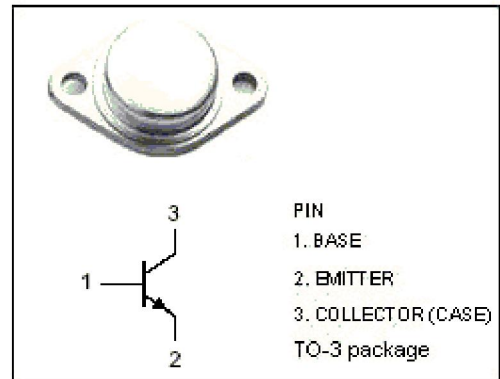
**3DD15**

**DESCRIPTION**

- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = 100V(\text{Min.})$
- DC Current Gain-  
:  $h_{FE} = 30\sim 250(\text{Min.})@I_C = 2A$
- Collector-Emitter Saturation Voltage-  
:  $V_{CE(sat)} = 1.5V(\text{Max})@I_C = 2.5A$

**APPLICATIONS**

- Designed for B&W TV horizontal output , regulated power supply and power amplifier applications.

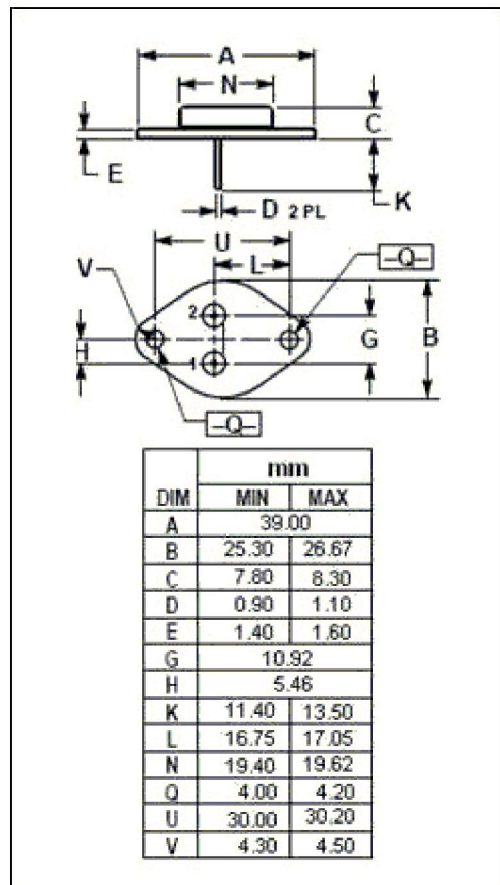


**ABSOLUTE MAXIMUM RATINGS( $T_a=25^\circ C$ )**

| SYMBOL    | PARAMETER                                     | VALUE   | UNIT       |
|-----------|---|---------|------------|
| $V_{CBO}$ | Collector-Base Voltage                        | 150     | V          |
| $V_{CEO}$ | Collector-Emitter Voltage                     | 100     | V          |
| $V_{EBO}$ | Emitter-Base Voltage                          | 5       | V          |
| $I_C$     | Collector Current-Continuous                  | 5       | A          |
| $P_C$     | Collector Power Dissipation@ $T_C=75^\circ C$ | 50      | W          |
| $T_J$     | Junction Temperature                          | 175     | $^\circ C$ |
| $T_{stg}$ | Storage Temperature                           | -55~175 | $^\circ C$ |

**THERMAL CHARACTERISTICS**

| SYMBOL        | PARAMETER                            | MAX | UNIT         |
|---------------|--------------------------------------|-----|--------------|
| $R_{th\ j-c}$ | Thermal Resistance, Junction to Case | 2.0 | $^\circ C/W$ |



**isc Silicon NPN Power Transistors****3DD15****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$  unless otherwise specified

| SYMBOL        | PARAMETER                            | CONDITIONS   | MIN | MAX | UNIT          |
|---------------|--------------------------------------|--|-----|-----|---------------|
| $V_{(BR)CEO}$ | Collector-Emitter Breakdown Voltage  | $I_C=5\text{mA}; I_B=0$                                  | 100 |     | V             |
| $V_{(BR)CBO}$ | Collector-Base Breakdown Voltage     | $I_C=1\text{mA}; I_E=0$                                  | 150 |     | 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 | $I_C=2.5\text{A}; I_B=0.25\text{A}$                      |     | 1.5 | V             |
| $I_{CEO}$     | Collector Cutoff Current             | $V_{CE}=50\text{V}; I_B=0$                               |     | 1.0 | mA            |
| $I_{CBO}$     | Collector Cutoff Current             | $V_{CB}=50\text{V}; I_E=0$                               |     | 0.5 | mA            |
| $h_{FE}$      | DC Current Gain                      | $I_C=2\text{A}; V_{CE}=10\text{V}$                       | 120 | 180 |               |
| $t_f$         | Fall Time                            | $I_C=3\text{A}; I_{B1}=0.2\text{A}, I_{B2}=-0.3\text{A}$ |     | 1.0 | $\mu\text{s}$ |