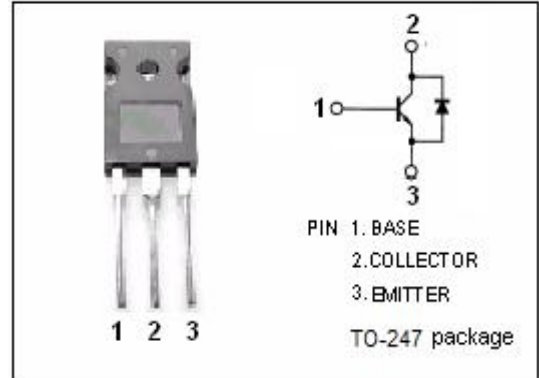


**isc Silicon NPN Power Transistor**
**BU508DW**
**DESCRIPTION**

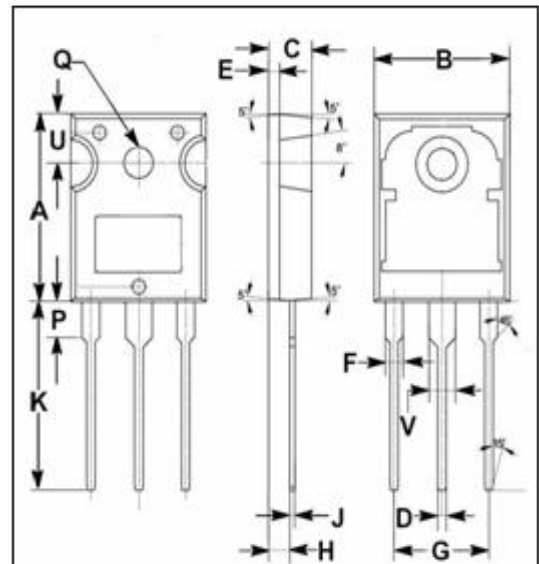
- High Voltage- $V_{CES} = 1500V(\text{Min.})$
- Collector Current-  $I_C = 8.0A$
- Built-in Integrated Diode
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- Designed for use in large screen color deflection circuits .


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

| SYMBOL    | PARAMETER   | VALUE   | UNIT             |
|-----------|---|---------|------------------|
| $V_{CES}$ | Collector-Emitter Voltage                                 | 1500    | V                |
| $V_{CEO}$ | Collector-Emitter Voltage                                 | 700     | V                |
| $V_{EBO}$ | Emitter-Base Voltage                                      | 7       | V                |
| $I_C$     | Collector Current-Continuous                              | 8.0     | A                |
| $I_{CM}$  | Collector Current-Peak                                    | 15      | A                |
| $I_B$     | Base Current-Continuous                                   | 4       | A                |
| $I_{BM}$  | Base Current-Peak   | 6       | A                |
| $P_C$     | Collector Power Dissipation<br>@ $T_c = 25^\circ\text{C}$ | 125     | W                |
| $T_J$     | Junction Temperature                                      | 150     | $^\circ\text{C}$ |
| $T_{stg}$ | Storage Temperature                                       | -65~150 | $^\circ\text{C}$ |



| DIM | mm    |       |
|-----|-------|-------|
|     | MIN   | MAX   |
| A   | 19.80 | 20.20 |
| B   | 15.40 | 15.80 |
| C   | 4.90  | 5.10  |
| D   | 0.90  | 1.10  |
| E   | 1.40  | 1.60  |
| F   | 1.90  | 2.10  |
| G   | 10.80 | 11.00 |
| H   | 2.40  | 2.60  |
| J   | 0.50  | 0.70  |
| K   | 19.50 | 20.50 |
| P   | 3.90  | 4.10  |
| Q   | 3.30  | 3.50  |
| U   | 5.20  | 5.40  |
| V   | 2.90  | 3.10  |

**THERMAL CHARACTERISTICS**

| SYMBOL        | PARAMETER                            | MAX | UNIT               |
|---------------|--------------------------------------|-----|--------------------|
| $R_{th\ j-c}$ | Thermal Resistance, Junction to Case | 1.0 | $^\circ\text{C/W}$ |

**isc Silicon NPN Power Transistor****BU508DW****ELECTRICAL CHARACTERISTICS**T<sub>C</sub>=25°C unless otherwise specified

| SYMBOL                | PARAMETER                            | CONDITIONS   | MIN | TYP. | MAX        | UNIT |
|-----------------------|--------------------------------------|--|-----|------|------------|------|
| V <sub>CEO(SUS)</sub> | Collector-Emitter Sustaining Voltage | I <sub>C</sub> = 50mA; I <sub>B</sub> = 0  | 700 |      |            | V    |
| V <sub>CE(sat)</sub>  | Collector-Emitter Saturation Voltage | I <sub>C</sub> = 4.5A; I <sub>B</sub> = 1.6A   |     |      | 1.0        | V    |
| V <sub>BE(sat)</sub>  | Base-Emitter Saturation Voltage      | I <sub>C</sub> = 4.5A; I <sub>B</sub> = 2A   |     |      | 1.1        | V    |
| I <sub>CES</sub>      | Collector Cutoff Current             | V <sub>CE</sub> = 1500V; V <sub>BE</sub> = 0<br>V <sub>CE</sub> = 1500V; V <sub>BE</sub> = 0; T <sub>C</sub> = 125°C |     |      | 1.0<br>2.0 | mA   |
| I <sub>EBO</sub>      | Emitter Cutoff Current               | V <sub>EB</sub> = 5.0V; I <sub>C</sub> = 0   |     |      | 1          | mA   |
| h <sub>FE</sub>       | DC Current Gain                      | I <sub>C</sub> = 0.1A; V <sub>CE</sub> = 5V  | 6   |      | 30         |      |
| f <sub>T</sub>        | Current-Gain—Bandwidth Product       | I <sub>C</sub> = 0.1A; V <sub>CE</sub> = 5V  |     | 7    |            | MHz  |
| V <sub>ECF</sub>      | C-E Diode Forward Voltage            | I <sub>F</sub> = 4.5A  |     |      | 2.0        | V    |

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