

**isc Silicon NPN Power Transistors**

**2SD458**

**DESCRIPTION**

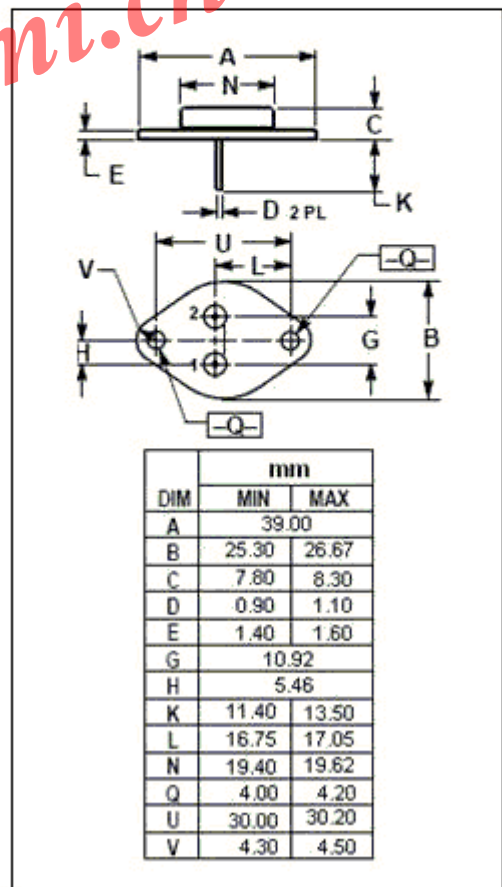
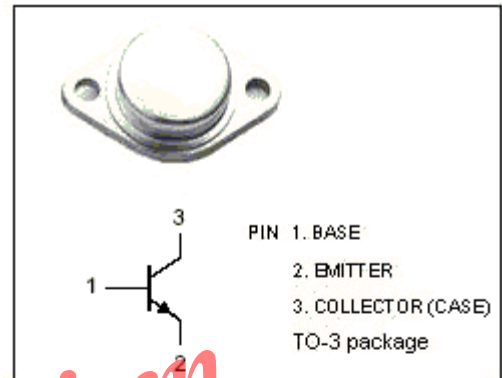
- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = 400V(\text{Min})$
- High Power Dissipation-  
:  $P_C = 80W(\text{Max}) @ T_C = 25^\circ\text{C}$

**APPLICATIONS**

- Designed for high power amplifier and switching applications.

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

| SYMBOL    | PARAMETER   | VALUE   | UNIT             |
|-----------|---|---------|------------------|
| $V_{CBO}$ | Collector-Base Voltage                                    | 600     | V                |
| $V_{CER}$ | Collector-Emitter Voltage $R_{BE} = 50 \Omega$            | 600     | V                |
| $V_{CEO}$ | Collector-Emitter Voltage                                 | 400     | V                |
| $V_{EBO}$ | Emitter-Base Voltage                                      | 5       | V                |
| $I_C$     | Collector Current-Continuous                              | 5       | A                |
| $I_{CM}$  | Collector Current-Peak                                    | 10      | A                |
| $I_B$     | Base Current-Continuous                                   | 2       | A                |
| $I_{BM}$  | Base Current-Peak   | 3       | A                |
| $P_C$     | Collector Power Dissipation<br>@ $T_C = 25^\circ\text{C}$ | 80      | W                |
| $T_J$     | Junction Temperature                                      | 150     | $^\circ\text{C}$ |
| $T_{stg}$ | Storage Temperature                                       | -65~150 | $^\circ\text{C}$ |



**isc Silicon NPN Power Transistors****2SD458****ELECTRICAL CHARACTERISTICS**T<sub>j</sub>=25°C unless otherwise specified

| SYMBOL               | PARAMETER                            | CONDITIONS                                     | MIN | TYP. | MAX | UNIT |
|----------------------|--------------------------------------|--|-----|------|-----|------|
| V <sub>(BR)CEO</sub> | Collector-Emitter Breakdown Voltage  | I <sub>C</sub> = 10mA; I <sub>B</sub> = 0      | 400 |      |     | V    |
| V <sub>(BR)EBO</sub> | Emitter-Base Breakdown Voltage       | I <sub>E</sub> = 1mA; I <sub>C</sub> = 0       | 5   |      |     | V    |
| V <sub>CE(sat)</sub> | Collector-Emitter Saturation Voltage | I <sub>C</sub> = 5A; I <sub>B</sub> = 1A       |     |      | 1.5 | V    |
| V <sub>BE(sat)</sub> | Base-Emitter Saturation Voltage      | I <sub>C</sub> = 5A; I <sub>B</sub> = 1A       |     |      | 3.0 | V    |
| I <sub>CER</sub>     | Collector Cutoff Current             | V <sub>CE</sub> = 600V; R <sub>BE</sub> = 50 Ω |     |      | 1.0 | mA   |
| h <sub>FE</sub>      | DC Current Gain                      | I <sub>C</sub> = 5A; V <sub>CE</sub> = 5V      | 6.5 |      | 50  |      |

◆ **h<sub>FE</sub> Classifications**

| Q     | R      |
|-------|--------|
| 15-50 | 6.5-30 |

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