

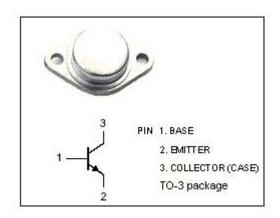
# **isc Silicon NPN Power Transistor**

#### **DESCRIPTION**

- · Collector-Emilter Sustaining Voltage-
  - : V<sub>CEO(SUS)</sub>= 500V(Min.)
- · Low Collector Saturation Voltage
  - : V<sub>CE(sat)</sub>= 1.0V(Max.)@ I<sub>C</sub>= 8A
- · High Speed Switching
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

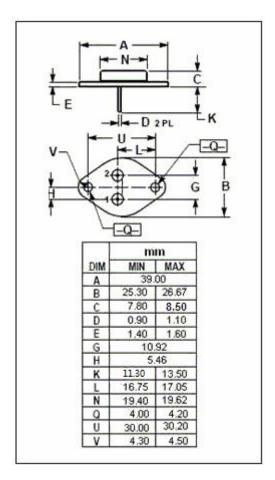


• Designed for power switching applications.



### ABSOLUTE MAXIMUM RATINGS (Ta=25℃)

| SYMBOL           | PARAMETER   | VALUE   | UNIT         |
|------------------|---|---------|--------------|
| V <sub>СВО</sub> | Collector-Base Voltage                                | 800     | V            |
| V <sub>CEO</sub> | Collector-Emitter Voltage                             | 500     | V            |
| V <sub>EBO</sub> | Emitter-Base Voltage                                  | 7       | V            |
| Ic               | Collector Current-Continuous                          | 15      | Α            |
| Ісм              | Collector Current-Peak                                | 30      | Α            |
| l <sub>Β</sub>   | Base Current-Continuous                               | 5       | Α            |
| Pc               | Collector Power Dissipation<br>@T <sub>C</sub> =25 °C | 200     | W            |
| T <sub>j</sub>   | Junction Temperature                                  | 150     | $^{\circ}$ C |
| T <sub>stg</sub> | Storage Temperature Range                             | -55~150 | $^{\circ}$ C |





# isc Silicon NPN Power Transistor

2SC3371

#### **ELECTRICAL CHARACTERISTICS**

Tc=25℃ unless otherwise specified

|                                 | DADAMETED                            | CONDITIONS  | MINI | TVD  | MAX | LINUT      |  |  |
|---------------------------------|--------------------------------------|---|------|------|-----|------------|--|--|
| SYMBOL                          | PARAMETER                            | CONDITIONS  | MIN  | TYP. | WAX | UNIT       |  |  |
| V <sub>CEO(SUS)</sub>           | Collector-Emitter Sustaining Voltage | I <sub>C</sub> = 0.5A; L= 25mH  | 500  |      |     | V          |  |  |
| $V_{\text{CE(sat)}}$            | Collector-Emitter Saturation Voltage | I <sub>C</sub> = 8A; I <sub>B</sub> = 1.6A  |      |      | 1.0 | V          |  |  |
| $V_{BE(sat)}$                   | Base-Emitter Saturation Voltage      | I <sub>C</sub> = 8A; I <sub>B</sub> = 1.6A  |      |      | 1.5 | ٧          |  |  |
| I <sub>CBO</sub>                | Collector Cutoff Current             | V <sub>CB</sub> = 800V; I <sub>E</sub> = 0  |      |      | 0.1 | mA         |  |  |
| ІЕВО                            | Emitter Cutoff Current               | V <sub>EB</sub> = 5V; I <sub>C</sub> = 0  |      |      | 0.1 | mA         |  |  |
| h <sub>FE-1</sub>               | DC Current Gain                      | I <sub>C</sub> = 0.1A; V <sub>CE</sub> = 5V   | 15   |      |     |            |  |  |
| h <sub>FE-2</sub>               | DC Current Gain                      | I <sub>C</sub> = 8A; V <sub>CE</sub> = 5V   | 10   |      |     |            |  |  |
| Switching Times; Resistive Load |                                      |   |      |      |     |            |  |  |
| t <sub>on</sub>                 | Turn-on Time                         |   |      |      | 1.0 | μ <b>s</b> |  |  |
| ts                              | Storage Time                         | I <sub>C</sub> = 8A; I <sub>B1</sub> = -I <sub>B2</sub> = 1.6A;<br>V <sub>CC</sub> = 200V |      |      | 3.0 | μ <b>s</b> |  |  |
| t <sub>f</sub>                  | Fall Time                            |   |      |      | 1.0 | μ \$       |  |  |

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