

## **isc Silicon NPN Power Transistor**

# 2SD1739

### DESCRIPTION

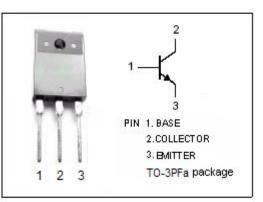
- High Voltage
- High Switching Speed
- Wide Area of Safe Operation
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

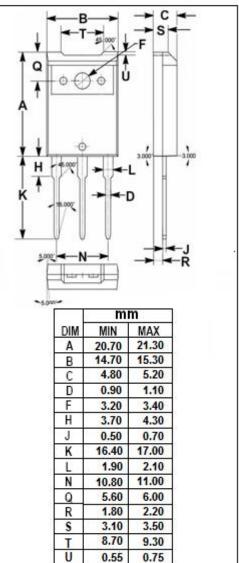
### **APPLICATIONS**

• Designed for horizontal deflection output applications.

| SYMBOL           | PARAMETER   | VALUE   | UNIT |  |
|------------------|---|---------|------|--|
| V <sub>CBO</sub> | Collector-Base Voltage                              | 1300    | V    |  |
| V <sub>CES</sub> | Collector-Emitter Voltage                           | 1300    | V    |  |
| Vceo             | Collector-Emitter Voltage                           | 700     | V    |  |
| V <sub>EBO</sub> | Emitter-Base Voltage                                | 7       | V    |  |
| lc               | Collector Current-Continuous                        | 6       | А    |  |
| I <sub>CP</sub>  | Collector Current-Peak                              | 18      | А    |  |
| I <sub>B</sub>   | Base Current- Continuous                            | 2.5     | А    |  |
| Pc               | Collector Power Dissipation<br>@T <sub>c</sub> =25℃ | 100     | W    |  |
| Tj               | Junction Temperature                                | 150     | °C   |  |
| T <sub>stg</sub> | Storage Temperature Range                           | -55-150 | °C   |  |

## ABSOLUTE MAXIMUM RATINGS (Ta=25°C)







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## **ELECTRICAL CHARACTERISTICS**

#### $T_c=25^{\circ}C$ unless otherwise specified

| SYMBOL               | PARAMETER                            | CONDITIONS                                  | MIN | ТҮР | МАХ | UNIT |
|----------------------|--------------------------------------|---|-----|-----|-----|------|
| V <sub>(BR)EBO</sub> | Emitter-Base Breakdown Voltage       | I <sub>E</sub> = 1mA; I <sub>C</sub> = 0    | 7   |     |     | V    |
| V <sub>CE(sat)</sub> | Collector-Emitter Saturation Voltage | I <sub>C</sub> = 5A; I <sub>B</sub> = 1.2A  |     |     | 8.0 | V    |
| V <sub>BE(sat)</sub> | Base-Emitter Saturation Voltage      | I <sub>C</sub> = 5A; I <sub>B</sub> = 1.2A  |     |     | 1.5 | V    |
| h <sub>FE</sub>      | DC Current Gain                      | I <sub>C</sub> = 1A; V <sub>CE</sub> = 5V   | 6   |     | 30  |      |
| Ісво                 | Collector Cutoff Current             | V <sub>CB</sub> = 750V; I <sub>E</sub> = 0  |     |     | 10  | μA   |
|                      |                                      | V <sub>CB</sub> = 1300V; I <sub>E</sub> = 0 |     |     | 1.0 | mA   |
| fT                   | Transition Frequency                 | I <sub>C</sub> = 1A; V <sub>CE</sub> = 10V  |     | 2   |     | MHz  |

Switching Times, Resistive Load

| ts             | Storage Time | Ic= 5A; I <sub>B1</sub> = 1A; I <sub>B2</sub> = 2A,<br>Vcc= 200V | 1.5 | μ S |
|----------------|--------------|--|-----|-----|
| t <sub>f</sub> | Fall Time    |  | 0.2 | μ5  |
|                |              |  |     |     |

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