

## isc Silicon NPN Power Transistor

## BU2508A

## DESCRIPTION

- Collector-Emitter Sustaining Voltage-  
:  $V_{CEO(SUS)} = 700V$  (Min)
- High Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

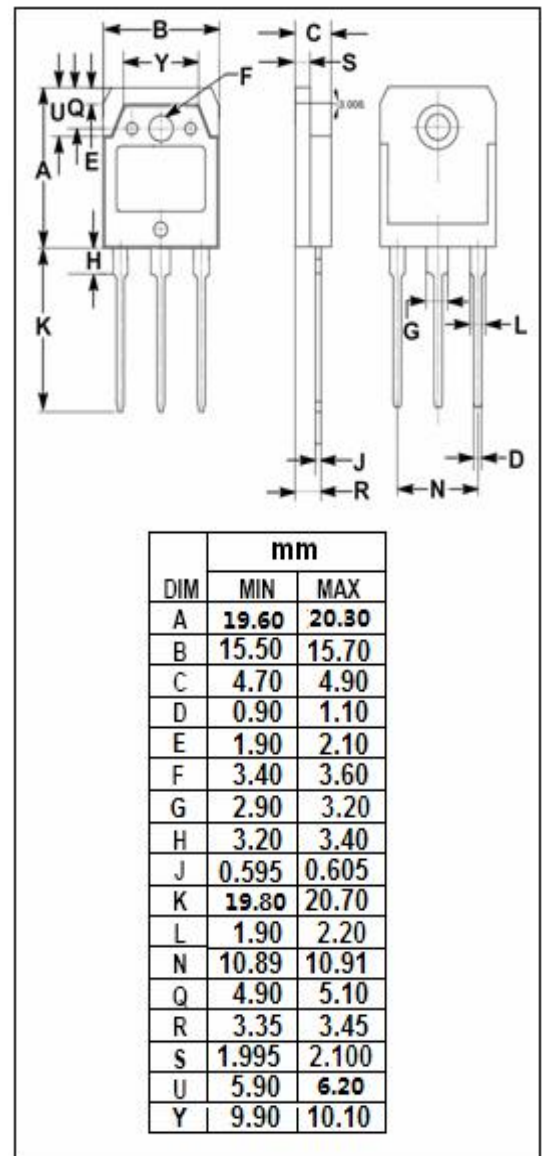
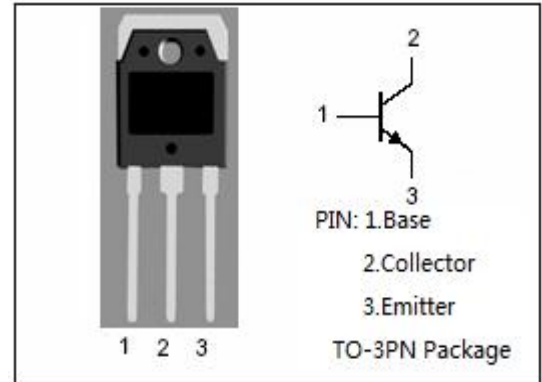
## APPLICATIONS

- Designed for use in horizontal deflection circuits of color TV receivers.

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

| SYMBOL    | PARAMETER                                           | VALUE   | UNIT       |
|-----------|-----------------------------------------------------|---------|------------|
| $V_{CES}$ | Collector- Emitter Voltage( $V_{BE} = 0$ )          | 1500    | V          |
| $V_{CEO}$ | Collector-Emitter Voltage                           | 700     | V          |
| $V_{EBO}$ | Emitter-Base Voltage                                | 7.5     | V          |
| $I_C$     | Collector Current- Continuous                       | 8       | 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>@ $T_c = 25^\circ C$ | 125     | W          |
| $T_J$     | Junction Temperature                                | 150     | $^\circ C$ |
| $T_{stg}$ | Storage Temperature Range                           | -65~150 | $^\circ C$ |

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



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## ELECTRICAL CHARACTERISTICS

T<sub>C</sub>=25°C unless otherwise specified

| SYMBOL                  | PARAMETER                            | CONDITIONS                                                                                                            | MIN | TYP. | MAX        | UNIT |
|-------------------------|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------|-----|------|------------|------|
| V <sub>CEQ(SUS)</sub>   | Collector-Emitter Sustaining Voltage | I <sub>C</sub> = 50mA ; I <sub>B</sub> = 0, L= 25mH                                                                   | 700 |      |            | V    |
| V <sub>(BR)EBO</sub>    | Emitter-Base Breakdown Voltage       | I <sub>E</sub> = 1mA; I <sub>C</sub> = 0                                                                              | 7.5 |      |            | V    |
| V <sub>CE(sat)</sub> -1 | Collector-Emitter Saturation Voltage | I <sub>C</sub> = 4.5A; I <sub>B</sub> = 1.1A                                                                          |     |      | 5.0        | V    |
| V <sub>CE(sat)</sub> -2 | Collector-Emitter Saturation Voltage | I <sub>C</sub> = 4.5A; I <sub>B</sub> = 1.29A                                                                         |     |      | 1.0        | V    |
| V <sub>BE(sat)</sub>    | Base-Emitter Saturation Voltage      | I <sub>C</sub> = 4.5A; I <sub>B</sub> = 1.7A                                                                          |     |      | 1.3        | 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> = 7.5V ; I <sub>C</sub> = 0                                                                           |     |      | 1.0        | mA   |
| h <sub>FE-1</sub>       | DC Current Gain                      | I <sub>C</sub> = 0.1A ; V <sub>CE</sub> = 5V                                                                          | 6   |      | 26         |      |
| h <sub>FE-2</sub>       | DC Current Gain                      | I <sub>C</sub> = 4.5A ; V <sub>CE</sub> = 1V                                                                          | 4   |      |            |      |
| C <sub>OB</sub>         | Output Capacitance                   | I <sub>E</sub> = 0; V <sub>CB</sub> = 10V; f <sub>test</sub> = 1MHz                                                   |     | 80   |            | pF   |

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