

ISC Silicon NPN Power Transistor

BU4508DZ

DESCRIPTION

- High Voltage-
- High Switching Speed
- Built-in Damer Diode

APPLICATIONS

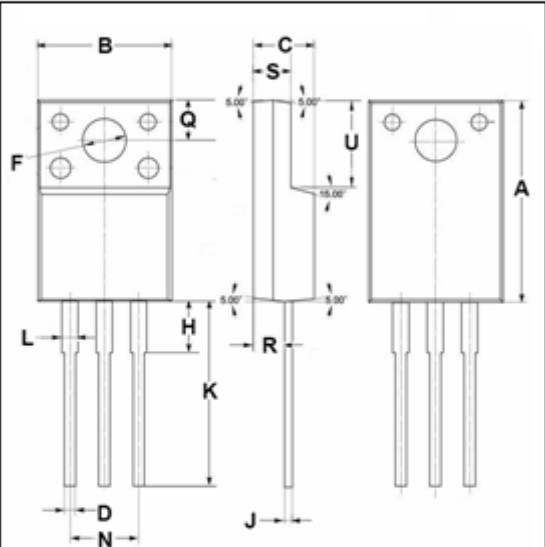
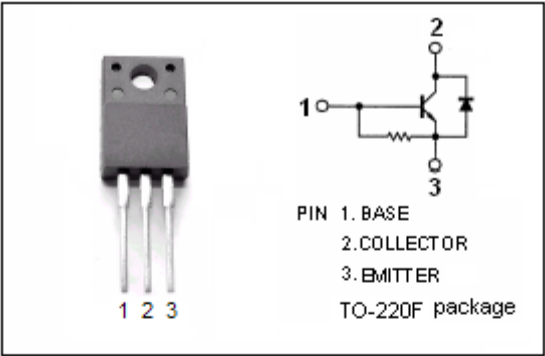
- Designed for use in horizontal deflection circuits of color TV receivers.

ABSOLUTE MAXIMUM RATINGS(T<sub>a</sub>=25℃)

| SYMBOL           | PARAMETER                                            | VALUE   | UNIT |
|------------------|------------------------------------------------------|---------|------|
| V <sub>CES</sub> | Collector- Emitter Voltage(V <sub>BE</sub> = 0)      | 1500    | V    |
| V <sub>CEO</sub> | Collector-Emitter Voltage                            | 800     | V    |
| V <sub>EBO</sub> | Emitter-Base Voltage                                 | 7.5     | V    |
| I <sub>C</sub>   | Collector Current- Continuous                        | 8       | A    |
| I <sub>CM</sub>  | Collector Current-Peak                               | 15      | A    |
| I <sub>B</sub>   | Base Current- Continuous                             | 4       | A    |
| I <sub>BM</sub>  | Base Current-Peak                                    | 6       | A    |
| P <sub>C</sub>   | Collector Power Dissipation<br>@ T <sub>C</sub> =25℃ | 32      | W    |
| T <sub>J</sub>   | Junction Temperature                                 | 150     | ℃    |
| T <sub>stg</sub> | Storage Temperature Range                            | -65~150 | ℃    |

THERMAL CHARACTERISTICS

| SYMBOL              | PARAMETER                           | MAX | UNIT |
|---------------------|-------------------------------------|-----|------|
| R <sub>th j-c</sub> | Thermal Resistance,Junction to Case | 4.0 | ℃/W  |



| DIM | mm    |       |
|-----|-------|-------|
|     | MIN   | MAX   |
| A   | 14.95 | 15.05 |
| B   | 10.00 | 10.10 |
| C   | 4.40  | 4.60  |
| D   | 0.75  | 0.80  |
| F   | 3.10  | 3.30  |
| H   | 3.70  | 3.90  |
| J   | 0.50  | 0.70  |
| K   | 13.4  | 13.6  |
| L   | 1.10  | 1.30  |
| N   | 5.00  | 5.20  |
| Q   | 2.70  | 2.90  |
| R   | 2.20  | 2.40  |
| S   | 2.65  | 2.85  |
| U   | 6.40  | 6.60  |

**ISC Silicon NPN Power Transistor****BU4508DZ****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> = 100mA; I <sub>B</sub> = 0, L= 25mH                                                                 | 800 |      |            | V    |
| V <sub>(BR)EBO</sub>  | Emitter-Base Breakdown Voltage       | I <sub>E</sub> = 600mA; I <sub>C</sub> = 0                                                                          | 7.5 |      |            | V    |
| V <sub>CE(sat)</sub>  | Collector-Emitter Saturation Voltage | I <sub>C</sub> = 5A; I <sub>B</sub> = 1.25A                                                                         |     |      | 3.0        | V    |
| V <sub>BE(sat)</sub>  | Base-Emitter Saturation Voltage      | I <sub>C</sub> = 5A; I <sub>B</sub> = 1.25A                                                                         |     |      | 1.03       | 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   |
| h <sub>FE-1</sub>     | DC Current Gain                      | I <sub>C</sub> = 0.5A; V <sub>CE</sub> = 5V                                                                         |     | 7    |            |      |
| h <sub>FE-2</sub>     | DC Current Gain                      | I <sub>C</sub> = 5A; V <sub>CE</sub> = 5V                                                                           | 4.2 |      | 7.3        |      |
| V <sub>ECF</sub>      | C-E Diode Forward Voltage            | I <sub>F</sub> = 5A                                                                                                 |     |      | 2.2        | V    |

Switching times (16kHz line deflection circuit)

|                  |              |                                                                    |  |  |      |    |
|------------------|--------------|--------------------------------------------------------------------|--|--|------|----|
| t <sub>stg</sub> | Storage Time | I <sub>C</sub> = 5A, I <sub>B1</sub> = 1A; I <sub>B2</sub> = -2.5A |  |  | 3.75 | μs |
| t <sub>f</sub>   | Fall Time    |                                                                    |  |  | 0.4  | μs |