

Silicon NPN Power Transistors

BU1508AX

DESCRIPTION

- With TO-220F package
- High voltage
- High speed switching

APPLICATIONS

- For use in horizontal deflection circuits of colour TV receivers.

PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1   | Base        |
| 2   | Collector   |
| 3   | Emitter     |

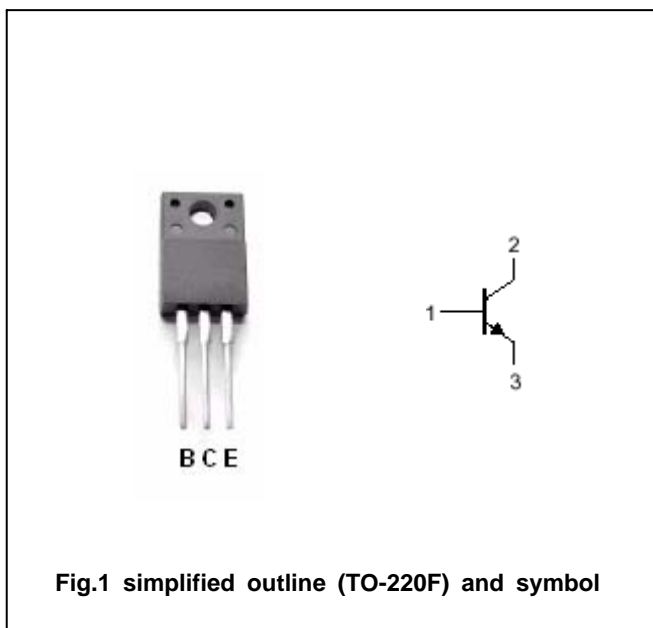


Fig.1 simplified outline (TO-220F) and symbol

Absolute maximum ratings (Ta=25 )

| SYMBOL           | PARAMETER                 | CONDITIONS         | VALUE   | UNIT |
|------------------|---------------------------|--------------------|---------|------|
| V <sub>CBO</sub> | Collector-base voltage    | Open emitter       | 1500    | V    |
| V <sub>CEO</sub> | Collector-emitter voltage | Open base          | 700     | V    |
| V <sub>EBO</sub> | Emitter-base voltage      | Open collector     | 7.5     | V    |
| I <sub>C</sub>   | Collector current         |                    | 8       | A    |
| I <sub>CM</sub>  | Collector current (peak)  |                    | 15      | A    |
| I <sub>B</sub>   | Base current              |                    | 4       | A    |
| I <sub>BM</sub>  | Base current (peak)       |                    | 6       | A    |
| P <sub>T</sub>   | Total power dissipation   | T <sub>C</sub> =25 | 35      | W    |
| T <sub>j</sub>   | Junction temperature      |                    | 150     |      |
| T <sub>stg</sub> | Storage temperature       |                    | -65~150 |      |

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## CHARACTERISTICS

T<sub>j</sub>=25 unless otherwise specified

| SYMBOL                | PARAMETER                            | CONDITIONS  | MIN | TYP. | MAX        | UNIT |
|-----------------------|--------------------------------------|---|-----|------|------------|------|
| V <sub>(BR)EBO</sub>  | Emitter-base breakdown voltage       | I <sub>E</sub> =1mA ; I <sub>C</sub> =0                           | 7.5 | 13.5 |            | V    |
| V <sub>CEO(SUS)</sub> | Collector-emitter sustaining voltage | I <sub>C</sub> =100mA ; I <sub>B</sub> =0; L=25mH                 | 700 |      |            | V    |
| V <sub>CEsat</sub>    | Collector-emitter saturation voltage | I <sub>C</sub> =4.5A; I <sub>B</sub> =1.1A                        |     |      | 1.0        | V    |
| V <sub>BEsat</sub>    | Base-emitter saturation voltage      | I <sub>C</sub> =4.5A; I <sub>B</sub> =1.7A                        |     |      | 1.1        | V    |
| I <sub>CES</sub>      | Collector cut-off current            | V <sub>CE</sub> =rated; V <sub>BE</sub> =0<br>T <sub>j</sub> =125 |     |      | 1.0<br>2.0 | mA   |
| I <sub>EBO</sub>      | Emitter cut-off 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                        |     | 13   |            |      |
| h <sub>FE-2</sub>     | DC current gain                      | I <sub>C</sub> =4.5A ; V <sub>CE</sub> =1V                        | 4.0 | 5.5  | 7.0        |      |
| C <sub>C</sub>        | Collector output capacitance         | I <sub>E</sub> =0; f=1MHz; V <sub>CB</sub> =10V                   |     | 80   |            | pF   |

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PACKAGE OUTLINE

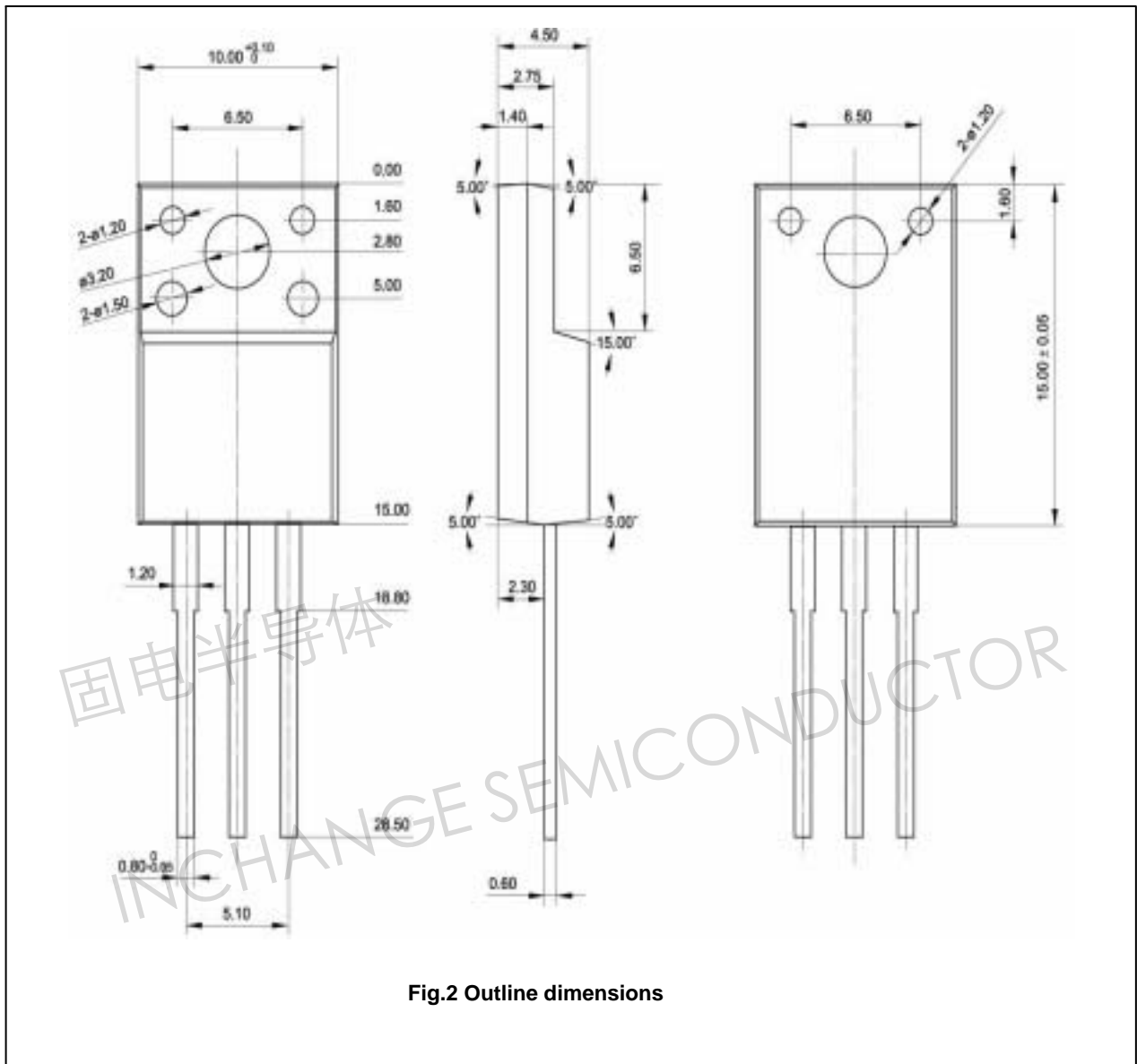


Fig.2 Outline dimensions