

Silicon NPN Power Transistors

BU2520D

DESCRIPTION

- With TO-3PN package
- High voltage,high speed
- Built-in damper diode

APPLICATIONS

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

PINNING

| PIN | DESCRIPTION                          |
|-----|--------------------------------------|
| 1   | Base                                 |
| 2   | Collector;connected to mounting base |
| 3   | Emitter                              |

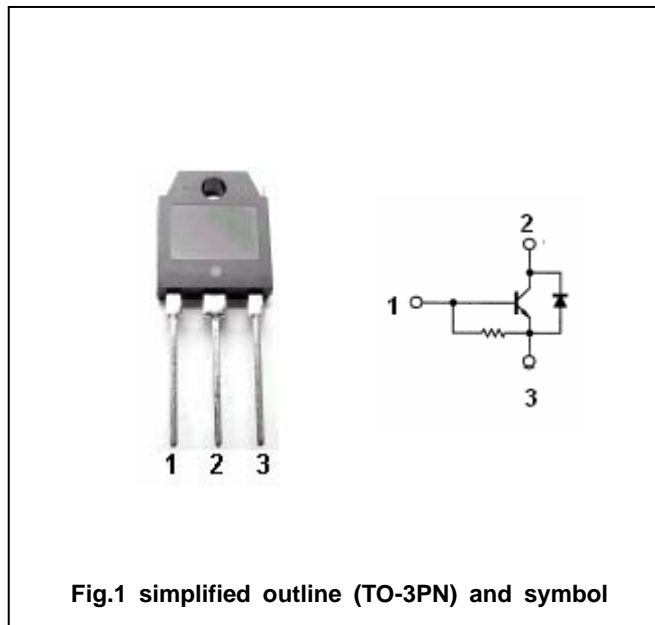


Fig.1 simplified outline (TO-3PN) and symbol

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          | 800     | V    |
| V <sub>EBO</sub> | Emitter-base voltage        | Open collector     | 7.5     | V    |
| I <sub>C</sub>   | Collector current (DC)      |                    | 10      | A    |
| I <sub>CM</sub>  | Collector current-peak      |                    | 25      | A    |
| I <sub>B</sub>   | Base current(DC)            |                    | 6       | A    |
| I <sub>BM</sub>  | Base current-peak           |                    | 9       | A    |
| P <sub>C</sub>   | Collector power dissipation | T <sub>C</sub> =25 | 125     | 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>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>B</sub> =600mA; I <sub>C</sub> =0  | 7.5 | 13.5 |            | V    |
| V <sub>CEsat</sub>    | Collector-emitter saturation voltage | I <sub>C</sub> =6A; I <sub>B</sub> =1.2A  |     |      | 5.0        | V    |
| V <sub>BEsat</sub>    | Base-emitter saturation voltage      | I <sub>C</sub> =6A; I <sub>B</sub> =1.2A  |     |      | 1.3        | V    |
| I <sub>CES</sub>      | Collector cut-off current            | V <sub>CE</sub> =ratedV <sub>CE</sub> ; 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  | 100 |      | 300        | mA   |
| h <sub>FE-1</sub>     | DC current gain                      | I <sub>C</sub> =1A ; V <sub>CE</sub> =5V  |     |      | 23         |      |
| h <sub>FE-2</sub>     | DC current gain                      | I <sub>C</sub> =6A ; V <sub>CE</sub> =5V  | 5   | 7    | 10         |      |
| V <sub>F</sub>        | Diode forward voltage                | I <sub>F</sub> =6A  |     |      | 2.2        | V    |
| C <sub>C</sub>        | Collector capacitance                | I <sub>E</sub> =0 ; V <sub>CB</sub> =10V; f=1MHz                                  |     | 115  |            | pF   |

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PACKAGE OUTLINE

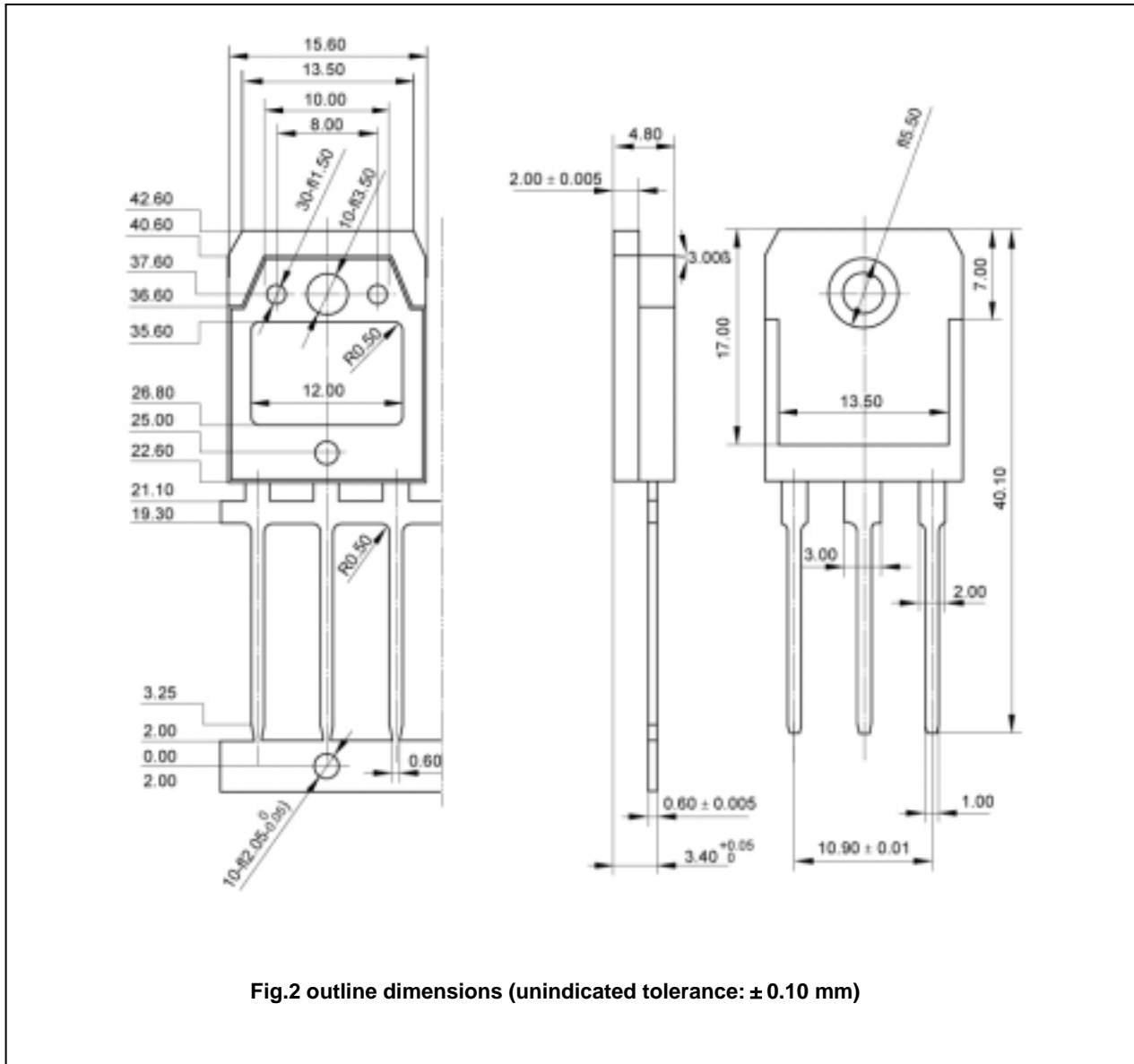


Fig.2 outline dimensions (unindicated tolerance: ± 0.10 mm)