

Silicon NPN Power Transistors

2SC3322

DESCRIPTION

- With TO-3P(I) package
- High voltage
- High speed

APPLICATIONS

- High power switching applications

PINNING

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

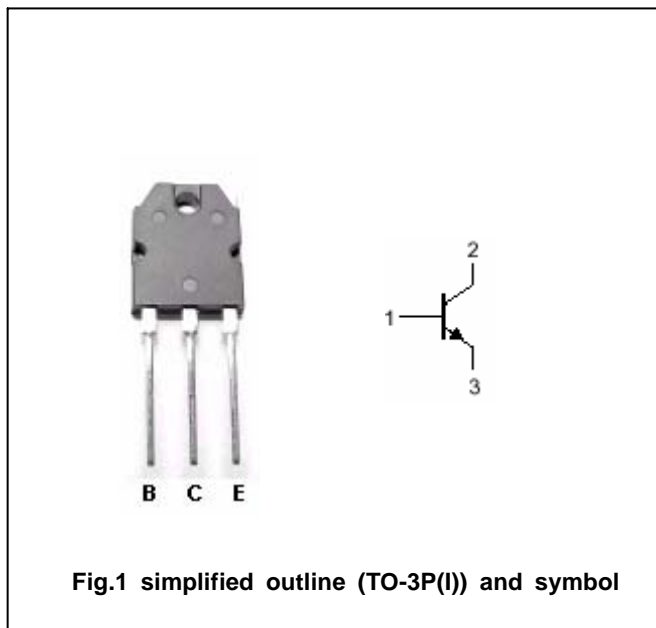


Fig.1 simplified outline (TO-3P(I)) and symbol

Absolute maximum ratings(Ta=25 )

| SYMBOL           | PARAMETER                 | CONDITIONS         | VALUE   | UNIT |
|------------------|---------------------------|--------------------|---------|------|
| V <sub>CBO</sub> | Collector-base voltage    | Open emitter       | 900     | V    |
| V <sub>CEO</sub> | Collector-emitter voltage | Open base          | 800     | V    |
| V <sub>EBO</sub> | Emitter-base voltage      | Open collector     | 7       | V    |
| I <sub>C</sub>   | Collector current         |                    | 5       | A    |
| I <sub>CM</sub>  | Collector current-peak    |                    | 10      | A    |
| I <sub>B</sub>   | Base current              |                    | 2.5     | A    |
| P <sub>T</sub>   | Total power dissipation   | T <sub>C</sub> =25 | 80      | W    |
| T <sub>j</sub>   | Junction temperature      |                    | 150     |      |
| T <sub>stg</sub> | Storage temperature       |                    | -55~150 |      |

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## CHARACTERISTICS

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

| SYMBOL                | PARAMETER                            | CONDITIONS  | MIN | TYP. | MAX | UNIT |
|-----------------------|--------------------------------------|---|-----|------|-----|------|
| V <sub>CE0(SUS)</sub> | Collector-emitter sustaining voltage | I <sub>C</sub> =0.2A, L=100mH; R <sub>BE</sub> =  | 800 |      |     | V    |
| V <sub>(BR)EBO</sub>  | Base-emitter breakdown voltage       | I <sub>E</sub> =10mA; I <sub>C</sub> =0   | 7   |      |     | V    |
| V <sub>CEsat</sub>    | Collector-emitter saturation voltage | I <sub>C</sub> =1.5A; I <sub>B</sub> =0.3A  |     |      | 1.0 | V    |
| V <sub>BE sat</sub>   | Base-emitter saturation voltage      | I <sub>C</sub> =1.5A; I <sub>B</sub> =0.3A  |     |      | 1.5 | V    |
| I <sub>CBO</sub>      | Collector cut-off current            | V <sub>CB</sub> =750V; I <sub>E</sub> =0  |     |      | 100 | μA   |
| I <sub>CEO</sub>      | Collector cut-off current            | V <sub>CE</sub> =650V; R <sub>BE</sub> =  |     |      | 100 | μA   |
| h <sub>FE-1</sub>     | DC current gain                      | I <sub>C</sub> =0.5A; V <sub>CE</sub> =5V   | 15  |      |     |      |
| h <sub>FE-2</sub>     | DC current gain                      | I <sub>C</sub> =3A; V <sub>CE</sub> =5V   | 7   |      |     |      |
| Switching times       |                                      |   |     |      |     |      |
| t <sub>on</sub>       | Turn-on time                         | I <sub>C</sub> =3A; V <sub>CC</sub> 250V<br>I <sub>B1</sub> =0.6A; I <sub>B2</sub> =-1.5A |     |      | 1.0 | μs   |
| t <sub>stg</sub>      | Storage time                         |   |     |      | 3.0 | μs   |
| t <sub>f</sub>        | Fall time                            |   |     |      | 1.0 | μs   |

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PACKAGE OUTLINE

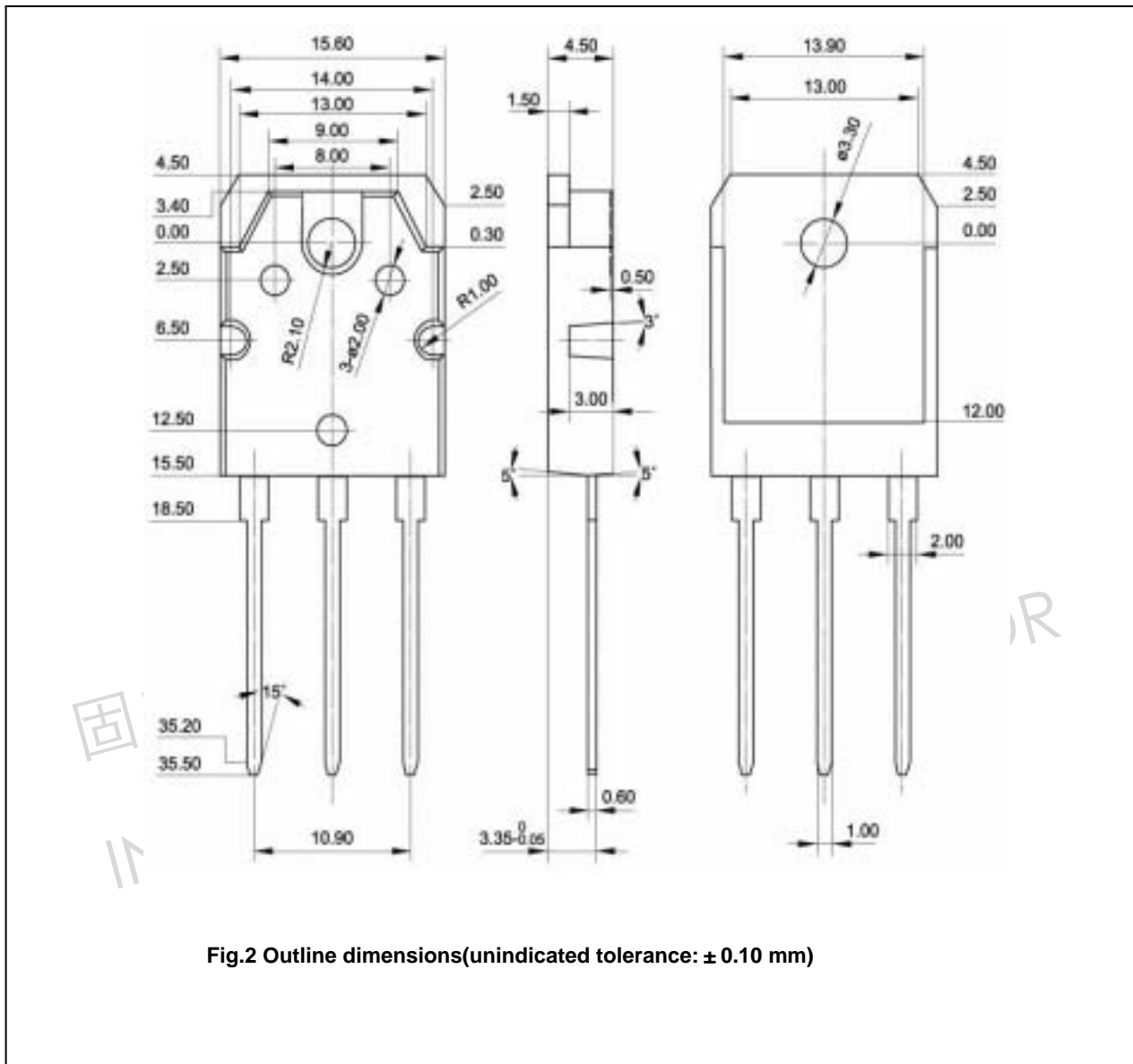


Fig.2 Outline dimensions(unindicated tolerance:  $\pm 0.10$  mm)