

Silicon NPN Power Transistors

2SD716

DESCRIPTION

- With TO-3P(I) package
- Complement to type 2SB686

APPLICATIONS

- Power amplifier applications
- Recommend for 30~35W high fidelity audio frequency amplifier output stage

PINNING

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

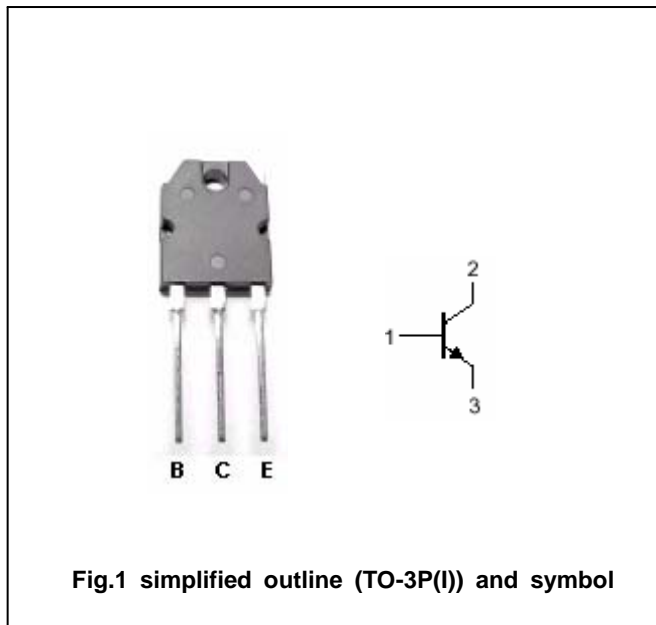


Fig.1 simplified outline (TO-3P(I)) and symbol

Absolute maximum ratings(Ta=25 )

| SYMBOL           | PARAMETER                 | CONDITIONS         | VALUE   | UNIT |
|------------------|---------------------------|--------------------|---------|------|
| V <sub>CBO</sub> | Collector-base voltage    | Open emitter       | 100     | V    |
| V <sub>CEO</sub> | Collector-emitter voltage | Open base          | 100     | V    |
| V <sub>EBO</sub> | Emitter-base voltage      | Open collector     | 5       | V    |
| I <sub>C</sub>   | Collector current         |                    | 6       | A    |
| I <sub>E</sub>   | Emitter current           |                    | -6      | A    |
| P <sub>T</sub>   | Total power dissipation   | T <sub>C</sub> =25 | 60      | 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>(BR)CEO</sub> | Collector-emitter breakdown voltage  | I <sub>C</sub> =50mA, I <sub>B</sub> =0         | 100 |      |     | V    |
| V <sub>(BR)EBO</sub> | Emitter-base breakdown voltage       | I <sub>E</sub> =10mA, I <sub>C</sub> =0         | 5   |      |     | V    |
| V <sub>CEsat</sub>   | Collector-emitter saturation voltage | I <sub>C</sub> =4A; I <sub>B</sub> =0.4A        |     |      | 2.0 | V    |
| V <sub>BE</sub>      | Base-emitter voltage                 | I <sub>C</sub> =4A; V <sub>CE</sub> =5V         |     |      | 1.5 | V    |
| I <sub>CBO</sub>     | Collector cut-off current            | V <sub>CB</sub> =100V; I <sub>E</sub> =0        |     |      | 10  | μA   |
| I <sub>EBO</sub>     | Emitter cut-off current              | V <sub>EB</sub> =5V; I <sub>C</sub> =0          |     |      | 10  | μA   |
| h <sub>FE</sub>      | DC current gain                      | I <sub>C</sub> =1A; V <sub>CE</sub> =5V         | 55  |      | 160 |      |
| f <sub>T</sub>       | Transition frequency                 | I <sub>C</sub> =1A; V <sub>CE</sub> =5V         |     | 12   |     | MHz  |
| C <sub>ob</sub>      | Output capacitance                   | I <sub>E</sub> =0; V <sub>CB</sub> =10V; f=1MHz |     | 100  |     | pF   |

◆ h<sub>FE</sub> Classifications

| R      | O      |
|--------|--------|
| 55-110 | 80-160 |

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PACKAGE OUTLINE

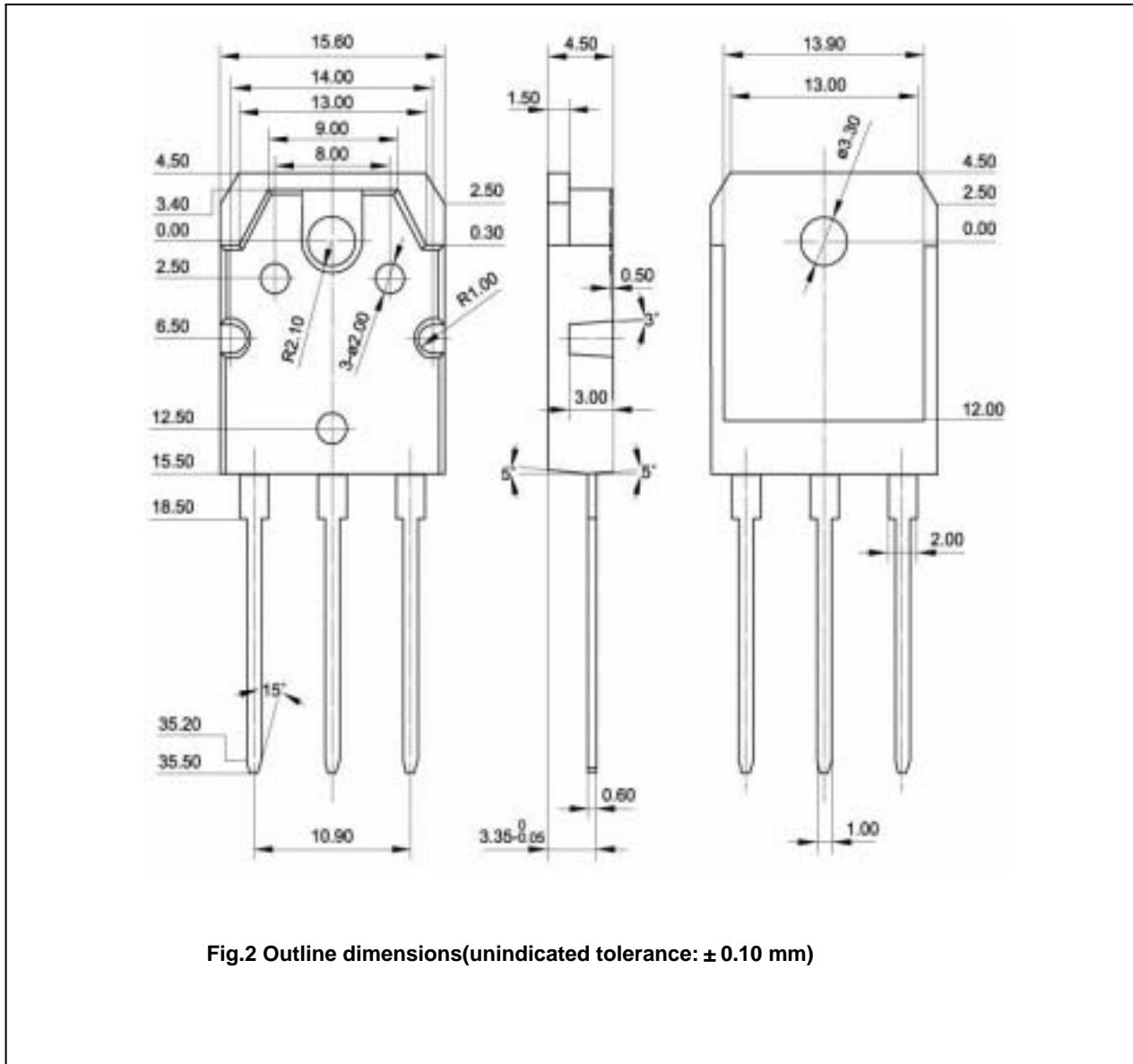


Fig.2 Outline dimensions(unindicated tolerance: ± 0.10 mm)