

Silicon NPN Power Transistors

BUV70

DESCRIPTION

- With TO-3PN package
- High breakdown voltage
- Fast switching speed
- Wide area of safe operation

APPLICATIONS

- For switching regulator applications

PINNING

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

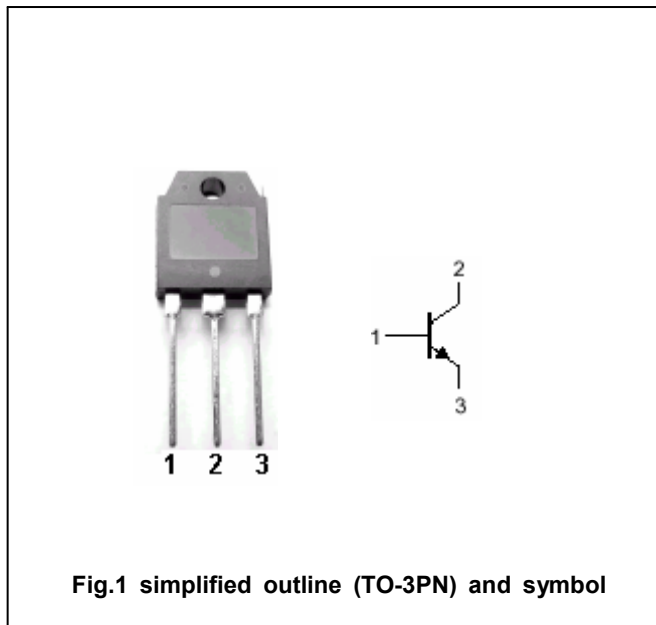


Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings (Ta=25°C)

| SYMBOL           | PARAMETER                   | CONDITIONS           | VALUE   | UNIT |
|------------------|-----------------------------|----------------------|---------|------|
| V <sub>CBO</sub> | Collector-base voltage      | Open emitter         | 1300    | V    |
| V <sub>CEO</sub> | Collector-emitter voltage   | Open base            | 550     | V    |
| V <sub>EBO</sub> | Emitter-base voltage        | Open collector       | 7       | V    |
| I <sub>C</sub>   | Collector current           |                      | 10      | A    |
| I <sub>B</sub>   | Base current                |                      | 4       | A    |
| P <sub>C</sub>   | Collector power dissipation | T <sub>C</sub> =25°C | 140     | W    |
| T <sub>j</sub>   | Junction temperature        |                      | 150     | °C   |
| T <sub>stg</sub> | Storage temperature         |                      | -55~150 | °C   |

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## CHARACTERISTICS

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

| SYMBOL               | PARAMETER                            | CONDITIONS                                  | MIN | TYP. | MAX | UNIT |
|----------------------|--------------------------------------|---|-----|------|-----|------|
| V <sub>(BR)CEO</sub> | Collector-emitter breakdown voltage  | I <sub>C</sub> =5mA ; I <sub>B</sub> =0     | 550 |      |     | V    |
| V <sub>(BR)EBO</sub> | Emitter-base breakdown voltage       | I <sub>E</sub> =1mA ; I <sub>C</sub> =0     | 7   |      |     | V    |
| V <sub>CEsat</sub>   | Collector-emitter saturation voltage | I <sub>C</sub> =6A; I <sub>B</sub> =1.2A    |     |      | 2.0 | V    |
| V <sub>BEsat</sub>   | Base-emitter saturation voltage      | I <sub>C</sub> =6A; I <sub>B</sub> =1.2A    |     |      | 1.5 | V    |
| I <sub>CBO</sub>     | Collector cut-off current            | V <sub>CB</sub> =500V; 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> =3.2A ; V <sub>CE</sub> =2V  | 5   |      |     |      |
| f <sub>T</sub>       | Transition frequency                 | I <sub>C</sub> =0.5A ; V <sub>CE</sub> =10V |     | 9    |     | MHz  |

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PACKAGE OUTLINE

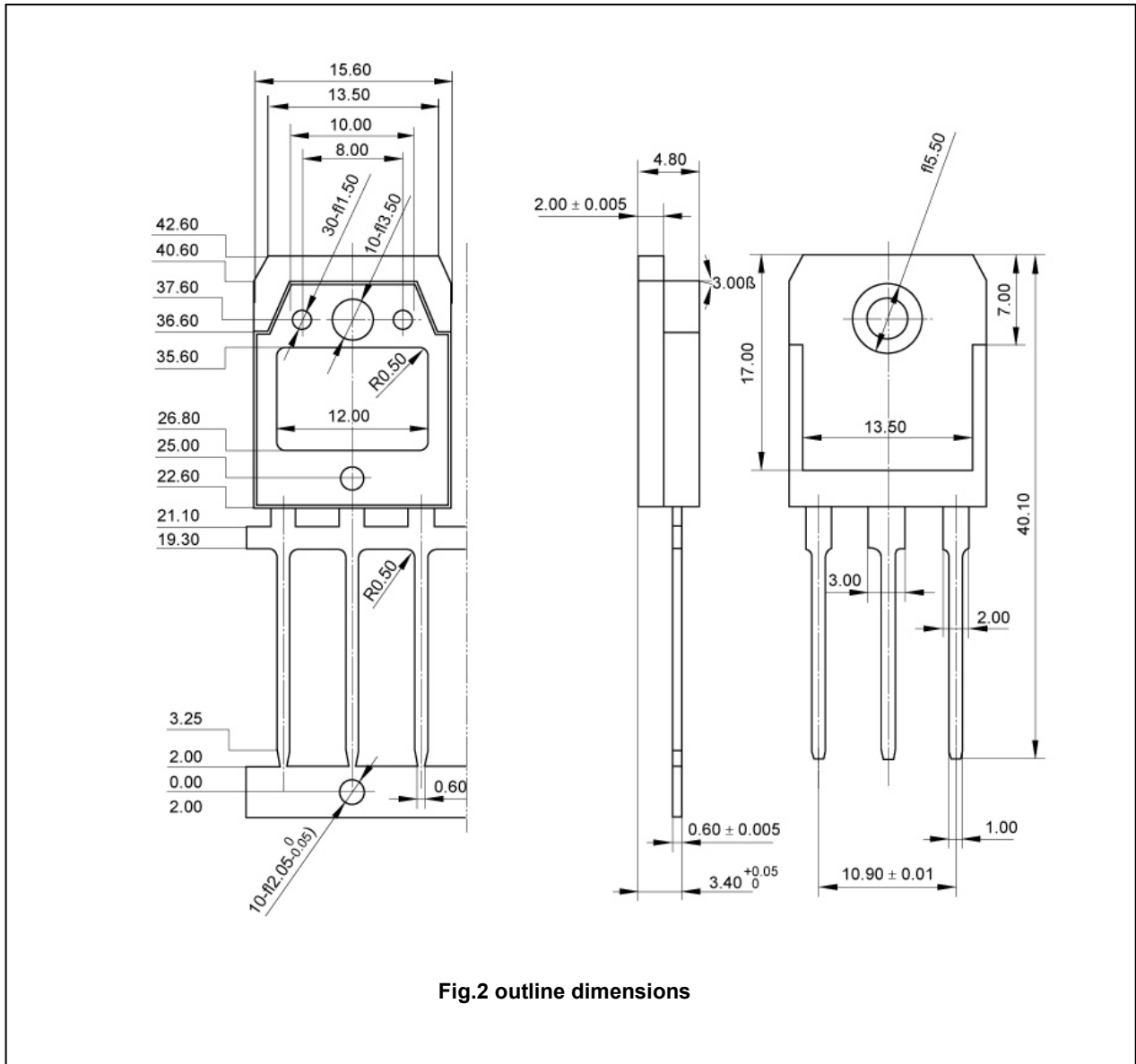


Fig.2 outline dimensions