

Silicon NPN Power Transistors

BD953

DESCRIPTION

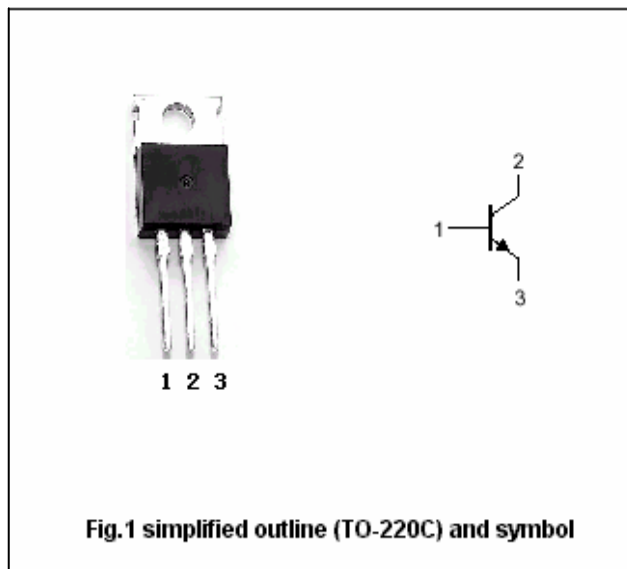
- With TO-220C package
- Low collector saturation voltage
- High current capability

APPLICATIONS

- For medium power linear and switching applications

PINNING

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



Absolute maximum ratings(Ta=25°C)

| 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       | 7       | V    |
| I <sub>C</sub>   | Collector current         |                      | 5       | A    |
| P <sub>C</sub>   | Collector dissipation     | T <sub>C</sub> =25°C | 40      | W    |
| T <sub>j</sub>   | Junction temperature      |                      | 150     | °C   |
| T <sub>stg</sub> | Storage temperature       |                      | -50~150 | °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> =10mA; I <sub>B</sub> =0    | 100 |      |     | 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> =2A; I <sub>B</sub> =0.2A   |     |      | 1.0 | V    |
| V <sub>BEsat</sub>   | Base-emitter saturation voltage      | I <sub>C</sub> =2A; I <sub>B</sub> =0.2A   |     |      | 1.5 | V    |
| I <sub>CBO</sub>     | Collector cut-off current            | V <sub>CB</sub> =100V; I <sub>E</sub> =0   |     |      | 50  | μA   |
| I <sub>EBO</sub>     | Emitter cut-off current              | V <sub>EB</sub> =7V; I <sub>C</sub> =0     |     |      | 50  | μA   |
| h <sub>FE-1</sub>    | DC current gain                      | I <sub>C</sub> =0.5A ; V <sub>CE</sub> =4V | 40  |      |     |      |
| h <sub>FE-2</sub>    | DC current gain                      | I <sub>C</sub> =2A ; V <sub>CE</sub> =4V   | 20  |      |     |      |
| f <sub>T</sub>       | Transition frequency                 | I <sub>C</sub> =0.5A ; V <sub>CE</sub> =4V | 3   |      |     | MHz  |

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PACKAGE OUTLINE

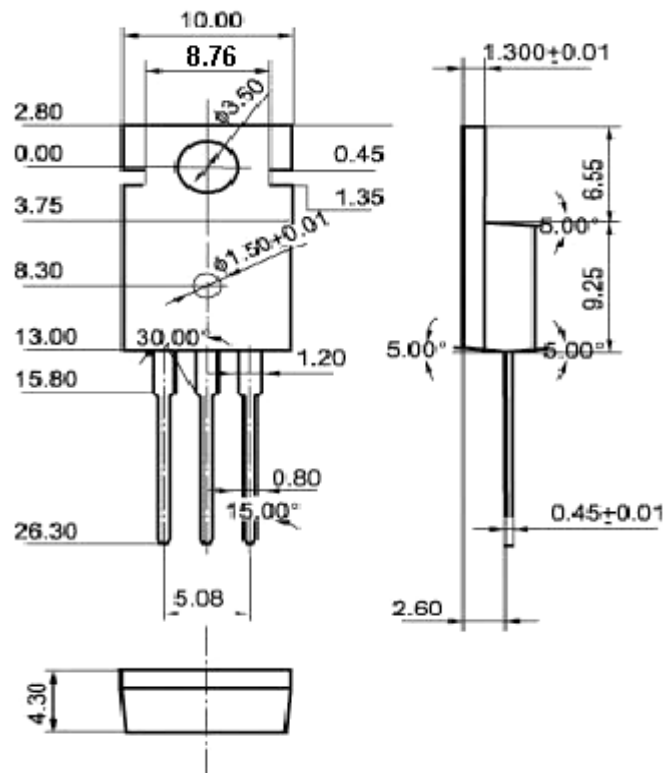


Fig.2 Outline dimensions (unindicated tolerance:±0.10mm)