

Silicon PNP Power Transistors

2SB1551

**DESCRIPTION**

- With TO-220Fa package
- High DC current gain
- DARLINGTON

**APPLICATIONS**

- For medium speed and power switching applications

**PINNING**

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

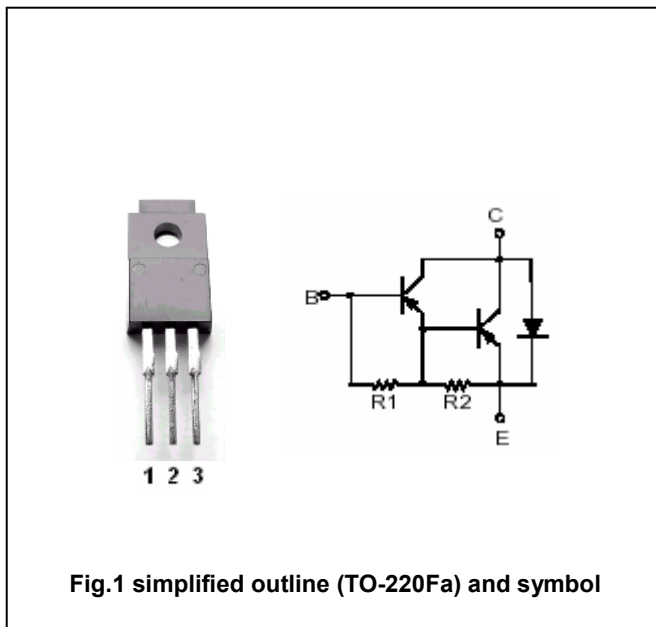


Fig.1 simplified outline (TO-220Fa) and symbol

**Absolute maximum ratings(Ta=25°C)**

| SYMBOL           | PARAMETER                   | CONDITIONS           | VALUE   | UNIT |
|------------------|-----------------------------|----------------------|---------|------|
| V <sub>CBO</sub> | Collector-base voltage      | Open emitter         | -80     | V    |
| V <sub>CEO</sub> | Collector-emitter voltage   | Open base            | -80     | V    |
| V <sub>EBO</sub> | Emitter-base voltage        | Open collector       | -5      | V    |
| I <sub>C</sub>   | Collector current           |                      | -10     | A    |
| P <sub>C</sub>   | Collector power dissipation | T <sub>C</sub> =25°C | 30      | 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> =-10mA, I <sub>B</sub> =0   | -80  |      |       | V    |
| V <sub>(BR)CBO</sub> | Collector-base breakdown voltage     | I <sub>C</sub> =-0.1mA, I <sub>E</sub> =0  | -80  |      |       | V    |
| V <sub>(BR)EBO</sub> | Emitter-base breakdown voltage       | I <sub>E</sub> =-2mA, I <sub>C</sub> =0    | -5   |      |       | V    |
| V <sub>CEsat</sub>   | Collector-emitter saturation voltage | I <sub>C</sub> =-5A, I <sub>B</sub> =-20mA |      |      | -2.0  | V    |
| V <sub>BEsat</sub>   | Base-emitter saturation voltage      | I <sub>C</sub> =-5A, I <sub>B</sub> =-20mA |      |      | -2.5  | V    |
| I <sub>CBO</sub>     | Collector cut-off current            | V <sub>CB</sub> =-80V, 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    |      |      | -2    | mA   |
| h <sub>FE</sub>      | DC current gain                      | I <sub>C</sub> =-5A ; V <sub>CE</sub> =-3V | 1000 |      | 20000 |      |

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PACKAGE OUTLINE

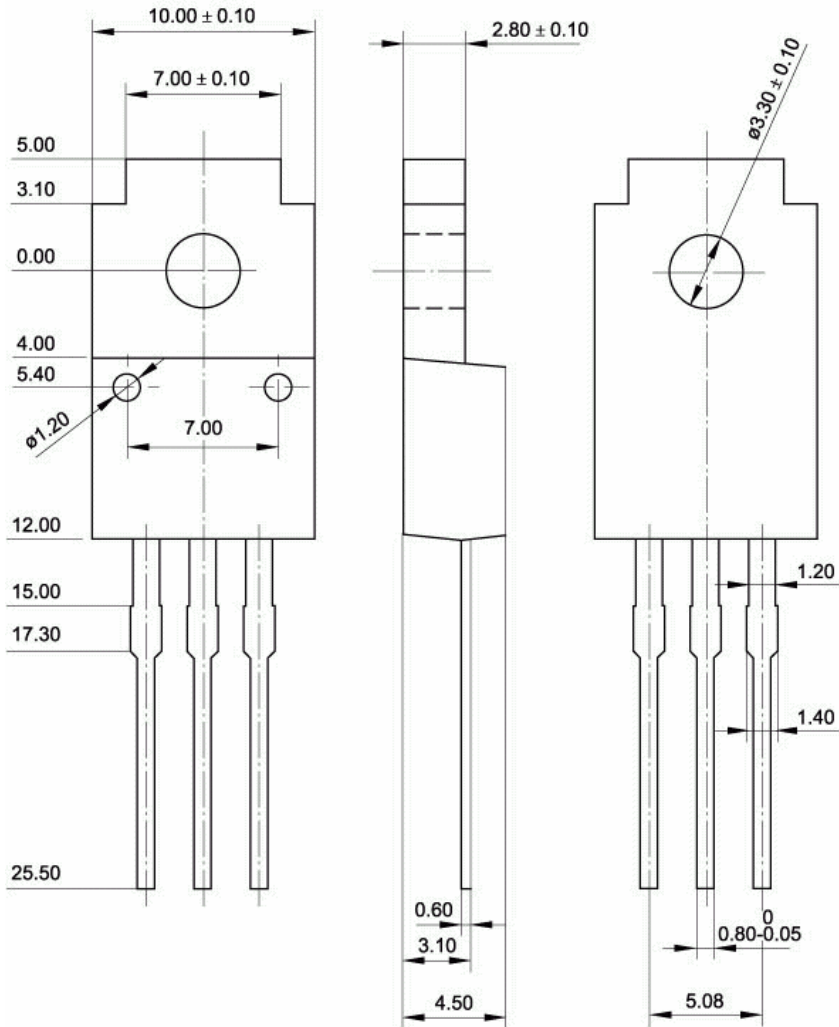


Fig.2 Outline dimensions (unindicated tolerance:  $\pm 0.15$  mm)