

Silicon PNP Power Transistors

2SB546

DESCRIPTION

- With TO-220C package
- Complement to type 2SD401
- Collector current  $I_C=-2A$
- Collector-base voltage  $V_{CBO}=-200V$

APPLICATIONS

- For use in general purpose power amplifier,vertical output application

PINNING

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

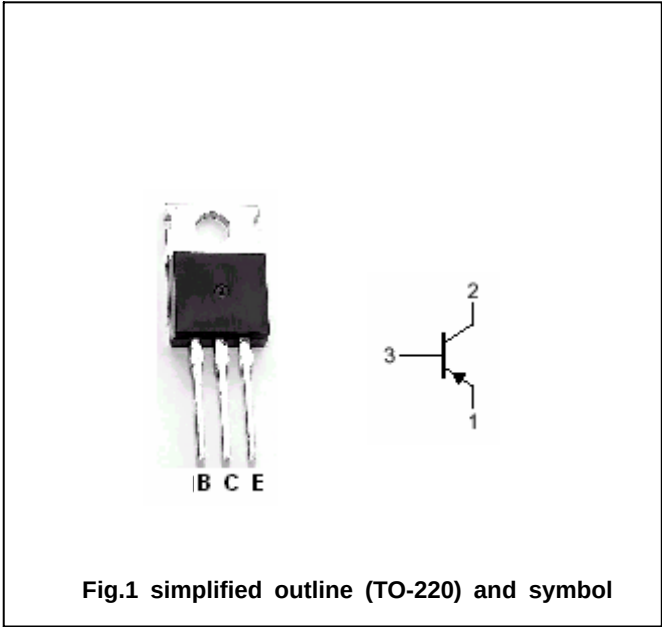


Fig.1 simplified outline (TO-220) and symbol

Absolute maximum ratings (Ta=25°C)

| SYMBOL    | PARAMETER                   | CONDITIONS        | VALUE   | UNIT        |
|-----------|-----------------------------|-------------------|---------|-------------|
| $V_{CBO}$ | Collector-base voltage      | Open emitter      | -200    | V           |
| $V_{CEO}$ | Collector-emitter voltage   | Open base         | -150    | V           |
| $V_{EBO}$ | Emitter-base voltage        | Open collector    | -5      | V           |
| $I_C$     | Collector current           |                   | -2      | A           |
| $P_C$     | Collector power dissipation | $T_C=25^{\circ}C$ | 25      | W           |
| $T_j$     | Junction temperature        |                   | 150     | $^{\circ}C$ |
| $T_{stg}$ | Storage temperature         |                   | -55~150 | $^{\circ}C$ |

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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      | -150 |      |      | V    |
| V <sub>(BR)CBO</sub> | Collector-base breakdown voltage     | I <sub>C</sub> =-0.5mA; I <sub>E</sub> =0     | -200 |      |      | V    |
| V <sub>(BR)EBO</sub> | Emitter-base breakdown voltage       | I <sub>E</sub> =-0.5mA; I <sub>B</sub> =0     | -5   |      |      | V    |
| V <sub>CEsat</sub>   | Collector-emitter saturation voltage | I <sub>C</sub> =-500mA; I <sub>B</sub> =-50mA |      |      | -1.0 | V    |
| I <sub>CBO</sub>     | Collector cut-off current            | V <sub>CB</sub> =-150V; I <sub>E</sub> =0     |      |      | -50  | μA   |
| I <sub>EBO</sub>     | Emitter cut-off current              | V <sub>EB</sub> =-5V; I <sub>C</sub> =0       |      |      | -50  | μA   |
| h <sub>FE</sub>      | DC current gain                      | I <sub>C</sub> =-0.4A; V <sub>CE</sub> =-10V  | 40   |      | 240  |      |
| f <sub>T</sub>       | Transition frequency                 | I <sub>C</sub> =-0.4A; V <sub>CE</sub> =-10V  |      | 5    |      | MHz  |

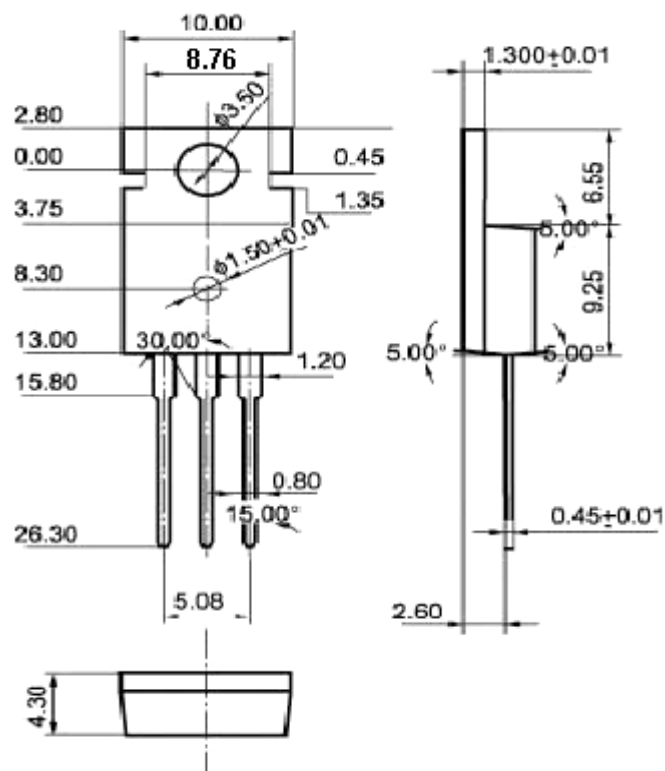
◆ h<sub>FE</sub> classifications

| R     | O      | Y       |
|-------|--------|---------|
| 40-80 | 70-140 | 120-240 |

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## PACKAGE OUTLINE

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

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