

Silicon PNP Power Transistors

2SB1105

DESCRIPTION

- With TO-220C package
- DARLINGTON
- High DC current gain
- Complement to type 2SD1605

APPLICATIONS

- Designed for use in low frequency power amplifier applications

PINNING

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

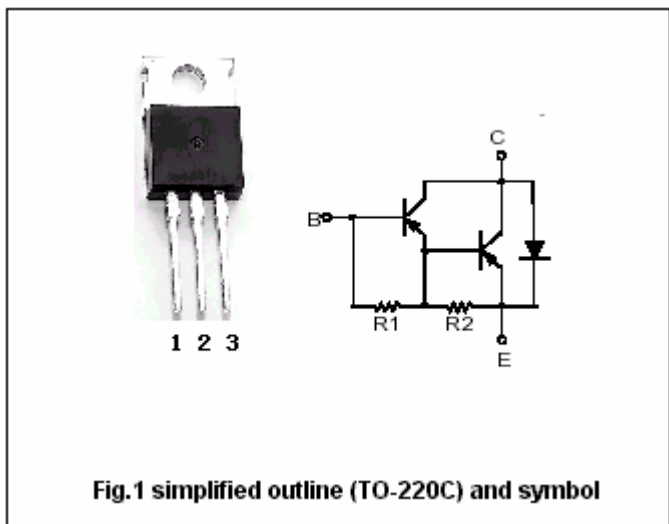


Fig.1 simplified outline (TO-220C) and symbol

Absolute maximum ratings(Tc=25°C)

| SYMBOL           | PARAMETER                   | CONDITIONS           | VALUE   | UNIT |
|------------------|-----------------------------|----------------------|---------|------|
| V <sub>CBO</sub> | Collector-base voltage      | Open emitter         | -120    | V    |
| V <sub>CEO</sub> | Collector-emitter voltage   | Open base            | -120    | V    |
| V <sub>EBO</sub> | Emitter-base voltage        | Open collector       | -7      | V    |
| I <sub>C</sub>   | Collector current-DC        |                      | -3      | 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> =-25mA, R <sub>BE</sub> =∞   | -120 |      |      | V    |
| V <sub>(BR)EBO</sub> | Emitter-base breakdown voltage       | I <sub>E</sub> =-50mA, I <sub>C</sub> =0    | -7   |      |      | V    |
| V <sub>CEsat-1</sub> | Collector-emitter saturation voltage | I <sub>C</sub> =-1.5A, I <sub>B</sub> =-3mA |      |      | -1.5 | V    |
| V <sub>CEsat-2</sub> | Collector-emitter saturation voltage | I <sub>C</sub> =-3A, I <sub>B</sub> =-30mA  |      |      | -3.0 | V    |
| V <sub>BEsat-1</sub> | Base-emitter saturation voltage      | I <sub>C</sub> =-1.5A, I <sub>B</sub> =-3mA |      |      | -2.0 | V    |
| V <sub>BEsat-2</sub> | Base-emitter saturation voltage      | I <sub>C</sub> =-3A, I <sub>B</sub> =-30mA  |      |      | -3.5 | V    |
| I <sub>CBO</sub>     | Collector cut-off current            | V <sub>CB</sub> =-120V, I <sub>E</sub> =0   |      |      | -100 | μA   |
| I <sub>CEO</sub>     | Collector cut-off current            | V <sub>CE</sub> =-100V, R <sub>BE</sub> =∞  |      |      | -10  | μA   |
| h <sub>FE</sub>      | DC current gain                      | I <sub>C</sub> =-1.5A; V <sub>CE</sub> =-3V | 1000 |      |      |      |
| V <sub>D</sub>       | Diode forward voltage                | I <sub>D</sub> =-3A                         |      |      | 3.0  | V    |

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PACKAGE OUTLINE

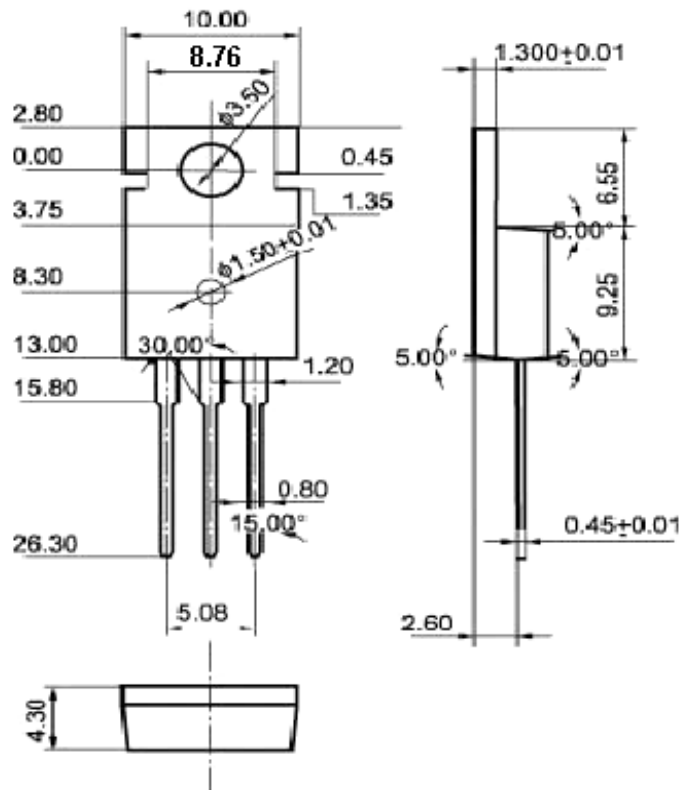


Fig.2 Outline dimensions