

**Silicon PNP Power Transistor**

**2SB884**

**DESCRIPTION**

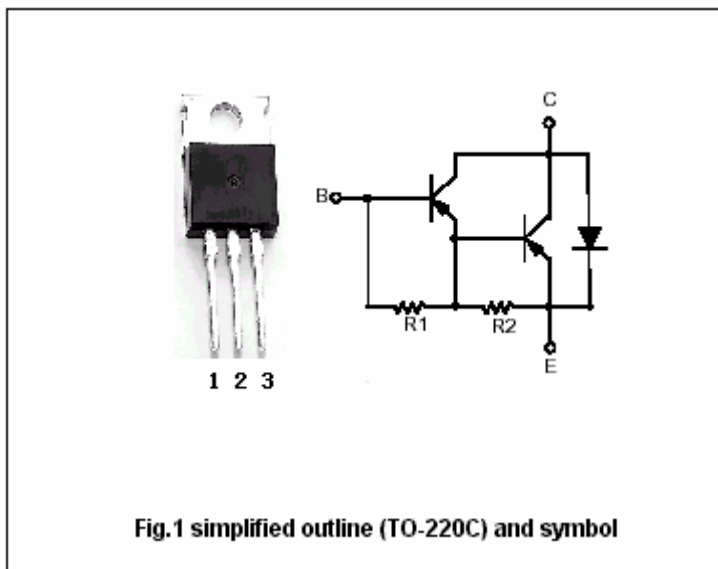
- With TO-220C package
- DARLINGTON
- High DC current gain
- Low collector saturation voltage
- Complement to type 2SD1194

**APPLICATIONS**

- For motor drivers,printer hammer drivers,relay drivers,voltage regulator control applications

**PINNING**

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



**Absolute maximum ratings(Tc=25°C)**

| SYMBOL           | PARAMETER                   | CONDITIONS           | VALUE   | UNIT |
|------------------|-----------------------------|----------------------|---------|------|
| V <sub>CBO</sub> | Collector-base voltage      | Open emitter         | -110    | V    |
| V <sub>CEO</sub> | Collector-emitter voltage   | Open base            | -100    | V    |
| V <sub>EBO</sub> | Emitter-base voltage        | Open collector       | -6      | V    |
| I <sub>C</sub>   | Collector current-DC        |                      | -3      | A    |
| I <sub>CM</sub>  | Collector current-Pulse     |                      | -5      | A    |
| P <sub>C</sub>   | Collector power dissipation | T <sub>C</sub> =25°C | 30      | W    |
|                  |                             | T <sub>a</sub> =25°C | 1.75    |      |
| 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> =-50mA, R <sub>BE</sub> =∞   | -100 |      |      | V    |
| V <sub>(BR)CBO</sub> | Collector-base breakdown voltage     | I <sub>C</sub> =-5mA, I <sub>E</sub> =0     | -110 |      |      | V    |
| V <sub>CEsat</sub>   | Collector-emitter saturation voltage | I <sub>C</sub> =-1.5A, I <sub>B</sub> =-3mA |      | -1.0 | -1.5 | V    |
| V <sub>BE sat</sub>  | Base-emitter saturation voltage      | I <sub>C</sub> =-1.5A, I <sub>B</sub> =-3mA |      |      | -2.0 | V    |
| I <sub>CBO</sub>     | Collector cut-off current            | V <sub>CB</sub> =-80V, I <sub>E</sub> =0    |      |      | -0.1 | mA   |
| I <sub>EBO</sub>     | Emitter cut-off current              | V <sub>EB</sub> =-5V; I <sub>C</sub> =0     |      |      | -3.0 | mA   |
| h <sub>FE</sub>      | DC current gain                      | I <sub>C</sub> =-1.5A; V <sub>CE</sub> =-3V | 1500 |      |      |      |
| f <sub>T</sub>       | Transition frequency                 | V <sub>CE</sub> =-5V, I <sub>C</sub> =-1.5A |      | 20   |      | MHz  |

## Switching times

|                  |               |  |  |     |  |    |
|------------------|---------------|--|--|-----|--|----|
| t <sub>on</sub>  | Turn-on time  | I <sub>C</sub> =-1A; V <sub>CC</sub> =-50V<br>I <sub>B1</sub> =-I <sub>B2</sub> =-2mA; R <sub>L</sub> =50Ω |  | 0.8 |  | μs |
| t <sub>stg</sub> | Storage time  |  |  | 2.4 |  | μs |
| t <sub>r</sub>   | Turn-off time |  |  | 1.2 |  | μs |

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PACKAGE OUTLINE

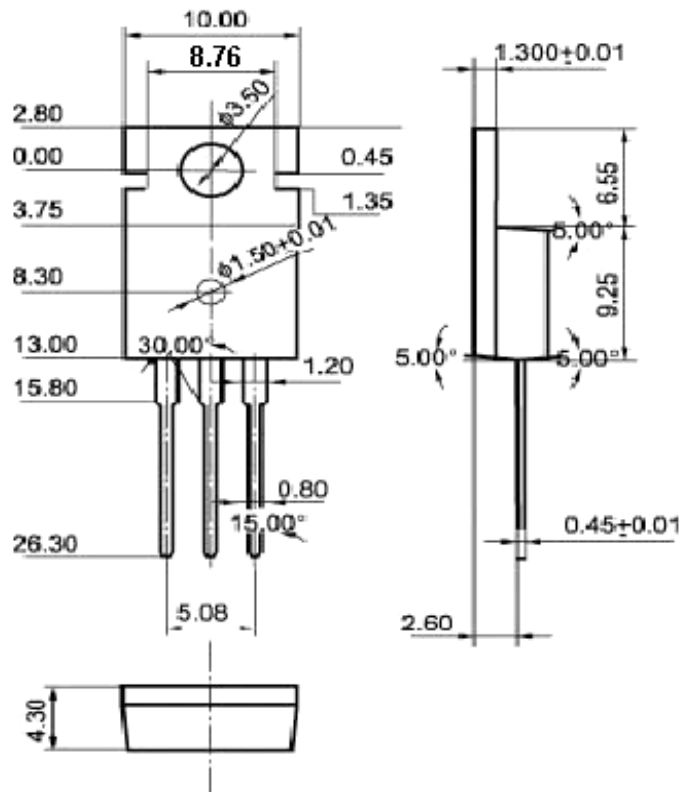


Fig.2 Outline dimensions