

Silicon NPN Power Transistors

2SC1880

DESCRIPTION

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

APPLICATIONS

- For industrial use

PINNING

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

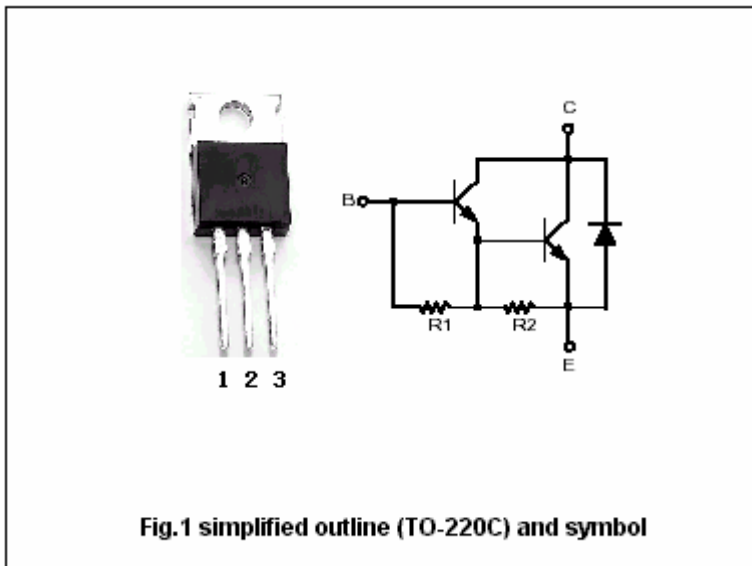


Fig.1 simplified outline (TO-220C) and symbol

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       | 5       | V    |
| I <sub>C</sub>   | Collector current-DC        |                      | 2       | A    |
| I <sub>CM</sub>  | Collector current-Pulse     |                      | 4       | A    |
| P <sub>C</sub>   | Collector power dissipation | T <sub>C</sub> =25°C | 15      | W    |
| T <sub>j</sub>   | Junction temperature        |                      | 150     | °C   |
| T <sub>stg</sub> | Storage temperature         |                      | -65~150 | °C   |

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## CHARACTERISTICS

T<sub>j</sub>=25°C unless otherwise specified

| SYMBOL                | PARAMETER                            | CONDITIONS                               | MIN  | TYP. | MAX | UNIT |
|-----------------------|--------------------------------------|--|------|------|-----|------|
| V <sub>CEQ(SUS)</sub> | Collector-emitter sustaining voltage | I <sub>C</sub> =30mA, I <sub>B</sub> =0  | 120  |      |     | V    |
| V <sub>(BR)CBO</sub>  | Collector-base breakdown voltage     | I <sub>C</sub> =1mA, I <sub>E</sub> =0   | 120  |      |     | V    |
| V <sub>(BR)EBO</sub>  | Emitter-base breakdown voltage       | I <sub>E</sub> =50mA, I <sub>C</sub> =0  | 5    |      |     | V    |
| V <sub>CEsat</sub>    | Collector-emitter saturation voltage | I <sub>C</sub> =2A, I <sub>B</sub> =8mA  |      |      | 1.2 | V    |
| I <sub>CBO</sub>      | Collector cut-off current            | V <sub>CB</sub> =100V, I <sub>E</sub> =0 |      |      | 0.1 | mA   |
| I <sub>CEO</sub>      | Collector cut-off current            | V <sub>CE</sub> =100V, I <sub>B</sub> =0 |      |      | 0.1 | mA   |
| I <sub>EBO</sub>      | Emitter cut-off current              | V <sub>EB</sub> =5V; I <sub>C</sub> =0   |      |      | 50  | mA   |
| h <sub>FE</sub>       | DC current gain                      | I <sub>C</sub> =2A ; V <sub>CE</sub> =2V | 1000 |      |     |      |

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PACKAGE OUTLINE

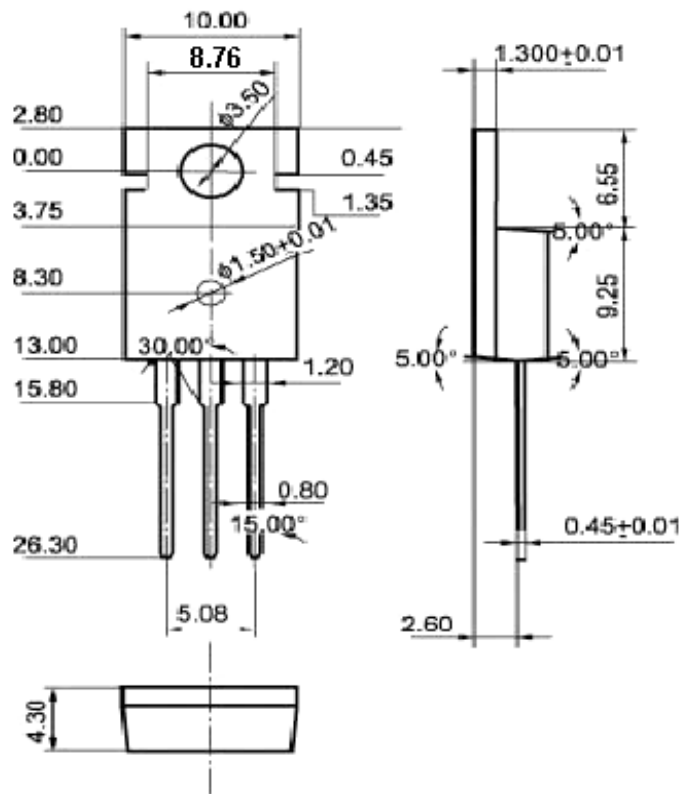


Fig.2 Outline dimensions