

**Silicon NPN Power Transistors**

**2SC1827**

**DESCRIPTION**

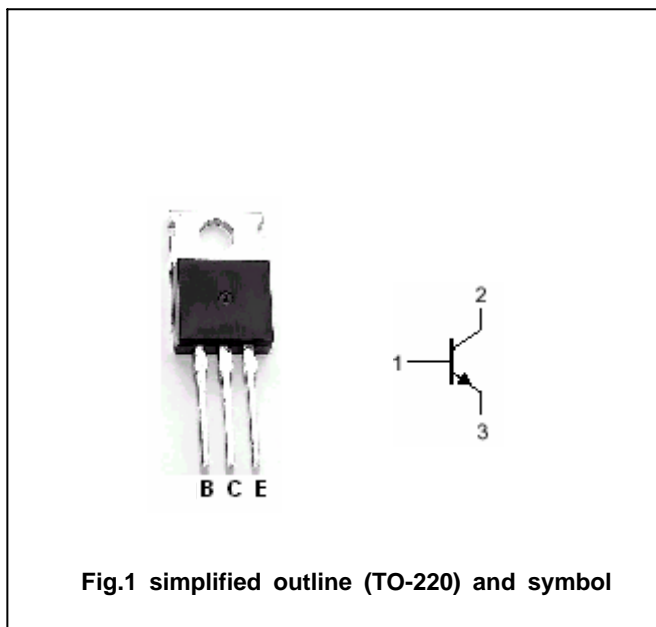
- With TO-220 package
- Complement to type 2SA769
- Collector current : $I_C=4A$
- Collector dissipation  
: $P_C=30W@T_C=25$

**APPLICATIONS**

- For use in low frequency power amplifier applications

**PINNING**

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



**Absolute maximum ratings (Ta=25 )**

| SYMBOL    | PARAMETER                   | CONDITIONS     | VALUE   | UNIT |
|-----------|-----------------------------|----------------|---------|------|
| $V_{CBO}$ | Collector-base voltage      | Open emitter   | 80      | V    |
| $V_{CEO}$ | Collector-emitter voltage   | Open base      | 80      | V    |
| $V_{EBO}$ | Emitter-base voltage        | Open collector | 5       | V    |
| $I_C$     | Collector current (DC)      |                | 4       | A    |
| $P_C$     | Collector power dissipation | $T_C=25$       | 30      | W    |
| $T_j$     | Junction temperature        |                | 150     |      |
| $T_{stg}$ | Storage temperature         |                | -55~150 |      |

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## CHARACTERISTICS

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

| SYMBOL               | PARAMETER                            | CONDITIONS                                 | MIN | TYP. | MAX | UNIT |
|----------------------|--------------------------------------|--|-----|------|-----|------|
| V <sub>(BR)CEO</sub> | Collector-emitter breakdown voltage  | I <sub>C</sub> =25mA ; 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> =0.1mA ; I <sub>C</sub> =0  | 5   |      |     | V    |
| V <sub>CEsat</sub>   | Collector-emitter saturation voltage | I <sub>C</sub> =3A ; I <sub>B</sub> =0.3A  |     |      | 1.0 | V    |
| V <sub>BEsat</sub>   | Base-emitter saturation voltage      | I <sub>C</sub> =3A ; I <sub>B</sub> =0.3A  |     |      | 1.5 | 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    |     |      | 10  | μA   |
| h <sub>FE</sub>      | DC current gain                      | I <sub>C</sub> =1A ; V <sub>CE</sub> =4V   | 60  |      | 240 |      |
| f <sub>T</sub>       | Transition frequency                 | I <sub>C</sub> =0.5A ; V <sub>CE</sub> =2V |     | 8    |     | MHz  |

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PACKAGE OUTLINE

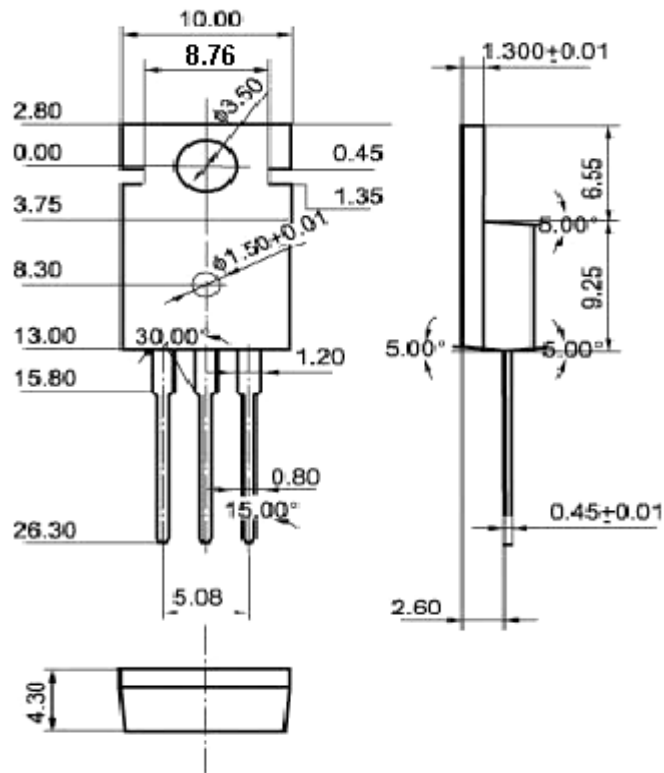


Fig.2 outline dimensions (unindicated tolerance:  $\pm 0.10$  mm)