

Silicon PNP Power Transistors

2SA1670

**DESCRIPTION**

- With TO-3PML package
- Complement to type 2SC4385

**APPLICATIONS**

- Audio and general purpose

**PINNING**

| PIN | DESCRIPTION |
|-----|-------------|
| 1   | Base        |
| 2   | Collector   |
| 3   | Emitter     |

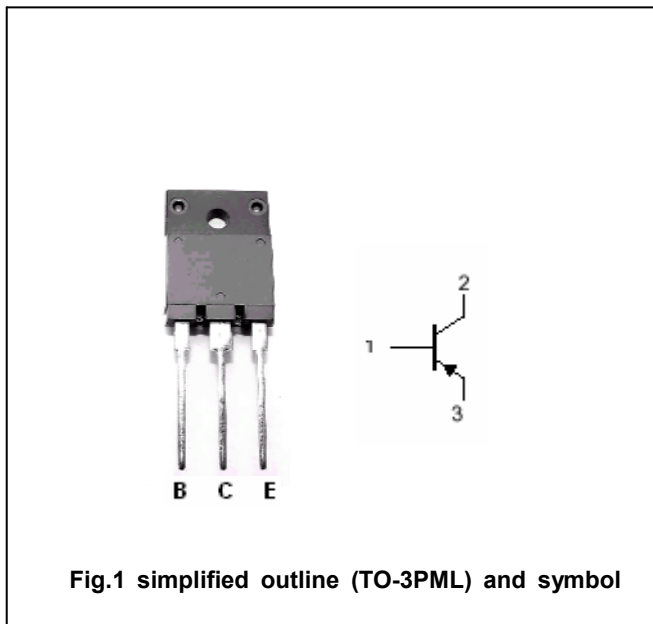


Fig.1 simplified outline (TO-3PML) and symbol

**Absolute maximum ratings(Ta=25°C)**

| SYMBOL           | PARAMETER                   | CONDITIONS           | VALUE   | UNIT |
|------------------|-----------------------------|----------------------|---------|------|
| V <sub>CBO</sub> | Collector-base voltage      | Open emitter         | -80     | V    |
| V <sub>CEO</sub> | Collector-emitter voltage   | Open base            | -80     | V    |
| V <sub>EBO</sub> | Emitter-base voltage        | Open collector       | -6      | V    |
| I <sub>C</sub>   | Collector current           |                      | -6      | A    |
| I <sub>B</sub>   | Base current                |                      | -3      | A    |
| P <sub>C</sub>   | Collector power dissipation | T <sub>C</sub> =25°C | 60      | 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> =-50mA; I <sub>B</sub> =0      | -80 |      |      | V    |
| V <sub>CEsat</sub>   | Collector-emitter saturation voltage | I <sub>C</sub> =-2 A; I <sub>B</sub> =-0.2 A  |     |      | -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> =-6V; I <sub>C</sub> =0       |     |      | -10  | μA   |
| h <sub>FE</sub>      | DC current gain                      | I <sub>C</sub> =-2A ; V <sub>CE</sub> =-4V    | 50  |      |      |      |
| f <sub>T</sub>       | Transition frequency                 | I <sub>C</sub> =-0.5A ; V <sub>CE</sub> =-12V |     | 20   |      | MHz  |

## Switching times

|                  |              |   |  |      |  |    |
|------------------|--------------|---|--|------|--|----|
| t <sub>on</sub>  | Turn-on time | I <sub>C</sub> =-3A; R <sub>L</sub> =10Ω<br>I <sub>B1</sub> =-I <sub>B2</sub> =-0.3A<br>V <sub>CC</sub> =-30V |  | 0.25 |  | μs |
| t <sub>stg</sub> | Storage time |   |  | 0.5  |  | μs |
| t <sub>f</sub>   | Fall time    |   |  | 0.1  |  | μs |

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PACKAGE OUTLINE



Fig.2 Outline dimensions