

## Silicon NPN Power Transistors

2SC4385

## DESCRIPTION

- With TO-3PML package
- Complement to type 2SA1670

## APPLICATIONS

- Audio and general purpose

## PINNING

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

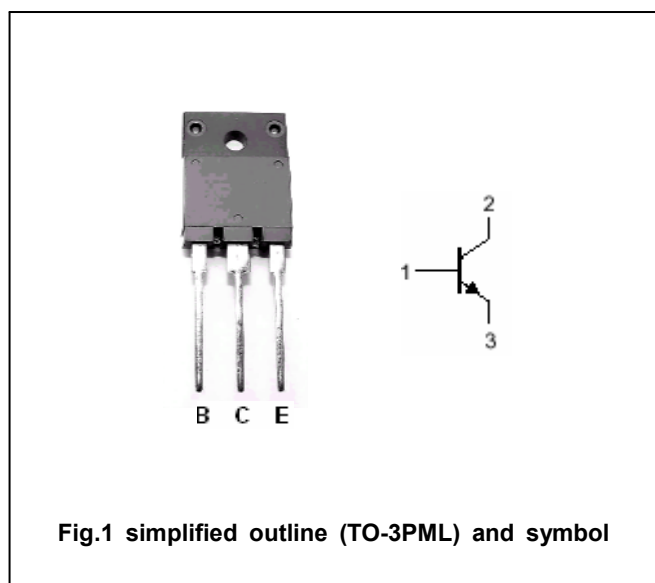


Fig.1 simplified outline (TO-3PML) and symbol

Absolute maximum ratings( $T_a=25^\circ\text{C}$ )

| SYMBOL    | PARAMETER                   | CONDITIONS             | VALUE   | UNIT             |
|-----------|-----------------------------|------------------------|---------|------------------|
| $V_{CBO}$ | Collector-base voltage      | Open emitter           | 120     | V                |
| $V_{CEO}$ | Collector-emitter voltage   | Open base              | 80      | V                |
| $V_{EBO}$ | Emitter-base voltage        | Open collector         | 6       | V                |
| $I_C$     | Collector current           |                        | 6       | A                |
| $I_B$     | Base current                |                        | 3       | A                |
| $P_C$     | Collector power dissipation | $T_C=25^\circ\text{C}$ | 60      | W                |
| $T_j$     | Junction temperature        |                        | 150     | $^\circ\text{C}$ |
| $T_{stg}$ | Storage temperature         |                        | -55~150 | $^\circ\text{C}$ |

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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>(BR)EBO</sub> | Emitter-base breakdown voltage       | I <sub>E</sub> =1mA; I <sub>C</sub> =0       | 6   |      |     | 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> =120V; 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  |      | 180 |      |
| f <sub>T</sub>       | Transition frequency                 | I <sub>E</sub> =-0.5A ; V <sub>CE</sub> =12V |     | 20   |     | MHz  |

◆ h<sub>FE</sub> classifications

| O      | P      | Y      |
|--------|--------|--------|
| 50-100 | 70-140 | 90-180 |

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## PACKAGE OUTLINE

