

## Silicon NPN Power Transistors

## 2SC1586

## DESCRIPTION

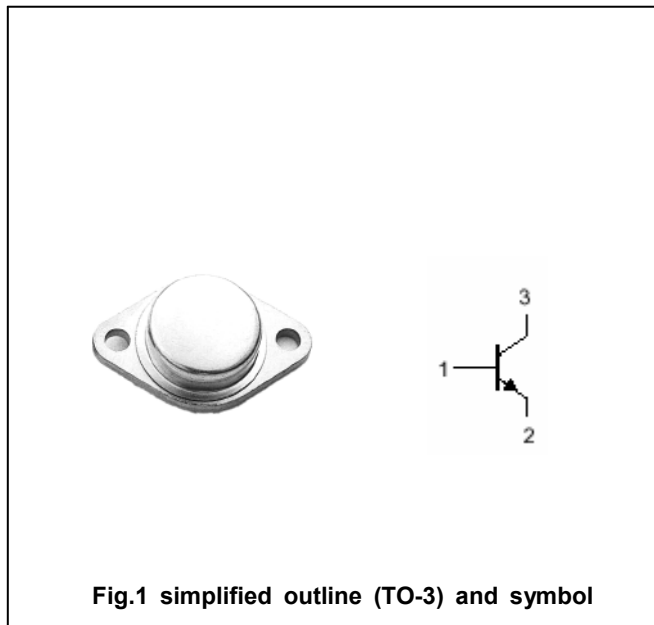
- With TO-3 package
- High power dissipation
- High current capability

## APPLICATIONS

- For audio power amplifier and general purpose applications

## PINNING(see Fig.2)

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

Absolute maximum ratings( $T_a = \square$ )

| SYMBOL    | PARAMETER                   | CONDITIONS         | VALUE   | UNIT      |
|-----------|-----------------------------|--------------------|---------|-----------|
| $V_{CBO}$ | Collector-base voltage      | Open emitter       | 250     | V         |
| $V_{CEO}$ | Collector-emitter voltage   | Open base          | 200     | V         |
| $V_{EBO}$ | Emitter-base voltage        | Open collector     | 6       | V         |
| $I_C$     | Collector current           |                    | 15      | A         |
| $I_B$     | Base current                |                    | 4       | A         |
| $P_C$     | Collector power dissipation | $T_C = 25 \square$ | 150     | W         |
| $T_j$     | Junction temperature        |                    | 150     | $\square$ |
| $T_{stg}$ | Storage temperature         |                    | -55~150 | $\square$ |

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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> =25mA ; I <sub>B</sub> =0          | 200 |      |     | 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> =5A; I <sub>B</sub> =0.5A          |     |      | 2.0 | V    |
| I <sub>CBO</sub>     | Collector cut-off current            | V <sub>CB</sub> =250V; I <sub>E</sub> =0          |     |      | 0.1 | mA   |
| I <sub>EBO</sub>     | Emitter cut-off current              | V <sub>EB</sub> =6V; I <sub>C</sub> =0            |     |      | 0.1 | mA   |
| h <sub>FE</sub>      | DC current gain                      | I <sub>C</sub> =5A ; V <sub>CE</sub> =4V          | 60  |      |     |      |
| f <sub>T</sub>       | Transition frequency                 | I <sub>C</sub> =1A ; V <sub>CE</sub> =12V         |     | 10   |     | MHz  |
| C <sub>OB</sub>      | Collector output capacitance         | I <sub>E</sub> =0 ; V <sub>CB</sub> = 10V; f=1MHz | 110 |      |     | pF   |

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PACKAGE OUTLINE

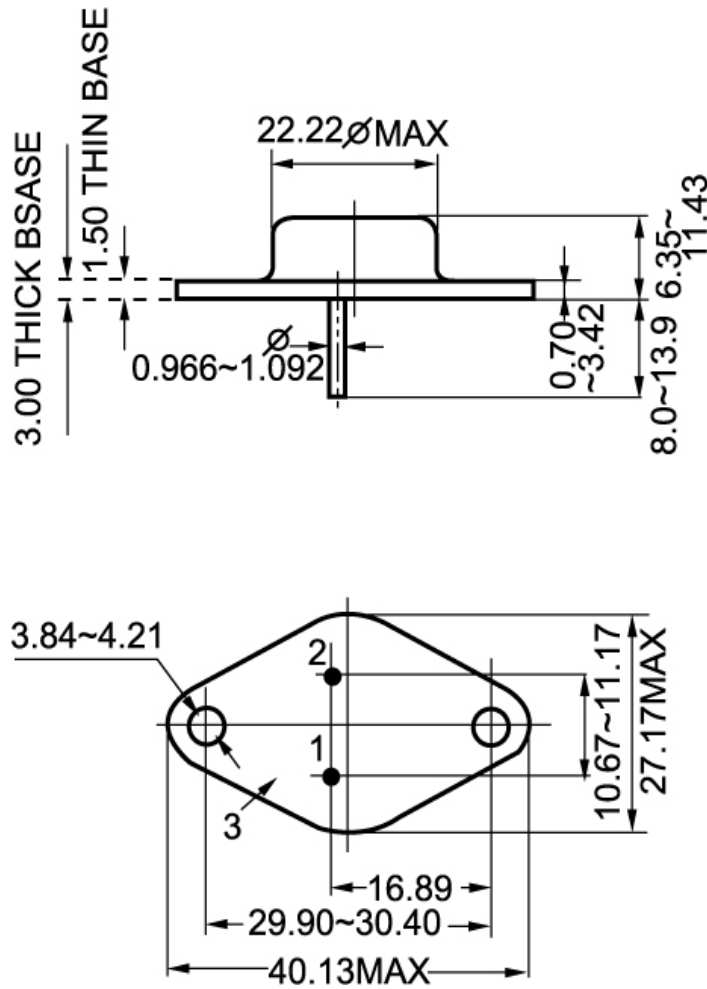


Fig.2 outline dimensions (unindicated tolerance:±0.1mm)