

**Silicon NPN Power Transistors**

**2SC1440**

**DESCRIPTION**

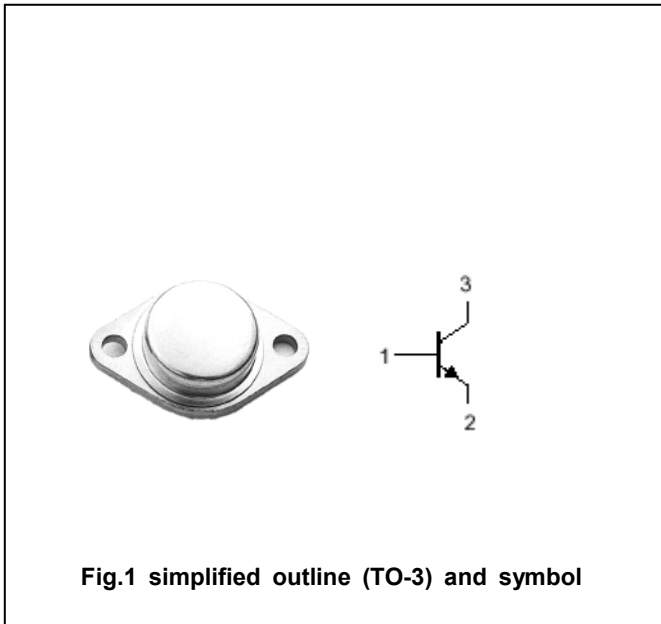
- With TO-3 package
- High power dissipation

**APPLICATIONS**

- Power amplifier applications
- Power switching applications
- DC-DC converters

**PINNING(see Fig.2)**

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



**Absolute maximum ratings(Ta=□)**

| SYMBOL           | PARAMETER                   | CONDITIONS          | VALUE   | UNIT |
|------------------|-----------------------------|---------------------|---------|------|
| V <sub>CBO</sub> | Collector-base voltage      | Open emitter        | 150     | V    |
| V <sub>CEO</sub> | Collector-emitter voltage   | Open base           | 150     | V    |
| V <sub>EBO</sub> | Emitter-base voltage        | Open collector      | 5       | V    |
| I <sub>C</sub>   | Collector current           |                     | 15      | A    |
| I <sub>B</sub>   | Base current                |                     | 4       | A    |
| P <sub>C</sub>   | Collector power dissipation | T <sub>C</sub> =25□ | 150     | W    |
| T <sub>j</sub>   | Junction temperature        |                     | 150     | □    |
| T <sub>stg</sub> | Storage temperature         |                     | -55~200 | □    |

## Silicon NPN Power Transistors

## 2SC1440

## 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  | 150 |      |     | V    |
| V <sub>(BR)EBO</sub> | Emitter-base breakdown voltage       | I <sub>E</sub> =1mA ; I <sub>C</sub> =0   | 5   |      |     | V    |
| V <sub>CEsat</sub>   | Collector-emitter saturation voltage | I <sub>C</sub> =10A; I <sub>B</sub> =1A   |     |      | 2.0 | V    |
| V <sub>BEsat</sub>   | Base-emitter saturation voltage      | I <sub>C</sub> =10A; I <sub>B</sub> =1A   |     |      | 2.5 | V    |
| I <sub>CBO</sub>     | Collector cut-off current            | V <sub>CB</sub> =150V; I <sub>E</sub> =0  |     |      | 0.1 | mA   |
| I <sub>EBO</sub>     | Emitter cut-off current              | V <sub>EB</sub> =5V; 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  | 20  |      |     |      |
| f <sub>T</sub>       | Transition frequency                 | I <sub>C</sub> =1A ; V <sub>CE</sub> =12V | 10  |      |     | MHz  |

PACKAGE OUTLINE



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