

Silicon NPN Power Transistors

2SC3636

DESCRIPTION

- With TO-3PN package
- High voltage ,high speed
- High reliability

APPLICATIONS

- Ultrahigh-definition CRT display horizontal deflection output applications

PINNING

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

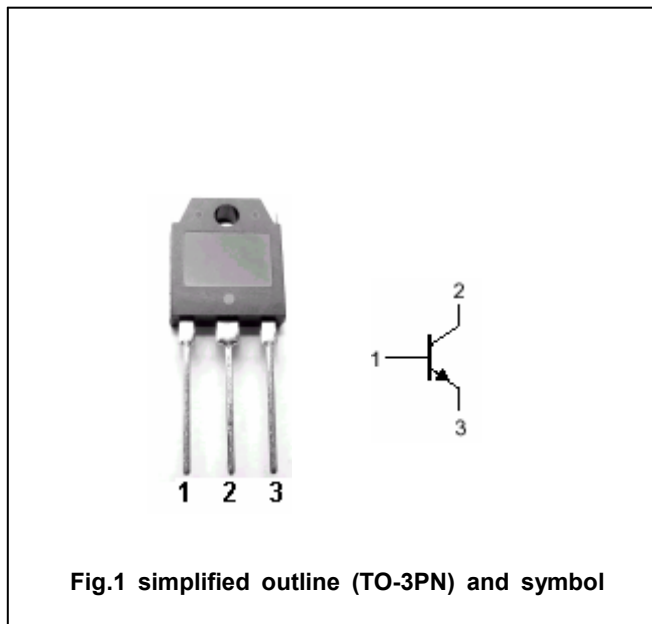


Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings(Ta=□)

| SYMBOL           | PARAMETER                   | CONDITIONS          | VALUE   | UNIT |
|------------------|-----------------------------|---------------------|---------|------|
| V <sub>CBO</sub> | Collector-base voltage      | Open emitter        | 900     | V    |
| V <sub>CEO</sub> | Collector-emitter voltage   | Open base           | 500     | V    |
| V <sub>EBO</sub> | Emitter-base voltage        | Open collector      | 7       | V    |
| I <sub>C</sub>   | Collector current           |                     | 7       | A    |
| I <sub>CM</sub>  | Collector current-peak      |                     | 14      | A    |
| P <sub>C</sub>   | Collector power dissipation | T <sub>C</sub> =25□ | 80      | W    |
| T <sub>j</sub>   | Junction temperature        |                     | 150     | □    |
| T <sub>stg</sub> | Storage temperature         |                     | -55~150 | □    |

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## CHARACTERISTICS

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

| SYMBOL                | PARAMETER                            | CONDITIONS                                 | MIN | TYP. | MAX | UNIT |
|-----------------------|--------------------------------------|--|-----|------|-----|------|
| V <sub>CE0(SUS)</sub> | Collector-emitter sustaining voltage | I <sub>C</sub> =100mA ; I <sub>B</sub> =0  | 500 |      |     | V    |
| V <sub>CEsat</sub>    | Collector-emitter saturation voltage | I <sub>C</sub> =4A ; I <sub>B</sub> =0.8A  |     |      | 2.0 | V    |
| V <sub>BEsat</sub>    | Base-emitter saturation voltage      | I <sub>C</sub> =4A ; I <sub>B</sub> =0.8A  |     |      | 1.5 | V    |
| I <sub>CBO</sub>      | Collector cut-off current            | V <sub>CB</sub> =500V; I <sub>E</sub> =0   |     |      | 10  | μA   |
| I <sub>CES</sub>      | Collector cut-off current            | V <sub>CE</sub> =900V; R <sub>BE</sub> =0  |     |      | 0.5 | mA   |
| I <sub>EBO</sub>      | Emitter cut-off current              | V <sub>EB</sub> =5V; I <sub>C</sub> =0     |     |      | 1.0 | mA   |
| h <sub>FE</sub>       | DC current gain                      | I <sub>C</sub> =0.8A ; V <sub>CE</sub> =5V | 8   |      |     |      |

## Switching times

|                |              |   |  |     |     |    |
|----------------|--------------|---|--|-----|-----|----|
| t <sub>s</sub> | Storage time | V <sub>CC</sub> =200V; I <sub>C</sub> =4A;<br>I <sub>B1</sub> =0.8A; I <sub>B2</sub> =-1.6A |  |     | 3.0 | μs |
| t <sub>f</sub> | Fall time    |   |  | 0.1 | 0.2 | μs |

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PACKAGE OUTLINE

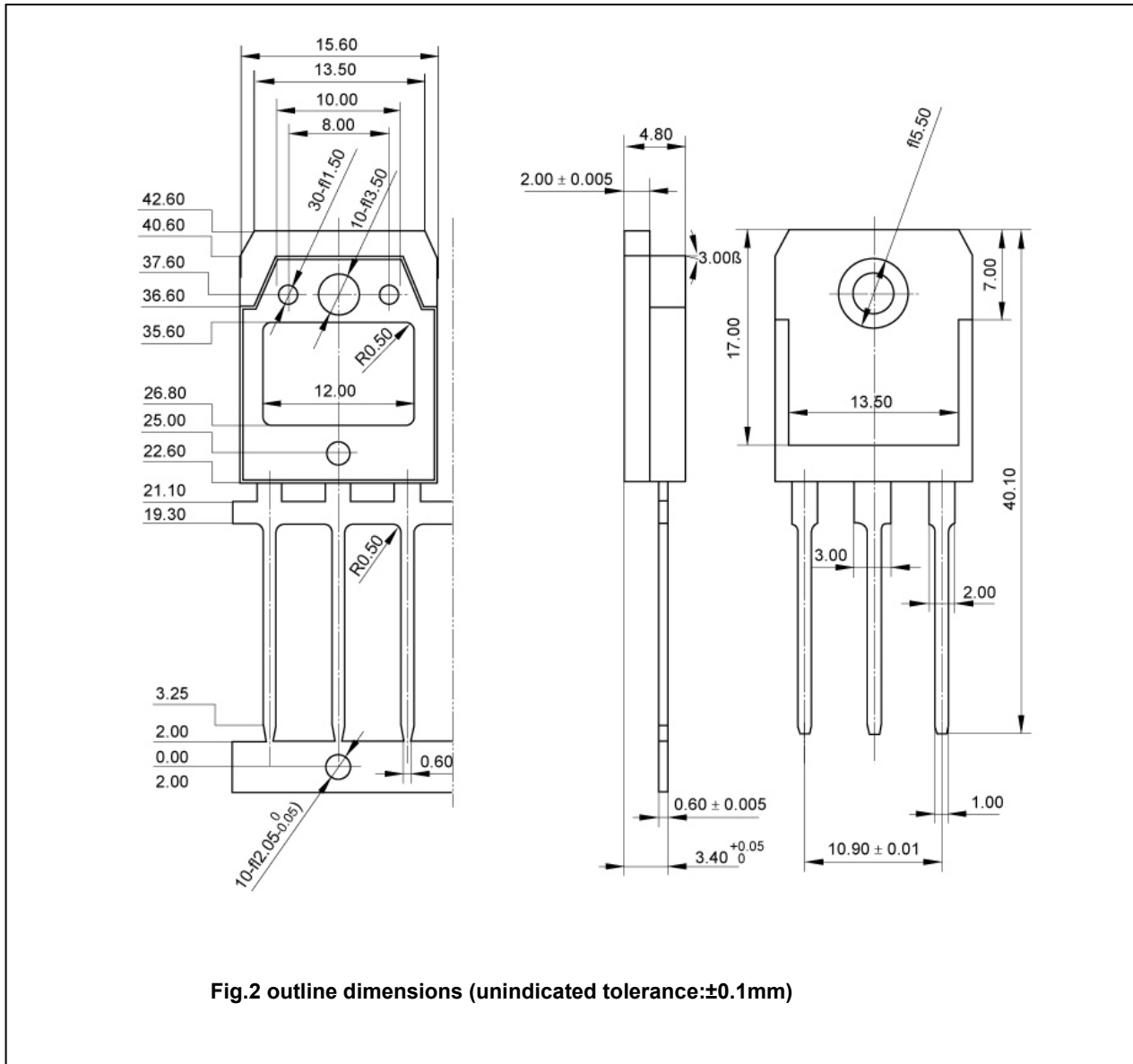


Fig.2 outline dimensions (unindicated tolerance:  $\pm 0.1$ mm)

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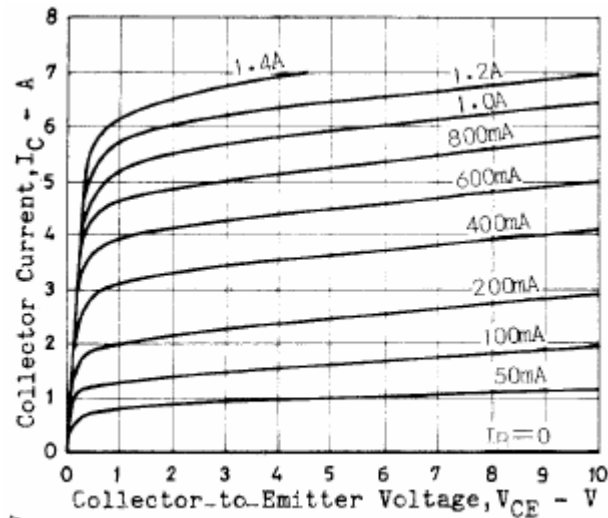


Fig.3 Static Characteristic

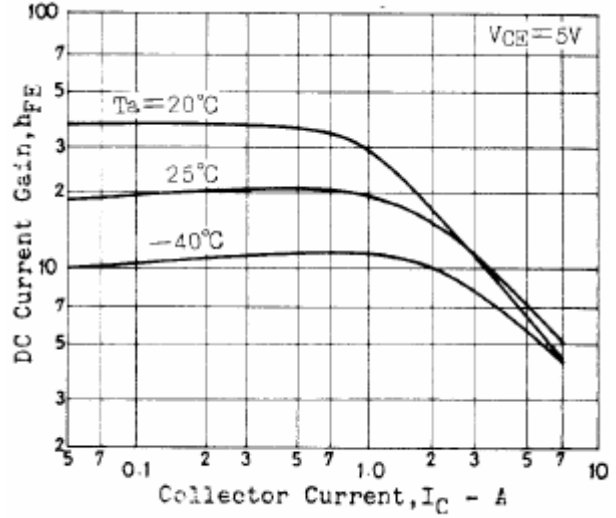


Fig.4 DC current Gain

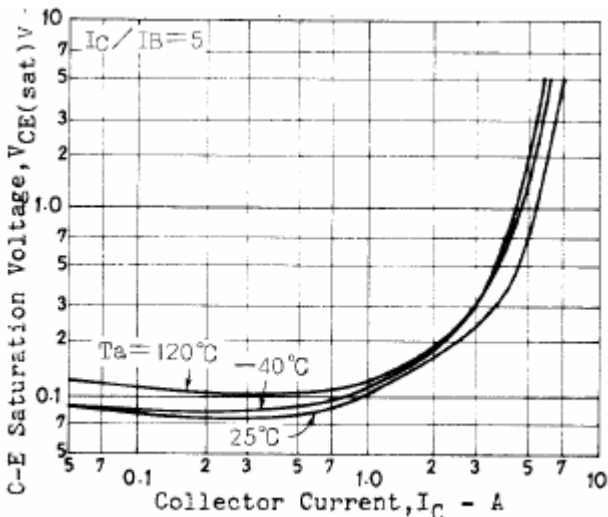


Fig.5 Collector-Emitter Saturation Voltage

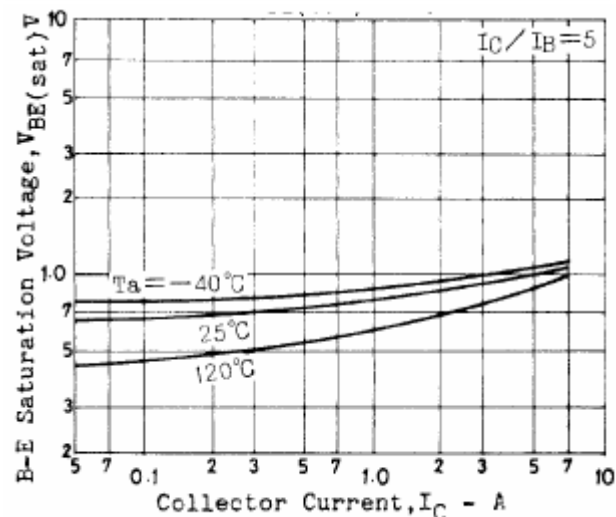


Fig.6 Base-Emitter Saturation Voltage

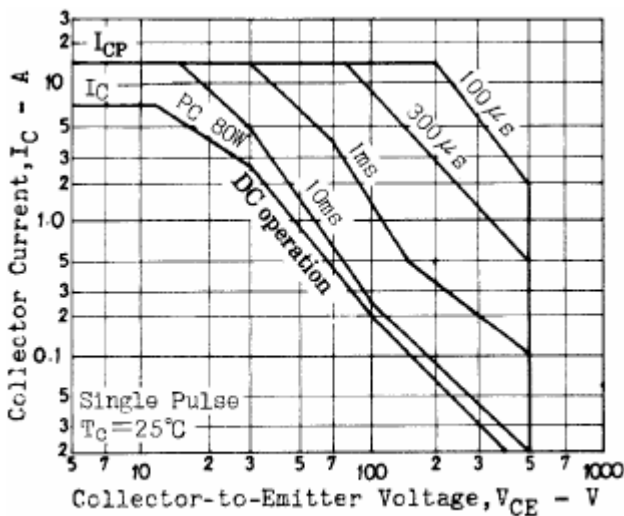


Fig.7 Safe Operating Area