

Silicon PNP Power Transistors

2SA1695

DESCRIPTION

- With TO-3PN package
- Complement to type 2SC4468

APPLICATIONS

- Audio and general purpose

PINNING

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

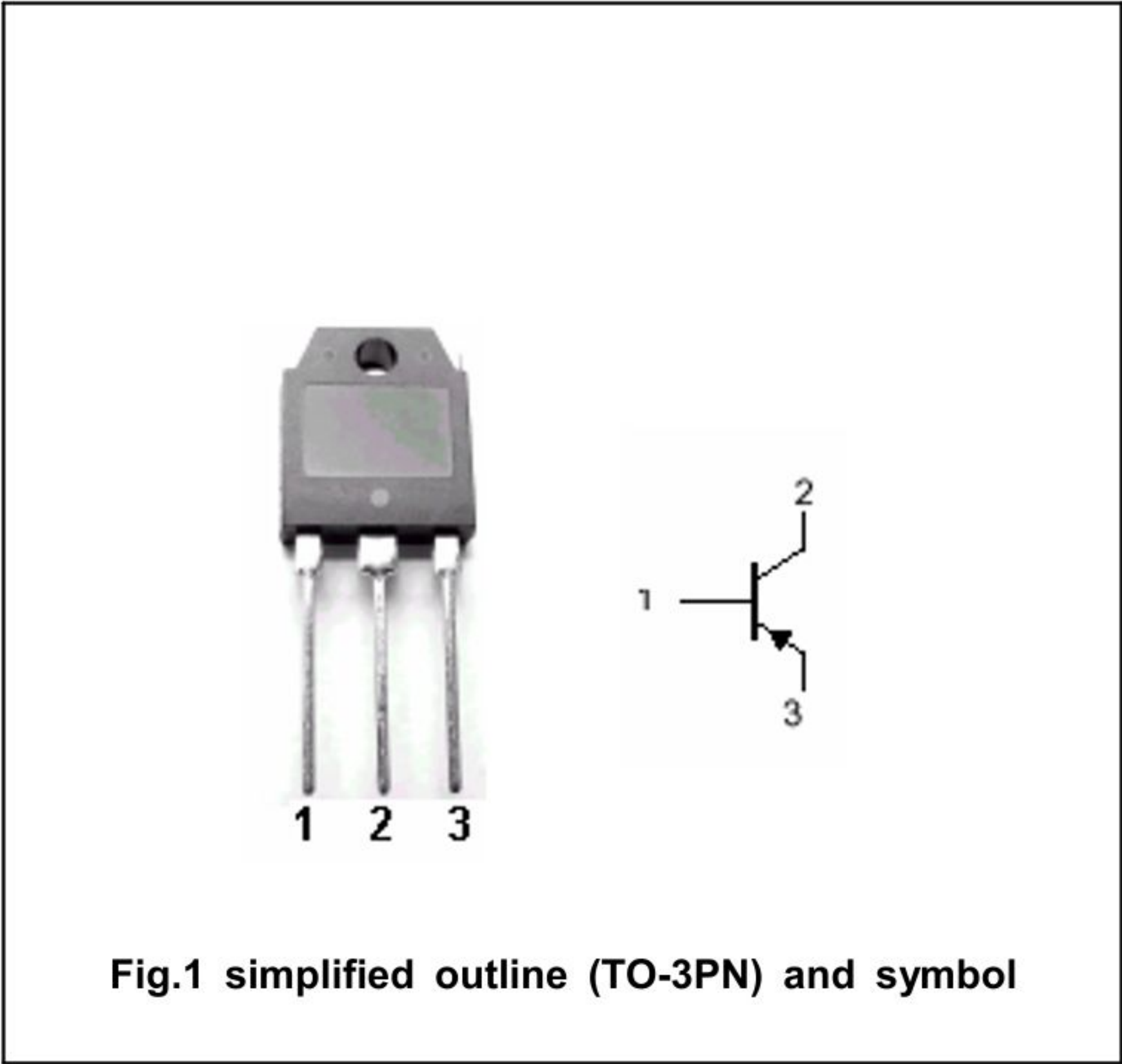


Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings(Ta=□)

| SYMBOL    | PARAMETER                   | CONDITIONS       | VALUE   | UNIT |
|-----------|-----------------------------|------------------|---------|------|
| $V_{CBO}$ | Collector-base voltage      | Open emitter     | -140    | V    |
| $V_{CEO}$ | Collector-emitter voltage   | Open base        | -140    | V    |
| $V_{EBO}$ | Emitter-base voltage        | Open collector   | -6      | V    |
| $I_C$     | Collector current           |                  | -10     | A    |
| $I_B$     | Base current                |                  | -4      | A    |
| $P_C$     | Collector power dissipation | $T_C=25^{\circ}$ | 100     | W    |
| $T_j$     | Junction temperature        |                  | 150     | □    |
| $T_{stg}$ | Storage temperature         |                  | -55~150 | □    |



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## CHARACTERISTICS

T<sub>j</sub>=25℃ 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         | -140 |      |      | V    |
| V <sub>CEsat</sub>   | Collector-emitter saturation voltage | I <sub>C</sub> =-5A ; I <sub>B</sub> =-0.5A       |      |      | -0.5 | V    |
| I <sub>CBO</sub>     | Collector cut-off current            | V <sub>CB</sub> =-140V; 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> =-3A ; V <sub>CE</sub> =-4V        | 50   |      | 180  |      |
| C <sub>OB</sub>      | Output capacitance                   | I <sub>E</sub> =0 ; V <sub>CB</sub> =-10V, f=1MHz |      | 400  |      | pF   |
| 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> =-5A; R <sub>L</sub> =12Ω<br>I <sub>B1</sub> =- I <sub>B2</sub> =-0.5A<br>V <sub>CC</sub> =-60V |  | 0.17 |  | μs |
| t <sub>s</sub>  | Storage time |                                                                                                                |  | 1.86 |  | μs |
| t <sub>f</sub>  | Fall time    |                                                                                                                |  | 0.27 |  | μs |

◆ h<sub>FE</sub> Classifications

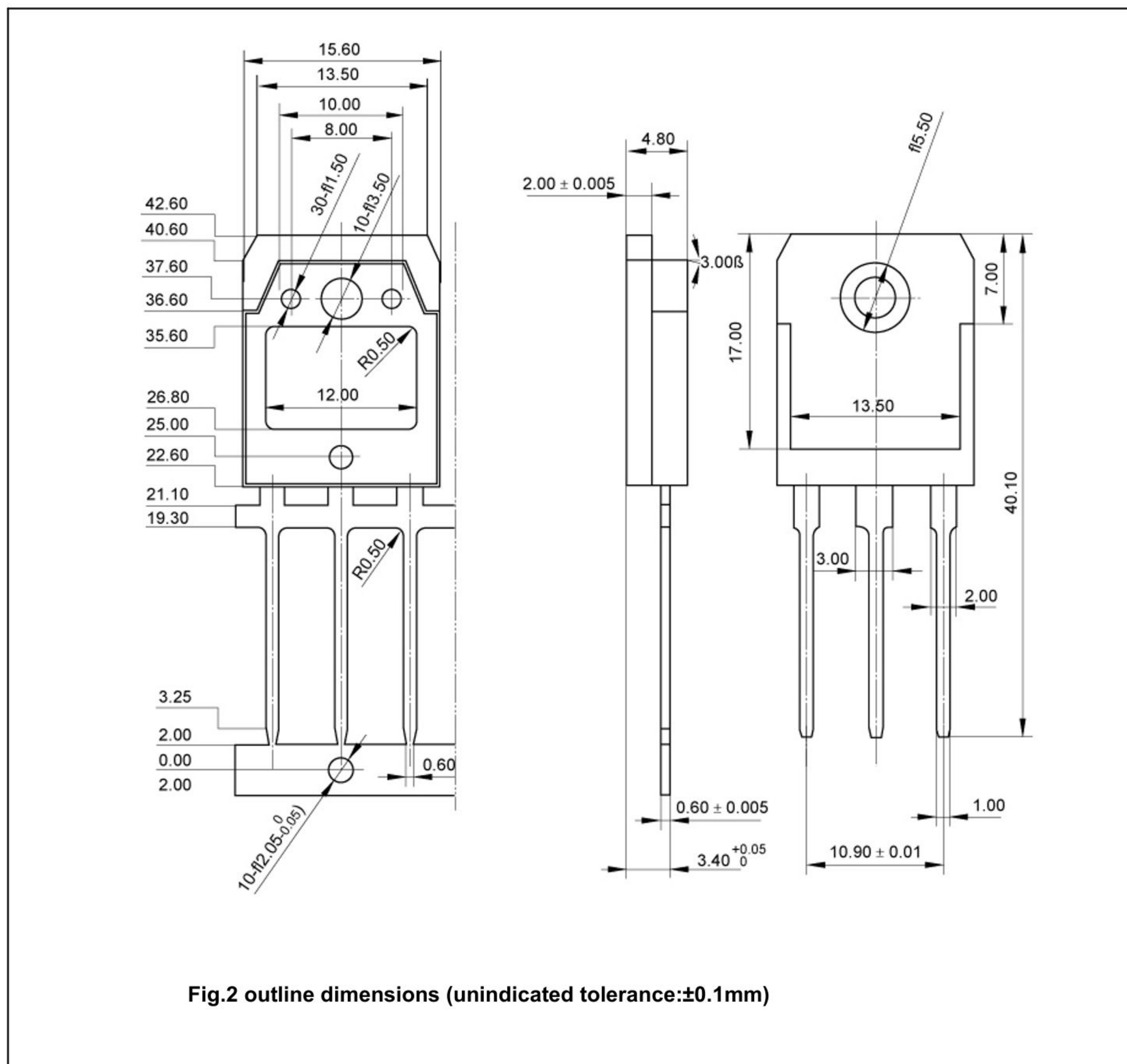
| O      | P      | Y      |
|--------|--------|--------|
| 50-100 | 70-140 | 90-180 |



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## PACKAGE OUTLINE

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



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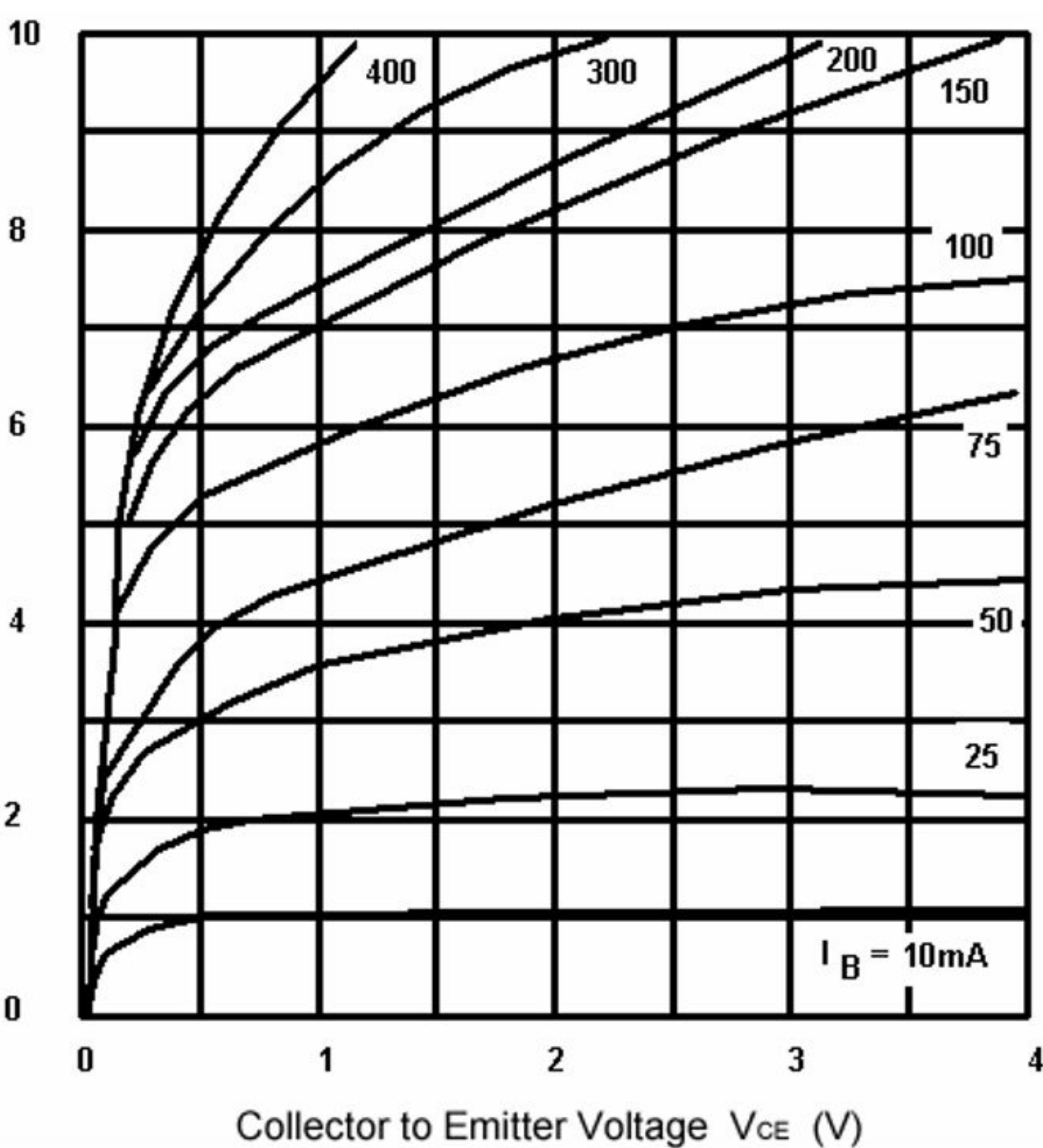


Fig.3 Static Characteristic

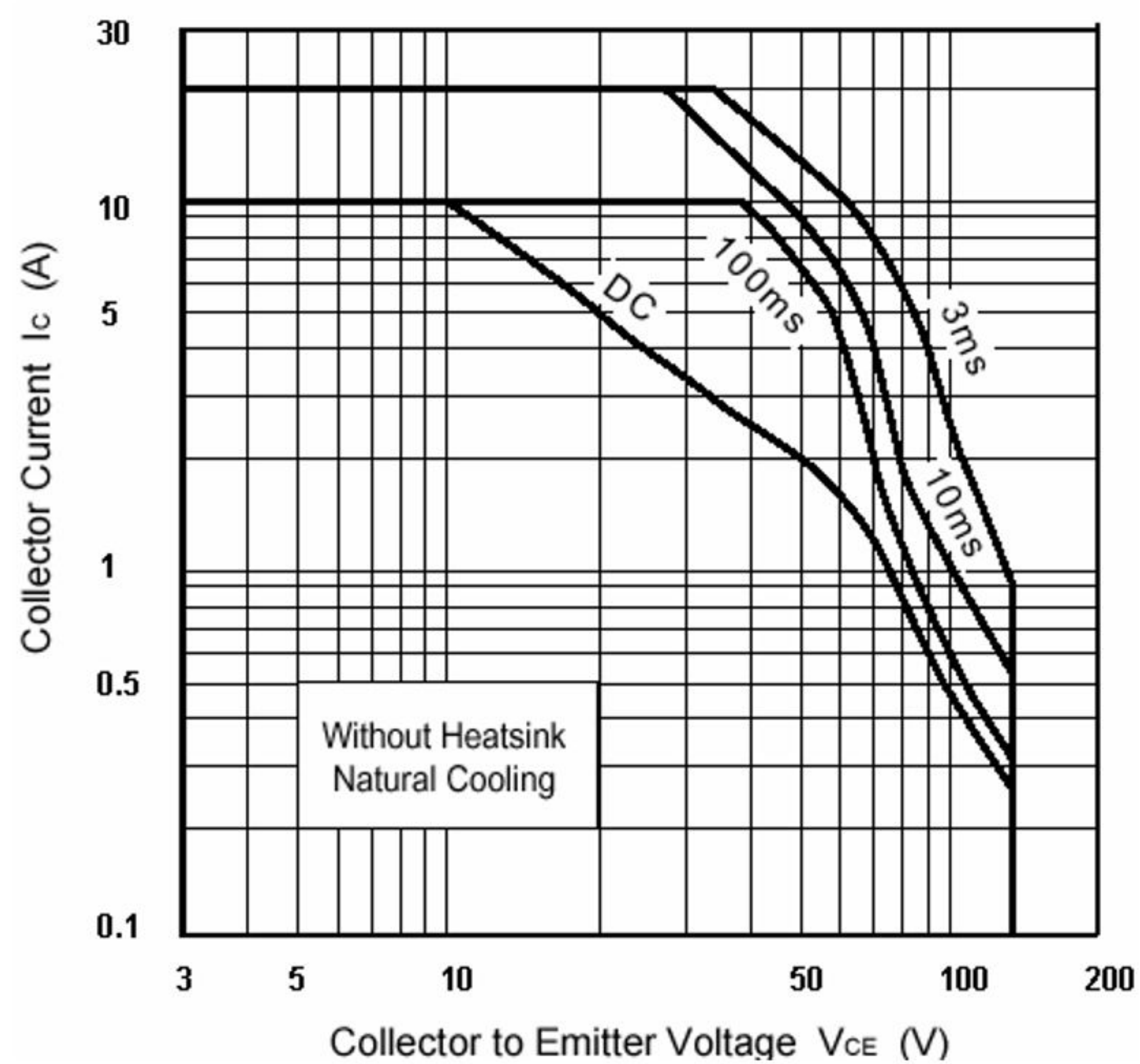


Fig.4 Safe Operating Area

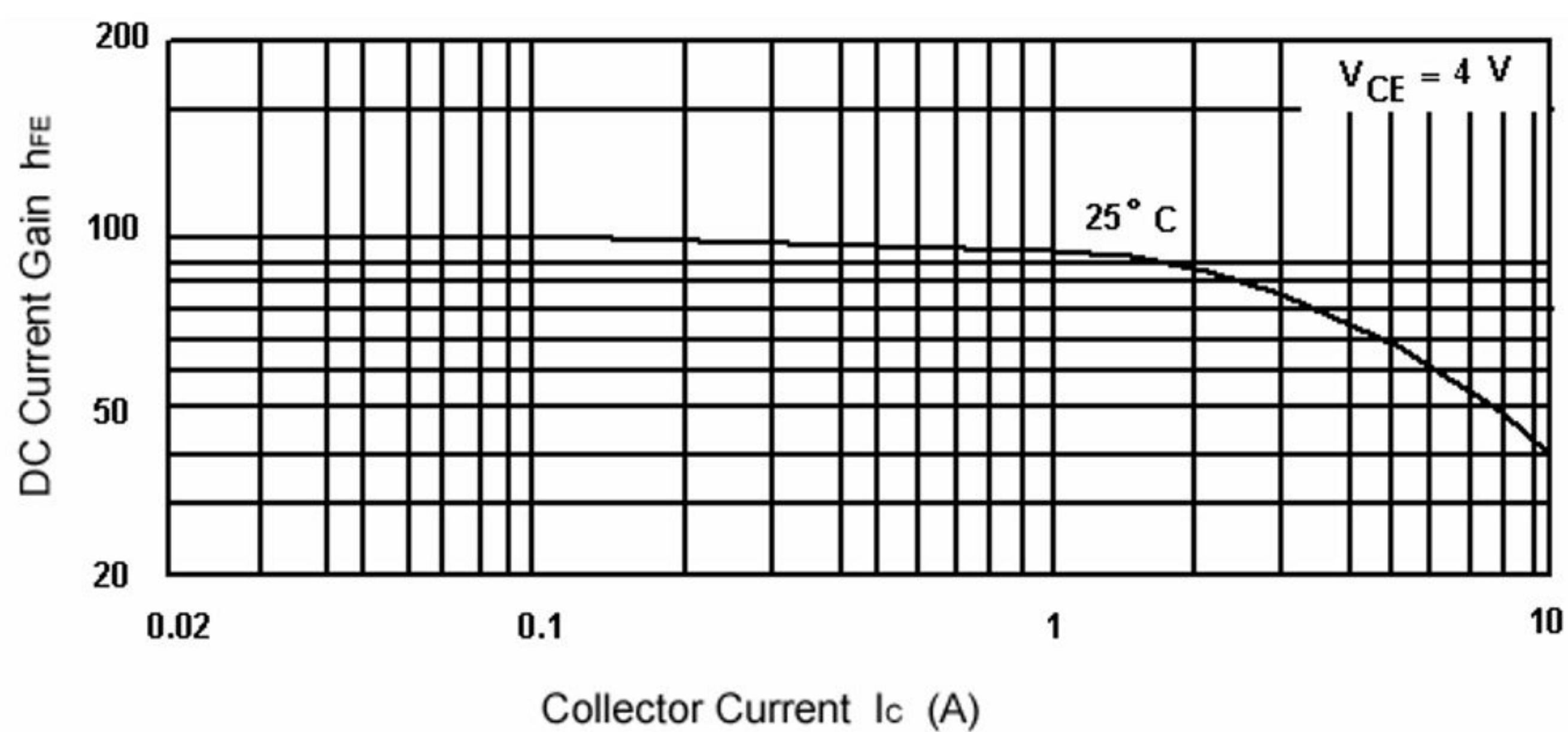


Fig.5 DC current Gain