

**Silicon PNP Power Transistors**

**2SA1943**

**DESCRIPTION**

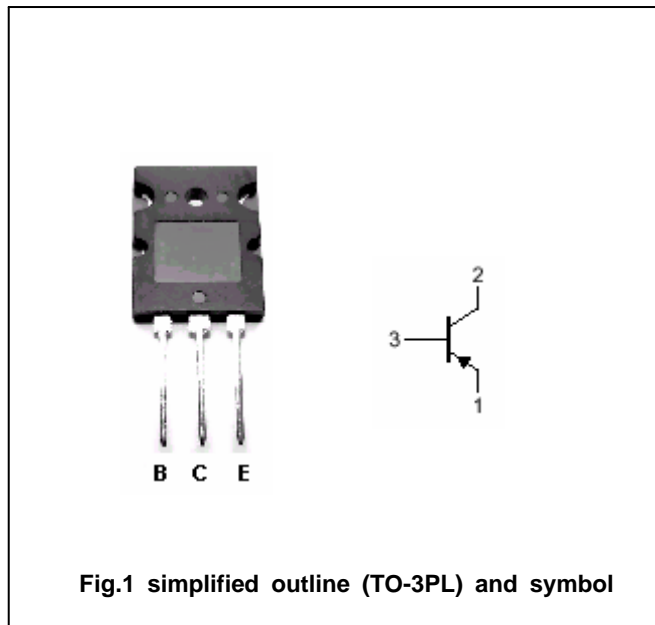
- With TO-3PL package
- Complement to type 2SC5200

**APPLICATIONS**

- Power amplifier applications
- Recommended for 100W high fidelity audio frequency amplifier output stage

**PINNING**

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



**Absolute maximum ratings(Ta=25 )**

| SYMBOL           | PARAMETER                   | CONDITIONS         | MAX     | UNIT |
|------------------|-----------------------------|--------------------|---------|------|
| V <sub>CBO</sub> | Collector-base voltage      | Open emitter       | -230    | V    |
| V <sub>CEO</sub> | Collector-emitter voltage   | Open base          | -230    | 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                |                    | -1.5    | 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         |                    | -55~150 |      |

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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  | -230 |      |      | V    |
| V <sub>CEsat</sub>   | Collector-emitter saturation voltage | I <sub>C</sub> =-8A I <sub>B</sub> =-0.8A  |      |      | -3.0 | V    |
| V <sub>BE</sub>      | Base-emitter voltage                 | I <sub>C</sub> =-7A ; V <sub>CE</sub> =-5V |      |      | -1.5 | V    |
| I <sub>CBO</sub>     | Collector cut-off current            | V <sub>CB</sub> =-230V; I <sub>E</sub> =0  |      |      | -5   | μ A  |
| I <sub>EBO</sub>     | Emitter cut-off current              | V <sub>EB</sub> =-5V; I <sub>C</sub> =0    |      |      | -5   | μ A  |
| h <sub>FE-1</sub>    | DC current gain                      | I <sub>C</sub> =-1A ; V <sub>CE</sub> =-5V | 55   |      | 160  |      |
| h <sub>FE-2</sub>    | DC current gain                      | I <sub>C</sub> =-7A ; V <sub>CE</sub> =-5V | 35   |      |      |      |
| f <sub>T</sub>       | Transition frequency                 | I <sub>C</sub> =-1A ; V <sub>CE</sub> =-5V |      | 30   |      | MHz  |
| C <sub>OB</sub>      | Collector output capacitance         | f=1MHz; V <sub>CB</sub> =-10V              |      | 360  |      | pF   |

◆ h<sub>FE-1</sub> classifications

|        |        |
|--------|--------|
| R      | O      |
| 55-110 | 80-160 |

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PACKAGE OUTLINE

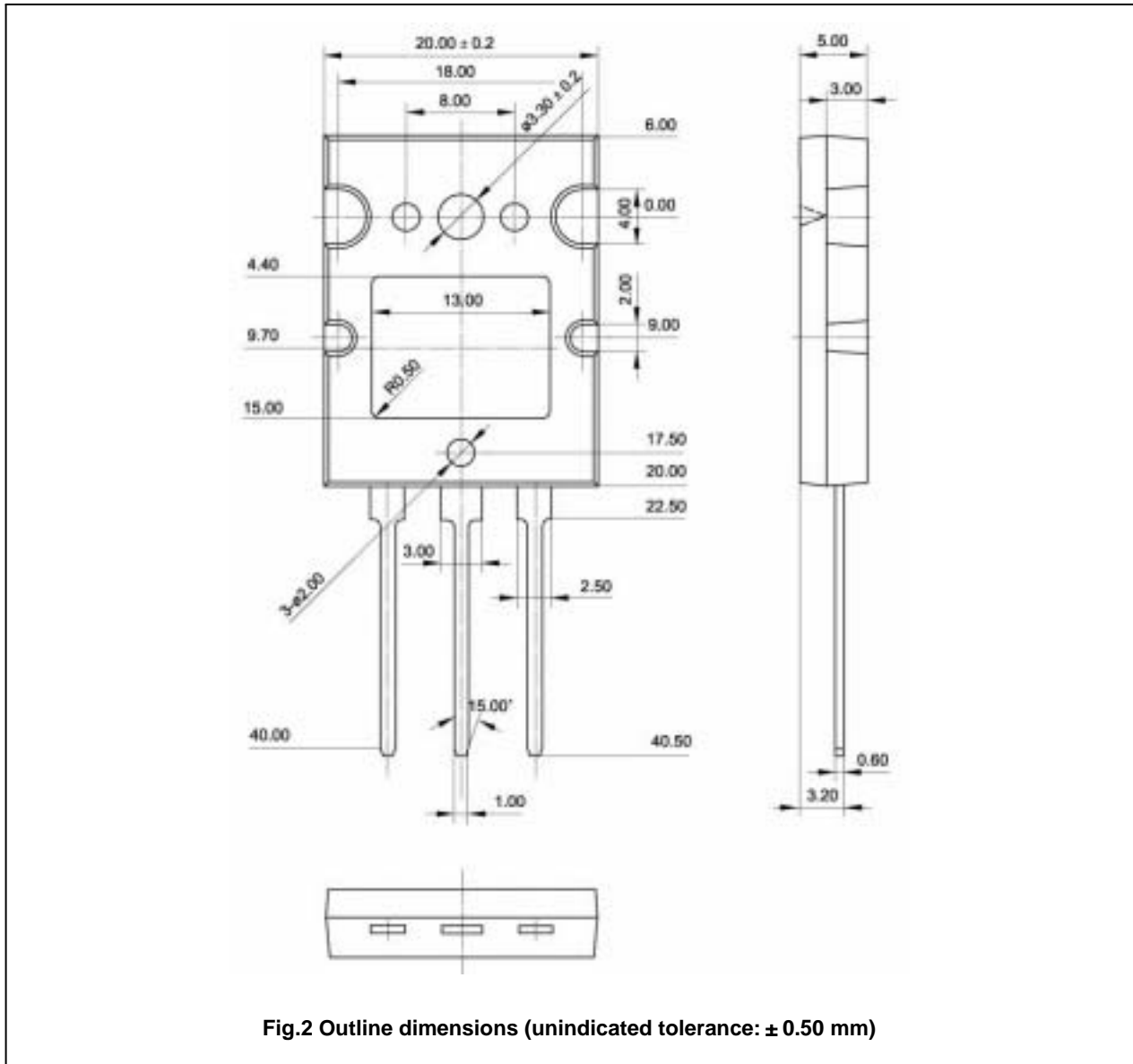


Fig.2 Outline dimensions (unindicated tolerance: ± 0.50 mm)

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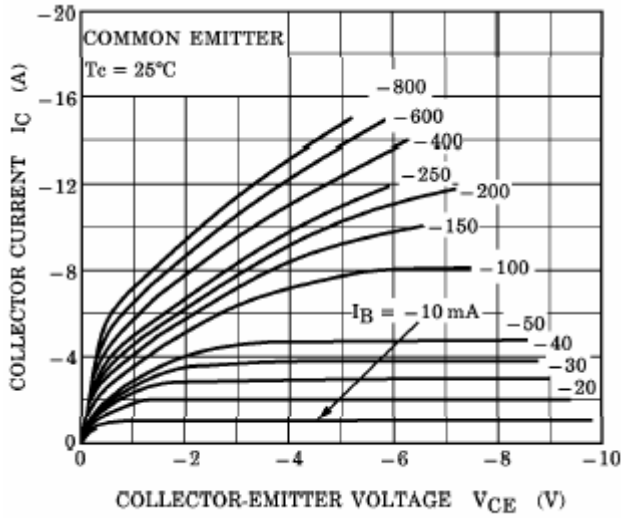


Fig.3 Static Characteristic

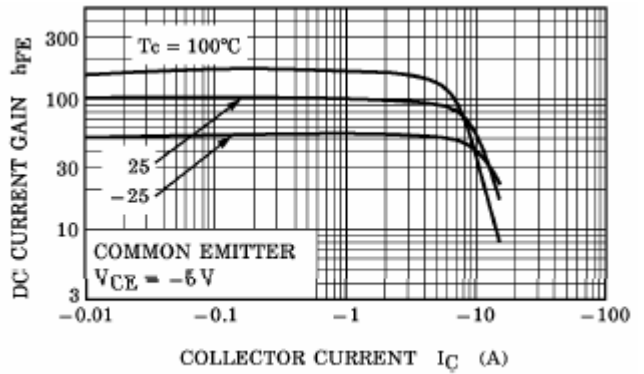


Fig.4 DC current Gain

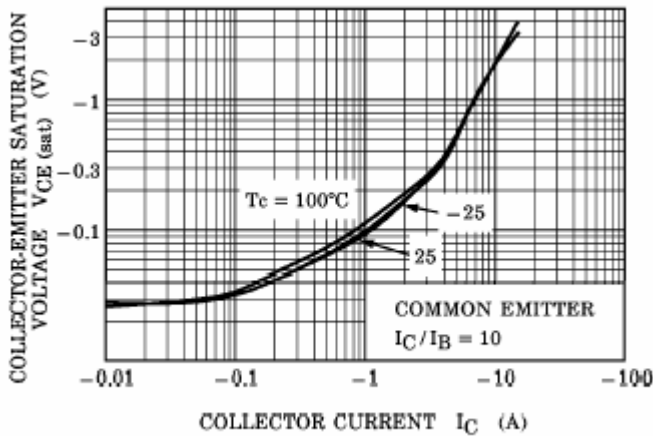


Fig.5 Collector-Emitter Saturation Voltage

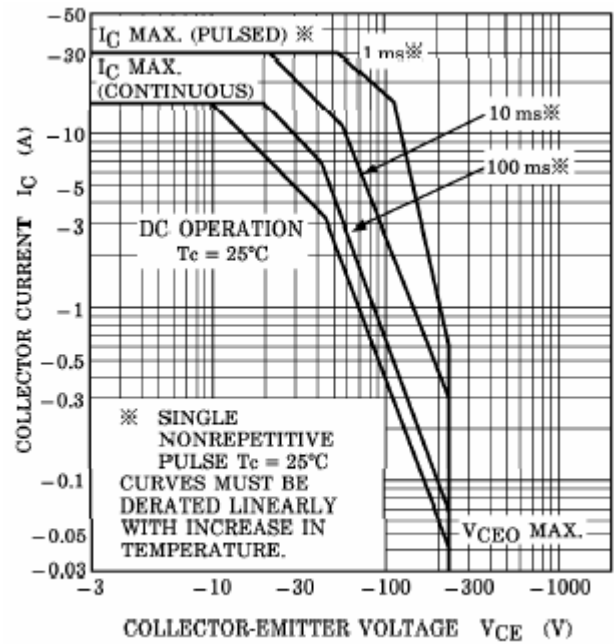


Fig.6 Safe Operating Area