

Silicon PNP Power Transistors

2SB1429

DESCRIPTION

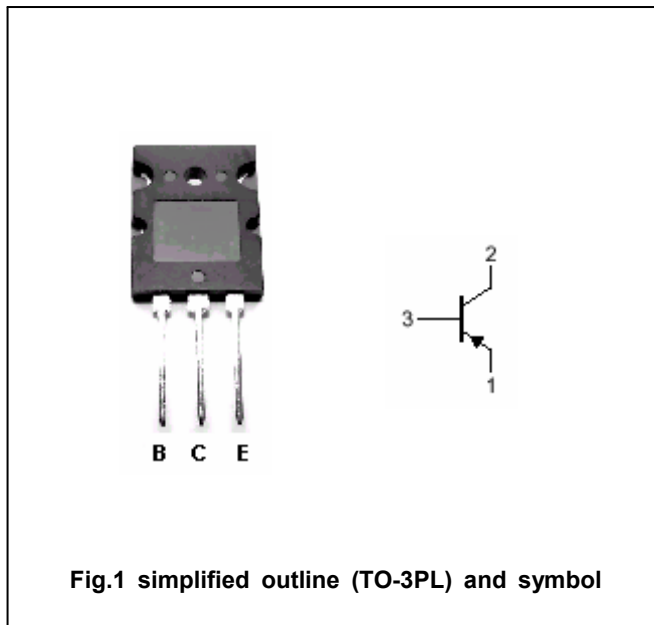
- With TO-3PL package
- Complement to type 2SD2155

APPLICATIONS

- Power amplifier applications
- Recommend 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°C)

| SYMBOL           | PARAMETER                   | CONDITIONS           | VALUE   | UNIT |
|------------------|-----------------------------|----------------------|---------|------|
| V <sub>CBO</sub> | Collector-base voltage      | Open emitter         | -180    | V    |
| V <sub>CEO</sub> | Collector-emitter voltage   | Open base            | -180    | 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°C | 150     | W    |
| T <sub>j</sub>   | Junction temperature        |                      | 150     | °C   |
| T <sub>stg</sub> | Storage temperature         |                      | -55~150 | °C   |

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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> =-50mA ; I <sub>B</sub> =0        | -180 |      |      | 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> =-6A ; V <sub>CE</sub> =-5V       |      |      | -1.5 | V    |
| I <sub>CBO</sub>     | Collector cut-off current            | V <sub>CB</sub> =-180V; I <sub>E</sub> =0        |      |      | -5   | μA   |
| I <sub>EBO</sub>     | Emitter cut-off current              | V <sub>EB</sub> =-5V; I <sub>C</sub> =0          |      |      | -5   | μA   |
| 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> =-6A ; V <sub>CE</sub> =-5V       | 30   |      |      |      |
| f <sub>T</sub>       | Transition frequency                 | I <sub>C</sub> =-1A ; V <sub>CE</sub> =-5V       |      | 10   |      | MHz  |
| C <sub>OB</sub>      | Collector output capacitance         | I <sub>E</sub> =0; f=1MHz; V <sub>CB</sub> =-10V |      | 340  |      | pF   |

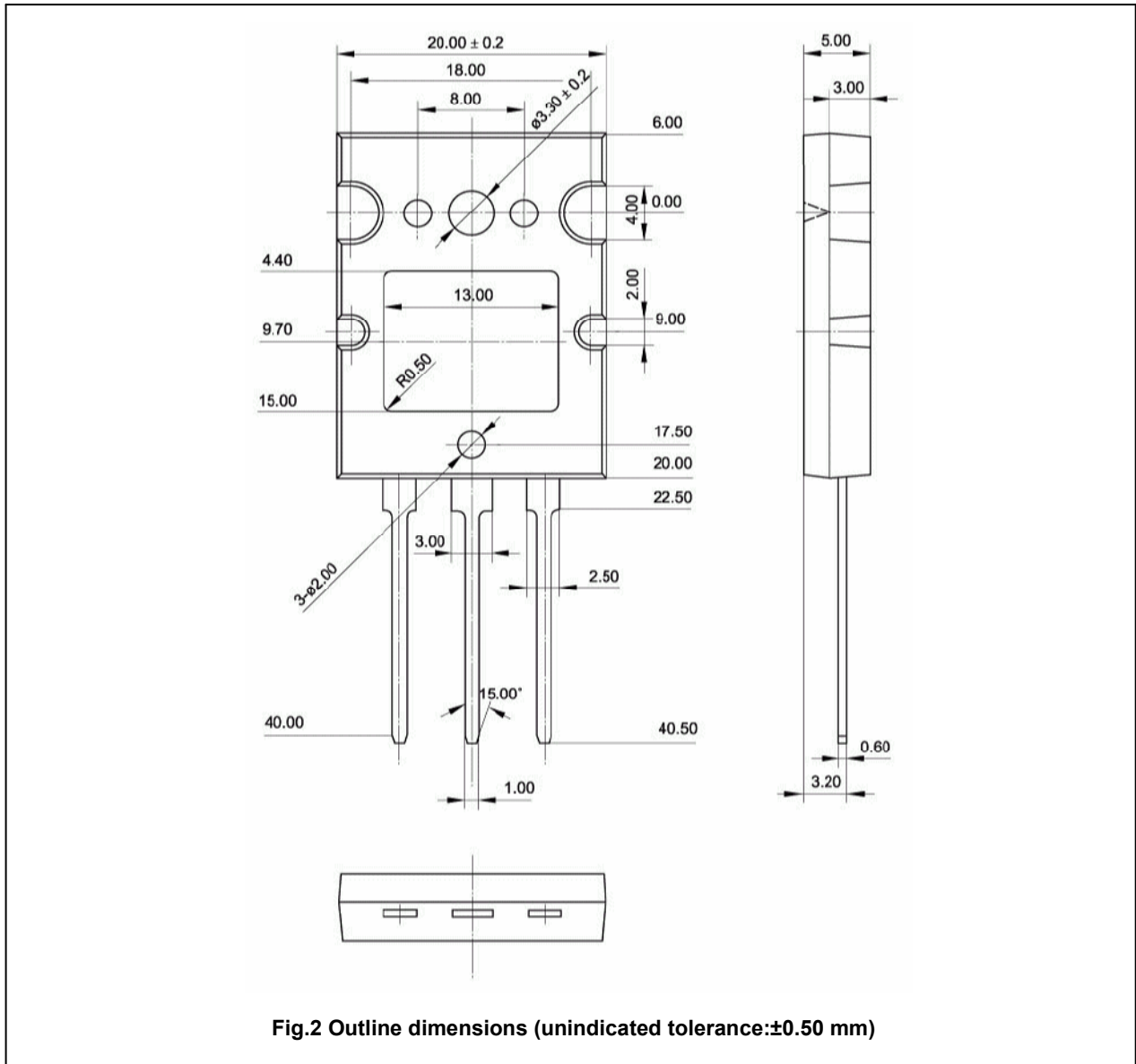
◆ h<sub>FE-1</sub> classifications

| R     | O      |
|-------|--------|
| 55-10 | 80-160 |

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PACKAGE OUTLINE



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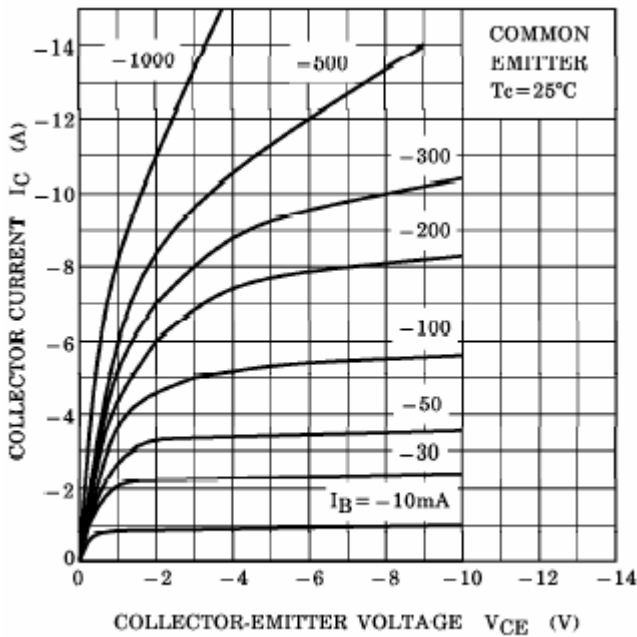


Fig.3 Static Characteristic

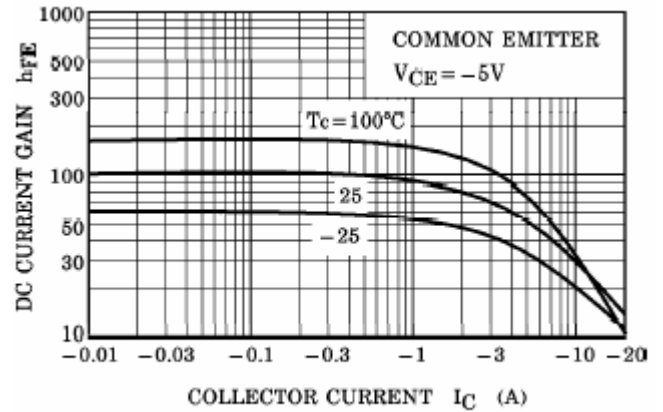


Fig.4 DC current Gain

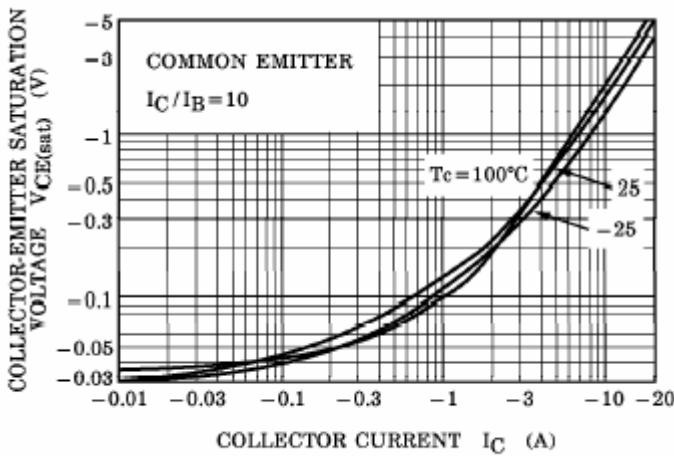


Fig.5 Collector-Emitter Saturation Voltage

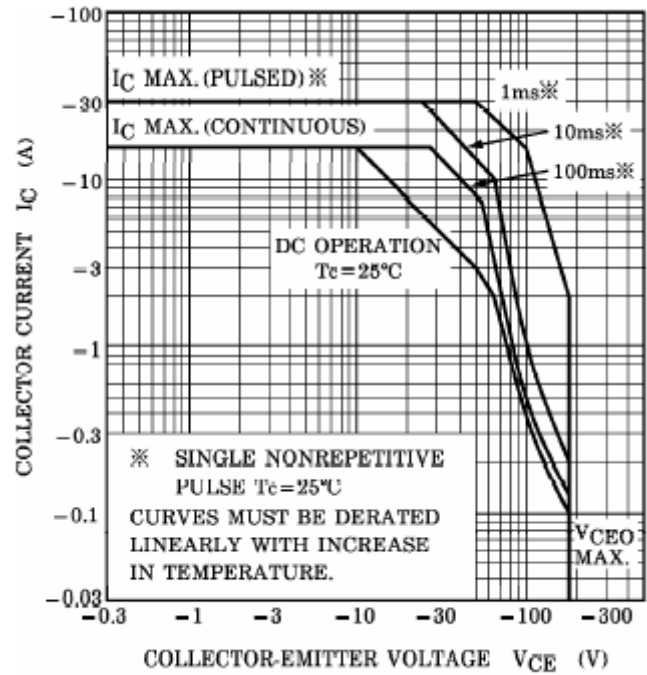


Fig.6 Safe Operating Area