

Silicon PNP Power Transistors

2SA1141

DESCRIPTION

- With TO-3PFa package
- Complement to type 2SC2681
- High transition frequency

APPLICATIONS

- Audio frequency power amplifier
- High frequency power amplifier

PINNING

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

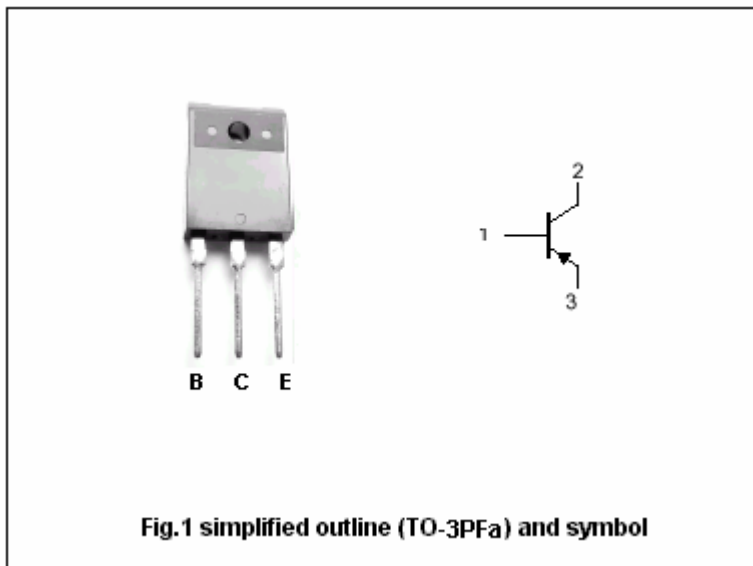


Fig.1 simplified outline (TO-3PFa) and symbol

Absolute maximum ratings(Ta=25°C)

| SYMBOL           | PARAMETER                   | CONDITIONS           | VALUE   | UNIT |
|------------------|-----------------------------|----------------------|---------|------|
| V <sub>CBO</sub> | Collector-base voltage      | Open emitter         | -115    | V    |
| V <sub>CEO</sub> | Collector-emitter voltage   | Open base            | -115    | V    |
| V <sub>EBO</sub> | Emitter-base voltage        | Open collector       | -5      | V    |
| I <sub>C</sub>   | Collector current           |                      | -10     | A    |
| I <sub>CM</sub>  | Collector current-peak      |                      | -15     | A    |
| P <sub>C</sub>   | Collector power dissipation | T <sub>C</sub> =25°C | 100     | W    |
|                  |                             | T <sub>a</sub> =25°C | 2       |      |
| 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>CEsat</sub> | Collector-emitter saturation voltage | I <sub>C</sub> =-4.5A ; I <sub>B</sub> =-0.45A    |     | -0.7 | -1.5 | V    |
| V <sub>BE</sub>    | Base-emitter on voltage              | I <sub>C</sub> =-4.5A ; V <sub>CE</sub> =-2V      |     | -1.2 | -2.0 | V    |
| I <sub>CBO</sub>   | Collector cut-off current            | V <sub>CB</sub> =-80V; I <sub>E</sub> =0          |     |      | -50  | μA   |
| I <sub>EBO</sub>   | Emitter cut-off current              | V <sub>EB</sub> =-5V; I <sub>C</sub> =0           |     |      | -50  | μA   |
| h <sub>FE-1</sub>  | DC current gain                      | I <sub>C</sub> =-1A ; V <sub>CE</sub> =-2V        | 60  |      | 200  |      |
| h <sub>FE-2</sub>  | DC current gain                      | I <sub>C</sub> =-4.5A ; V <sub>CE</sub> =-2V      | 40  |      |      |      |
| C <sub>OB</sub>    | Output capacitance                   | I <sub>E</sub> =0 ; V <sub>CB</sub> =-10V; f=1MHz |     | 390  |      | pF   |
| f <sub>T</sub>     | Transition frequency                 | I <sub>C</sub> =-1A ; V <sub>CE</sub> =-2V        |     | 90   |      | MHz  |

◆ h<sub>FE-1</sub> classifications

| R      | Q       |
|--------|---------|
| 60-120 | 100-200 |

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PACKAGE OUTLINE



Fig.2 Outline dimensions (unindicated tolerance:±0.30mm)