

**Silicon PNP Power Transistors**

**2N4907 2N4908 2N4909**

**DESCRIPTION**

- With TO-3 package
- Excellent safe operating areas

**APPLICATIONS**

- For medium-speed switching and amplifier applications

**PINNING**

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

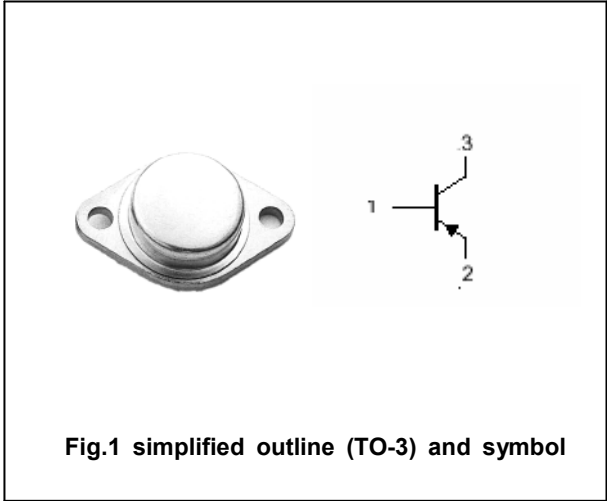


Fig.1 simplified outline (TO-3) and symbol

**ABSOLUTE MAXIMUM RATINGS(Ta=25°C)**

| SYMBOL           | PARAMETER                 | CONDITIONS           | VALUE   | UNIT |
|------------------|---------------------------|----------------------|---------|------|
| V <sub>CBO</sub> | Collector-base voltage    | 2N4907               | -40     | V    |
|                  |                           | 2N4908               | -60     |      |
|                  |                           | 2N4909               | -80     |      |
| V <sub>CEO</sub> | Collector-emitter voltage | 2N4907               | -40     | V    |
|                  |                           | 2N4908               | -60     |      |
|                  |                           | 2N4909               | -80     |      |
| V <sub>EBO</sub> | Emitter-base voltage      | Open collector       | -7      | V    |
| I <sub>C</sub>   | Collector current         |                      | -10     | A    |
| I <sub>B</sub>   | Base current              |                      | -4      | A    |
| P <sub>D</sub>   | Total Power Dissipation   | T <sub>C</sub> =25°C | 150     | W    |
| T <sub>j</sub>   | Junction temperature      |                      | 200     | °C   |
| T <sub>stg</sub> | Storage temperature       |                      | -65~200 | °C   |

**THERMAL CHARACTERISTICS**

| SYMBOL               | PARAMETER                           | VALUE | UNIT |
|----------------------|-------------------------------------|-------|------|
| R <sub>(th) jc</sub> | Thermal resistance junction to case | 1.17  | °C/W |

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## CHARACTERISTICS

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

| SYMBOL                | PARAMETER                            | CONDITIONS  | MIN | TYP. | MAX           | UNIT |
|-----------------------|--------------------------------------|---|-----|------|---------------|------|
| V <sub>CEO(SUS)</sub> | Collector-emitter sustaining voltage | 2N4907  | -40 |      |               | V    |
|                       |                                      | 2N4908  | -60 |      |               |      |
|                       |                                      | 2N4909  | -80 |      |               |      |
|                       |                                      | I <sub>C</sub> =-0.2A ; I <sub>B</sub> =0                                     |     |      |               |      |
| V <sub>CE(sat)</sub>  | Collector-emitter saturation voltage | I <sub>C</sub> =-5A; I <sub>B</sub> =-0.5A                                    |     |      | -1.0          | V    |
| V <sub>BE(sat)</sub>  | Base-emitter saturation voltage      | I <sub>C</sub> =-5A; I <sub>B</sub> =-0.5A                                    |     |      | -1.5          | V    |
| V <sub>BE(on)</sub>   | Base-emitter on voltage              | I <sub>C</sub> =-4A ; V <sub>CE</sub> =-4V                                    |     |      | -1.5          | V    |
| I <sub>CEX</sub>      | Collector cut-off current            | V <sub>CE</sub> =-100V; V <sub>BE(off)</sub> =-1.5V<br>T <sub>C</sub> =150 °C |     |      | -1.0<br>-10.0 | mA   |
| I <sub>EBO</sub>      | Emitter cut-off current              | V <sub>EB</sub> =-7V; I <sub>C</sub> =0                                       |     |      | -5.0          | mA   |
| h <sub>FE-1</sub>     | DC current gain                      | I <sub>C</sub> =-4A ; V <sub>CE</sub> =-4V                                    | 20  |      | 80            |      |
| h <sub>FE-2</sub>     | DC current gain                      | I <sub>C</sub> =-10A ; V <sub>CE</sub> =-4V                                   | 5   |      |               |      |
| f <sub>T</sub>        | Transition frequency                 | I <sub>C</sub> =-0.5A; V <sub>CE</sub> =-10V                                  | 4   |      |               | MHz  |

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PACKAGE OUTLINE

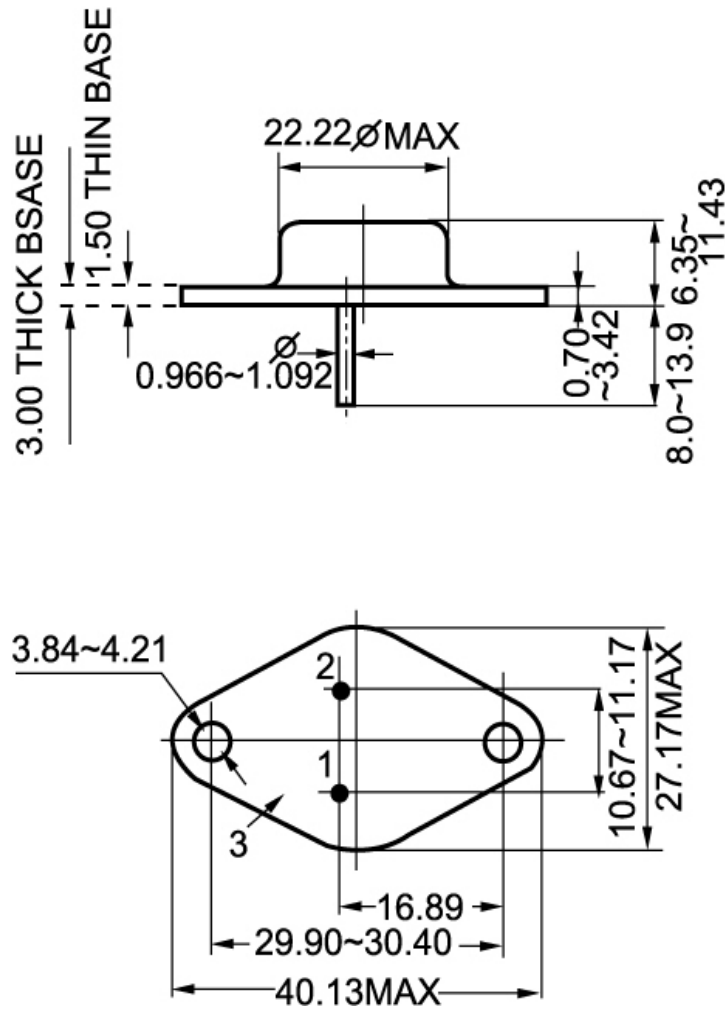


Fig.2 outline dimensions (unindicated tolerance:±0.10mm)