

**Silicon PNP Power Transistors**

**2N4918 2N4919 2N4920**

**DESCRIPTION**

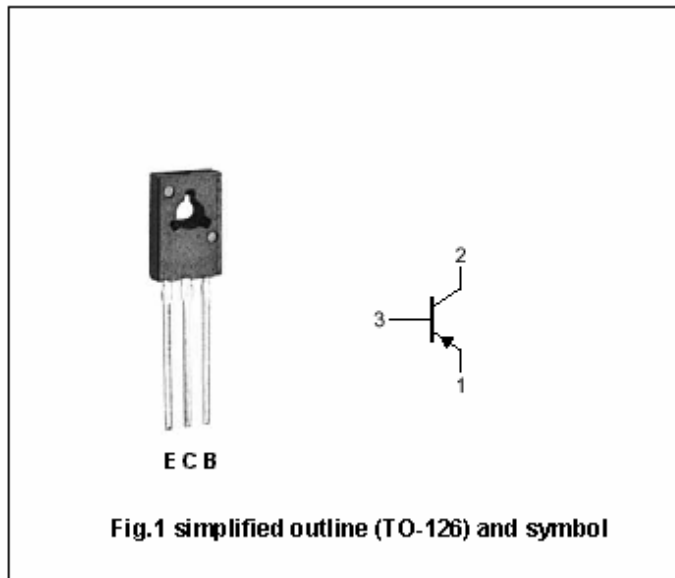
- With TO-126 package
- Complement to type 2N4921/4922/4923
- Excellent safe operating area
- Low collector saturation voltage

**APPLICATIONS**

- For driver circuits ,switching ,and amplifier applications

**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    | 2N4918               | -40     | V    |
|                  |                           | 2N4919               | -60     |      |
|                  |                           | 2N4920               | -80     |      |
| V <sub>CEO</sub> | Collector-emitter voltage | 2N4918               | -40     | V    |
|                  |                           | 2N4919               | -60     |      |
|                  |                           | 2N4920               | -80     |      |
| V <sub>EBO</sub> | Emitter-base voltage      | Open collector       | -5      | V    |
| I <sub>C</sub>   | Collector current         |                      | -1      | A    |
| I <sub>CM</sub>  | Collector current-Peak    |                      | -3      | A    |
| I <sub>B</sub>   | Base current              |                      | -1      | A    |
| P <sub>D</sub>   | Total power dissipation   | T <sub>C</sub> =25°C | 30      | W    |
| T <sub>j</sub>   | Junction temperature      |                      | 150     | °C   |
| T <sub>stg</sub> | Storage temperature       |                      | -65~150 | °C   |

**THERMAL CHARACTERISTICS**

| SYMBOL              | PARAMETER                           | VALUE | UNIT |
|---------------------|-------------------------------------|-------|------|
| R <sub>th j-c</sub> | Thermal resistance junction to case | 4.16  | °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 | 2N4918   | -40                                      |      |              | V    |    |
|                       |                                      | 2N4919   | -60                                      |      |              |      |    |
|                       |                                      | 2N4920   | -80                                      |      |              |      |    |
| V <sub>CEsat</sub>    | Collector-emitter saturation voltage | I <sub>C</sub> =-1.0A ; I <sub>B</sub> =-0.1A  |  |      | -0.6         | V    |    |
| V <sub>BEsat</sub>    | Base-emitter saturation voltage      | I <sub>C</sub> =-1.0A ; I <sub>B</sub> =-0.1A  |  |      | -1.3         | V    |    |
| V <sub>BE</sub>       | Base-emitter on voltage              | I <sub>C</sub> =-1A ; V <sub>CE</sub> =-1V   |  |      | -1.3         | V    |    |
| I <sub>CEO</sub>      | Collector cut-off current            | 2N4918   | V <sub>CE</sub> =-20V; I <sub>B</sub> =0 |      |              | -0.5 | mA |
|                       |                                      | 2N4919   | V <sub>CE</sub> =-30V; I <sub>B</sub> =0 |      |              |      |    |
|                       |                                      | 2N4920   | V <sub>CE</sub> =-40V; I <sub>B</sub> =0 |      |              |      |    |
| I <sub>CBO</sub>      | Collector cut-off current            | V <sub>CB</sub> = Rated V <sub>CBO</sub> ; I <sub>E</sub> =0                                   |  |      | -0.1         | mA   |    |
| I <sub>CEX</sub>      | Collector cut-off current            | V <sub>CE</sub> = Rated V <sub>CEO</sub> ; V <sub>BE(off)</sub> =1.5V<br>T <sub>C</sub> =125°C |  |      | -0.1<br>-0.5 | mA   |    |
| I <sub>EBO</sub>      | Emitter cut-off current              | V <sub>EB</sub> =-5V; I <sub>C</sub> =0  |  |      | -1.0         | mA   |    |
| h <sub>FE-1</sub>     | DC current gain                      | I <sub>C</sub> =-50mA ; V <sub>CE</sub> =-1V   | 40                                       |      |              |      |    |
| h <sub>FE-2</sub>     | DC current gain                      | I <sub>C</sub> =-500mA ; V <sub>CE</sub> =-1V  | 30                                       |      | 150          |      |    |
| h <sub>FE-3</sub>     | DC current gain                      | I <sub>C</sub> =-1A ; V <sub>CE</sub> =-1V   | 10                                       |      |              |      |    |
| f <sub>T</sub>        | Transition frequency                 | I <sub>C</sub> =-250mA ; V <sub>CE</sub> =-10V; f=1MHz   | 3.0                                      |      |              | MHz  |    |
| C <sub>OB</sub>       | Output capacitance                   | f=100kHz ; V <sub>CB</sub> =-10V; I <sub>E</sub> =0  |  |      | 100          | pF   |    |

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PACKAGE OUTLINE

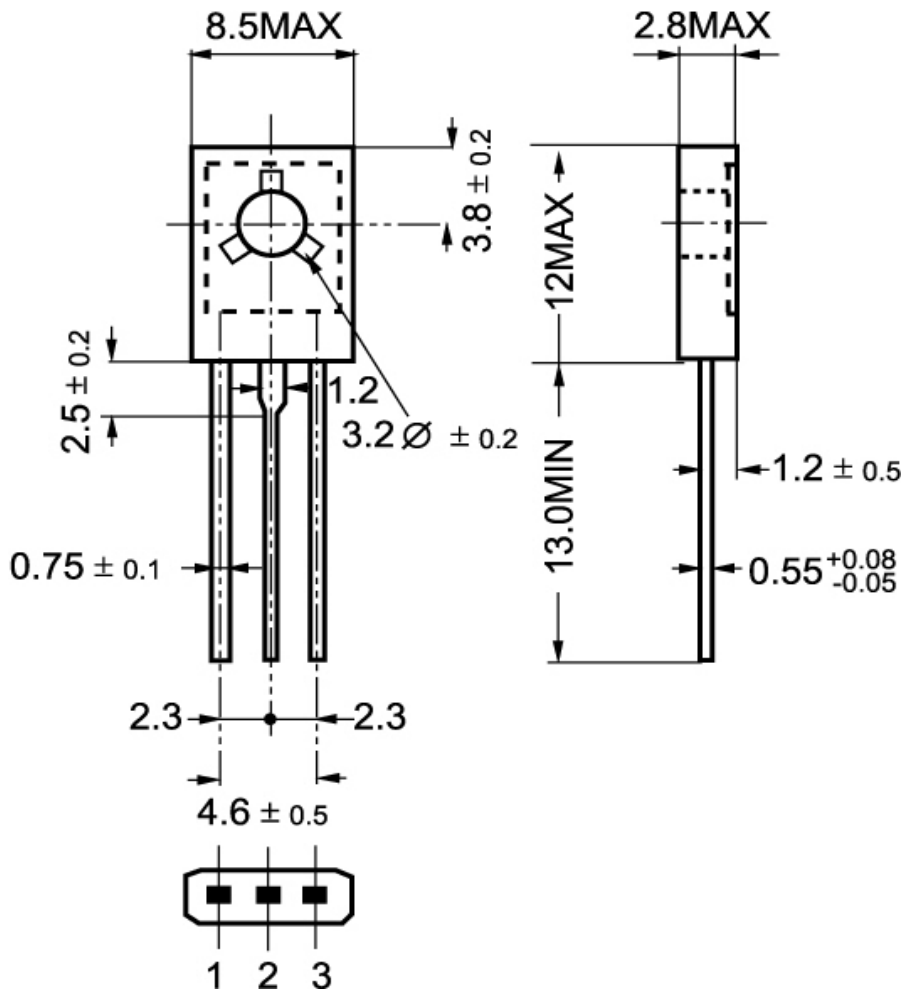


Fig.2 Outline dimensions