

**Silicon PNP Power Transistors**

**2SB512**

**DESCRIPTION**

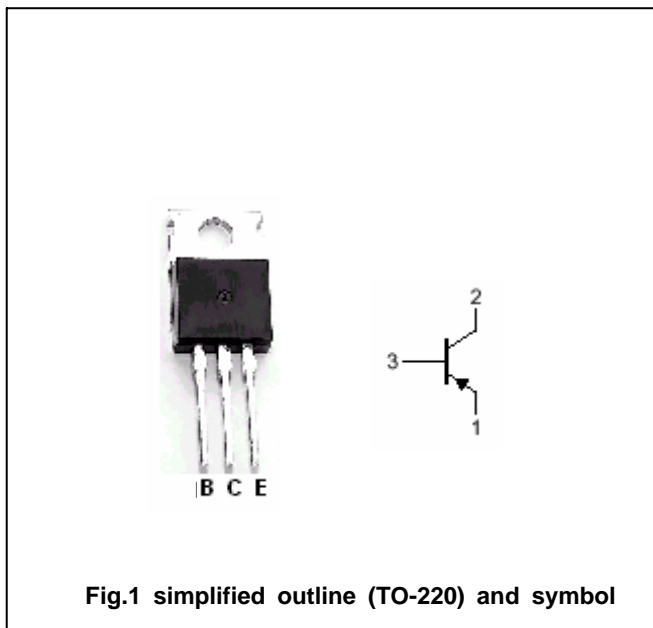
- With TO-220 package
- Low collector saturation voltage

**APPLICATIONS**

- For low frequency power amplifier applications

**PINNING**

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



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

| SYMBOL    | PARAMETER                   | CONDITIONS     | VALUE   | UNIT |
|-----------|-----------------------------|----------------|---------|------|
| $V_{CBO}$ | Collector-base voltage      | Open emitter   | -60     | V    |
| $V_{CEO}$ | Collector-emitter voltage   | Open base      | -60     | V    |
| $V_{EBO}$ | Emitter-base voltage        | Open collector | -5      | V    |
| $I_C$     | Collector current           |                | -3      | A    |
| $P_C$     | Collector power dissipation | $T_C=25$       | 25      | W    |
| $T_j$     | Junction temperature        |                | 150     |      |
| $T_{stg}$ | 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> =-10mA, I <sub>B</sub> =0     | -60 |      |      | V    |
| V <sub>(BR)CBO</sub> | Collector-base breakdown voltage     | I <sub>C</sub> =-1mA, I <sub>E</sub> =0      | -60 |      |      | V    |
| V <sub>(BR)EBO</sub> | Emitter-base breakdown voltage       | I <sub>E</sub> =-1mA, I <sub>C</sub> =0      | -6  |      |      | V    |
| V <sub>CEsat</sub>   | Collector-emitter saturation voltage | I <sub>C</sub> =-2A; I <sub>B</sub> =-0.2A   |     |      | -1.0 | V    |
| V <sub>BEsat</sub>   | Base-emitter saturation voltage      | I <sub>C</sub> =-2A; I <sub>B</sub> =-0.2A   |     |      | -1.5 | V    |
| I <sub>CBO</sub>     | Collector cut-off current            | V <sub>CB</sub> =-40V; I <sub>E</sub> =0     |     |      | -1.0 | μA   |
| I <sub>EBO</sub>     | Emitter cut-off current              | V <sub>EB</sub> =-4V; I <sub>C</sub> =0      |     |      | -1.0 | μA   |
| h <sub>FE</sub>      | DC current gain                      | I <sub>C</sub> =-0.5A; V <sub>CE</sub> =-5V  | 60  |      | 320  |      |
| f <sub>T</sub>       | Transition frequency                 | I <sub>C</sub> =-0.5A; V <sub>CE</sub> =-10V | 3   |      |      | MHz  |

