

**Silicon NPN Power Transistors**

**2N6537**

**DESCRIPTION**

- With TO-66 package
- DARLINGTON

**APPLICATIONS**

- Power switching
- Hammer drivers
- Series and shunt regulators
- Audio amplifiers

**PINNING (See Fig.2)**

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

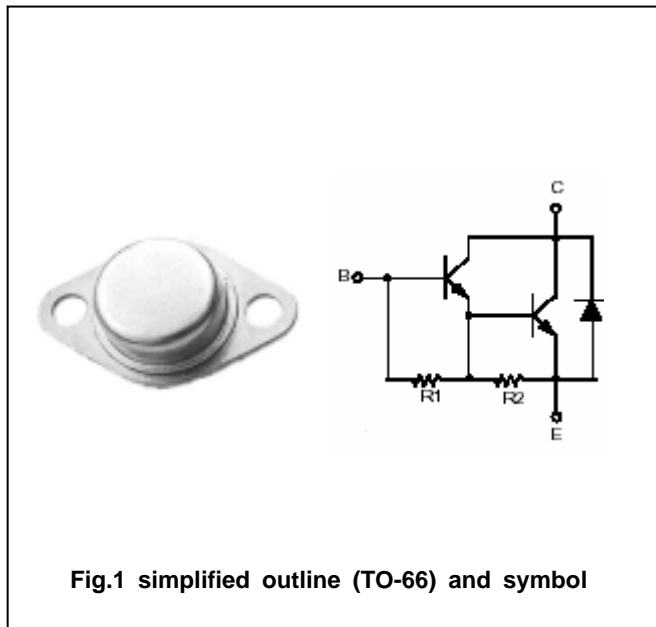


Fig.1 simplified outline (TO-66) and symbol

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

| SYMBOL           | PARAMETER                 | CONDITIONS         | VALUE   | UNIT |
|------------------|---------------------------|--------------------|---------|------|
| V <sub>CBO</sub> | Collector-base voltage    | Open emitter       | 120     | V    |
| V <sub>CEO</sub> | Collector-emitter voltage | Open base          | 120     | V    |
| V <sub>EBO</sub> | Emitter-base voltage      | Open collector     | 5       | V    |
| I <sub>C</sub>   | Collector current         |                    | 8       | A    |
| I <sub>CM</sub>  | Collector current-Peak    |                    | 15      | A    |
| I <sub>B</sub>   | Base current              |                    | 0.25    | A    |
| P <sub>T</sub>   | Total power dissipation   | T <sub>C</sub> =25 | 36      | W    |
| T <sub>j</sub>   | Junction temperature      |                    | 150     |      |
| T <sub>stg</sub> | Storage temperature       |                    | -65~150 |      |

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## CHARACTERISTICS

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

| SYMBOL                | PARAMETER                            | CONDITIONS   | MIN  | TYP. | MAX        | UNIT |
|-----------------------|--------------------------------------|--|------|------|------------|------|
| V <sub>CEQ(SUS)</sub> | Collector-emitter sustaining voltage | I <sub>C</sub> =0.2A ; I <sub>B</sub> =0                             | 120  |      |            | V    |
| V <sub>CEsat-1</sub>  | Collector-emitter saturation voltage | I <sub>C</sub> =3A ; I <sub>B</sub> =6mA                             |      |      | 2.0        | V    |
| V <sub>CEsat-2</sub>  | Collector-emitter saturation voltage | I <sub>C</sub> =8A ; I <sub>B</sub> =80mA                            |      |      | 3.0        | V    |
| V <sub>BE-1</sub>     | Base -emitter on voltage             | I <sub>C</sub> =3A ; V <sub>CE</sub> =3V                             |      |      | 2.8        | V    |
| V <sub>BE-2</sub>     | Base -emitter on voltage             | I <sub>C</sub> =8A ; V <sub>CE</sub> =3V                             |      |      | 4.5        | V    |
| I <sub>CEV</sub>      | Collector cut-off current            | V <sub>CE</sub> =120V; V <sub>BE</sub> =-1.5V<br>T <sub>C</sub> =125 |      |      | 0.5<br>5.0 | mA   |
| I <sub>CEO</sub>      | Collector cut-off current            | V <sub>CE</sub> =120V; I <sub>B</sub> =0                             |      |      | 1.0        | mA   |
| I <sub>EBO</sub>      | Emitter cut-off current              | V <sub>EB</sub> =5V; I <sub>C</sub> =0                               |      |      | 5.0        | mA   |
| h <sub>FE-1</sub>     | DC current gain                      | I <sub>C</sub> =3A ; V <sub>CE</sub> =3V                             | 1000 |      | 10000      |      |
| h <sub>FE-2</sub>     | DC current gain                      | I <sub>C</sub> =8A ; V <sub>CE</sub> =3V                             | 100  |      | 5000       |      |
| V <sub>F</sub>        | Diode forward voltage                | I <sub>F</sub> =5A   |      |      | 4.0        | V    |

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PACKAGE OUTLINE

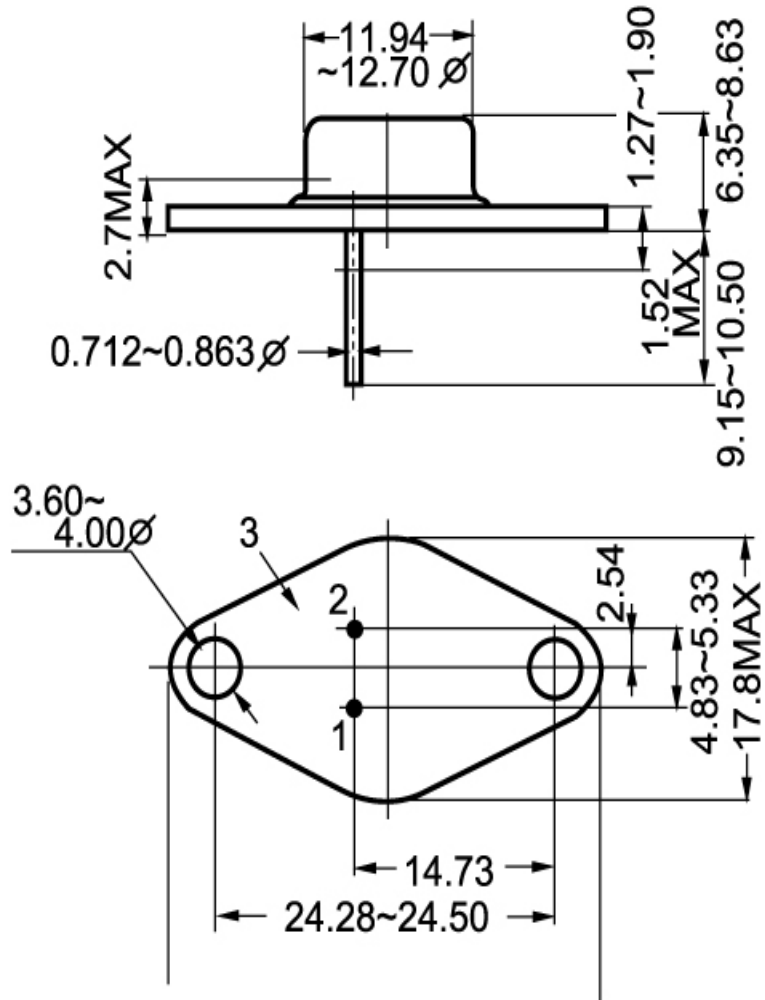


Fig.2 Outline dimensions