

## Silicon NPN Power Transistors

2N6836

## DESCRIPTION

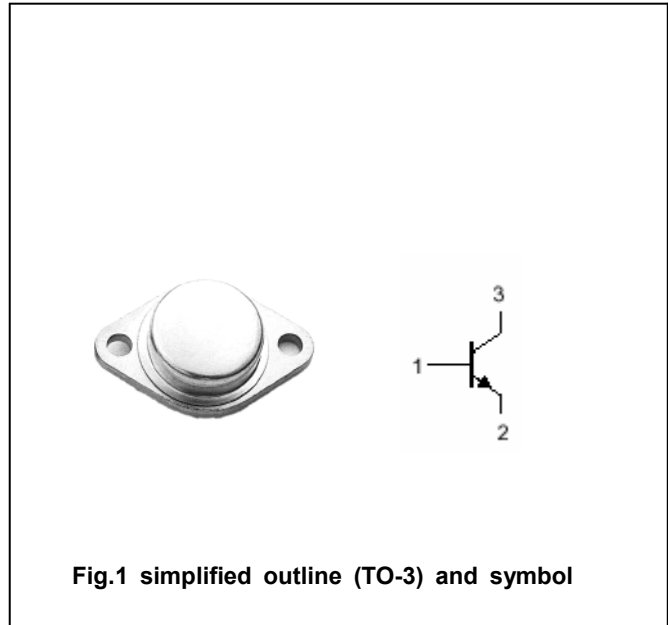
- With TO-3 package
- High voltage ,high speed

## APPLICATIONS

- Switching regulators
- Inverters
- Motor controls
- Deflection circuits

## PINNING

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

Absolute maximum ratings( $T_a = \square$ )

| SYMBOL    | PARAMETER                   | CONDITIONS         | VALUE   | UNIT      |
|-----------|-----------------------------|--------------------|---------|-----------|
| $V_{CBO}$ | Collector-base voltage      | Open emitter       | 850     | V         |
| $V_{CEO}$ | Collector-emitter voltage   | Open base          | 450     | V         |
| $V_{EBO}$ | Emitter-base voltage        | Open collector     | 6       | V         |
| $I_C$     | Collector current           |                    | 15      | A         |
| $I_{CM}$  | Collector current-peak      |                    | 20      | A         |
| $I_B$     | Base current                |                    | 10      | A         |
| $I_{BM}$  | Base current-peak           |                    | 15      | A         |
| $P_C$     | Collector power dissipation | $T_C = 25 \square$ | 175     | W         |
| $T_j$     | Junction temperature        |                    | 200     | $\square$ |
| $T_{stg}$ | Storage temperature         |                    | -65~200 | $\square$ |

## THERMAL CHARACTERISTICS

| SYMBOL        | PARAMETER                           | VALUE | UNIT        |
|---------------|-------------------------------------|-------|-------------|
| $R_{th\ j-c}$ | Thermal resistance junction to case | 1.0   | $\square/W$ |

## Silicon NPN Power Transistors

2N6836

## CHARACTERISTICS

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

| SYMBOL                | PARAMETER                            | CONDITIONS  | MIN | TYP. | MAX         | UNIT |
|-----------------------|--------------------------------------|---|-----|------|-------------|------|
| V <sub>CEQ(SUS)</sub> | Collector-emitter sustaining voltage | I <sub>C</sub> =0.1A ; I <sub>B</sub> =0                                | 450 |      |             | V    |
| V <sub>CEsat-1</sub>  | Collector-emitter saturation voltage | I <sub>C</sub> =5A; I <sub>B</sub> =0.7A                                |     |      | 1.2         | V    |
| V <sub>CEsat-2</sub>  | Collector-emitter saturation voltage | I <sub>C</sub> =10A; I <sub>B</sub> =1.0A<br>T <sub>C</sub> =100 °C     |     |      | 2.5<br>3.0  | V    |
| V <sub>BEsat</sub>    | Base-emitter saturation voltage      | I <sub>C</sub> =10A; I <sub>B</sub> =1.0A<br>T <sub>C</sub> =100 °C     |     |      | 1.5<br>1.5  | V    |
| I <sub>CEV</sub>      | Collector cut-off current            | V <sub>CE</sub> =850V; V <sub>BE</sub> =-1.5V<br>T <sub>C</sub> =100 °C |     |      | 0.25<br>1.5 | mA   |
| I <sub>EBO</sub>      | Emitter cut-off current              | V <sub>EB</sub> =6V; I <sub>C</sub> =0                                  |     |      | 1.0         | mA   |
| h <sub>FE-1</sub>     | DC current gain                      | I <sub>C</sub> =10A ; V <sub>CE</sub> =5V                               | 8   |      | 30          |      |
| h <sub>FE-2</sub>     | DC current gain                      | I <sub>C</sub> =15A ; V <sub>CE</sub> =5V                               | 5   |      |             |      |
| C <sub>OB</sub>       | Output capacitance                   | I <sub>E</sub> =0 ; V <sub>CB</sub> =10V;f=1MHz                         | 50  |      | 400         | pF   |
| f <sub>T</sub>        | Transition frequency                 | I <sub>C</sub> =0.25A ; V <sub>CE</sub> =10V;f=10MHz                    | 10  |      | 75          | MHz  |

Silicon NPN Power Transistors

2N6836

PACKAGE OUTLINE

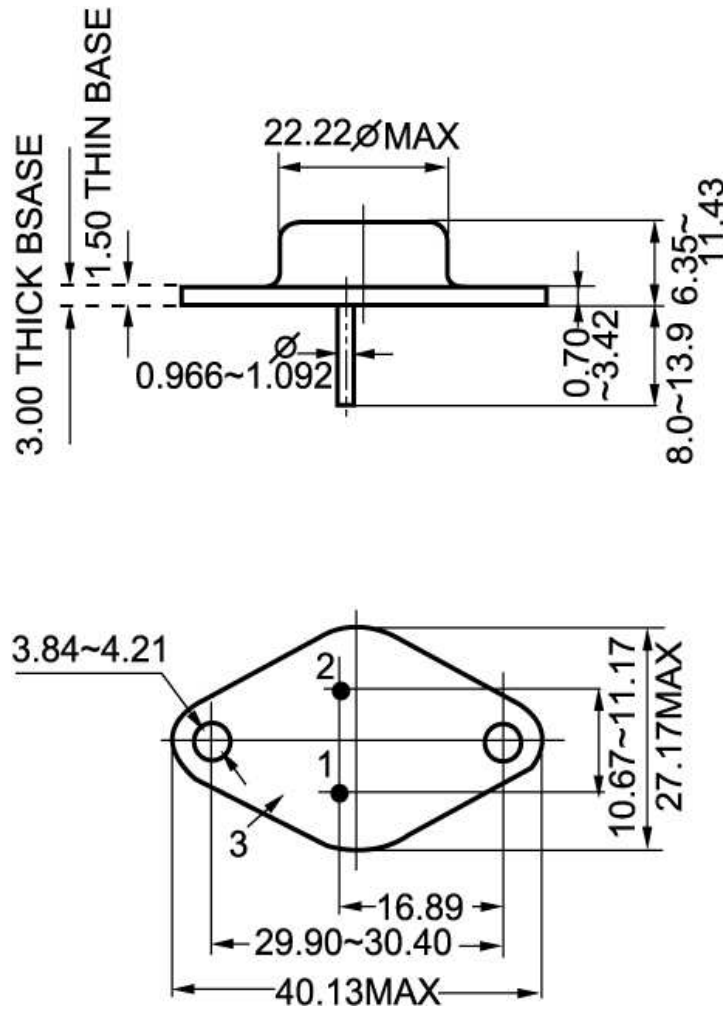


Fig.2 outline dimensions (unindicated tolerance:±0.1mm)

This datasheet has been downloaded from:

[www.DatasheetCatalog.com](http://www.DatasheetCatalog.com)

Datasheets for electronic components.