

## Silicon NPN Power Transistors

## MJ4033/4034/4035

## DESCRIPTION

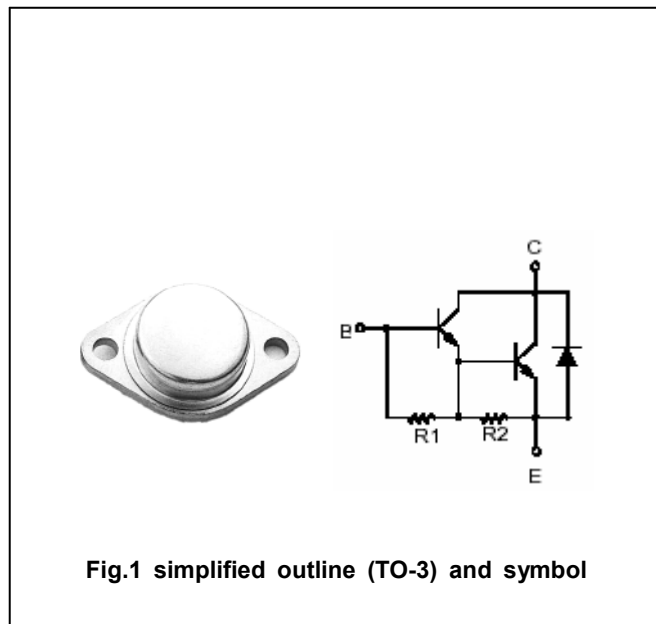
- With TO-3 package
- Respectively complement to type MJ4030/4031/4032
- DARLINGTON
- High DC current gain

## APPLICATIONS

- For use as output devices in complementary general purpose amplifier applications

## PINNING(see Fig.2)

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

ABSOLUTE MAXIMUM RATINGS( $T_C=25^\circ\text{C}$ )

| SYMBOL    | PARAMETER                   |        | CONDITIONS             | VALUE   | UNIT             |
|-----------|-----------------------------|--------|------------------------|---------|------------------|
| $V_{CBO}$ | Collector-base voltage      | MJ4033 | Open emitter           | 60      | V                |
|           |                             | MJ4034 |                        | 80      |                  |
|           |                             | MJ4035 |                        | 100     |                  |
| $V_{CEO}$ | Collector-emitter voltage   | MJ4033 | Open base              | 60      | V                |
|           |                             | MJ4034 |                        | 80      |                  |
|           |                             | MJ4035 |                        | 100     |                  |
| $V_{EBO}$ | Emitter-base voltage        |        | Open collector         | 5       | V                |
| $I_C$     | Collector current           |        |                        | 16      | A                |
| $I_{CM}$  | Collector current-peak      |        |                        | 20      | A                |
| $I_B$     | Base current                |        |                        | 0.5     | A                |
| $P_C$     | Collector power dissipation |        | $T_C=25^\circ\text{C}$ | 150     | W                |
| $T_j$     | Junction temperature        |        |                        | 200     | $^\circ\text{C}$ |
| $T_{stg}$ | Storage temperature         |        |                        | -65~200 | $^\circ\text{C}$ |

## Silicon NPN Power Transistors

## MJ4033/4034/4035

## CHARACTERISTICS

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

www.datasheet4u.com

| SYMBOL                 | PARAMETER                            |        | CONDITIONS                                | MIN  | TYP. | MAX | UNIT |
|------------------------|--------------------------------------|--------|-------------------------------------------|------|------|-----|------|
| V <sub>CEO(SUS)</sub>  | Collector-emitter sustaining voltage | MJ4033 | I <sub>C</sub> =0.1A ; I <sub>B</sub> =0  | 60   |      |     | V    |
|                        |                                      | MJ4034 |                                           | 80   |      |     |      |
|                        |                                      | MJ4035 |                                           | 100  |      |     |      |
| V <sub>CE(sat)-1</sub> | Collector-emitter saturation voltage |        | I <sub>C</sub> =10A; I <sub>B</sub> =40mA |      |      | 2.5 | V    |
| V <sub>CE(sat)-2</sub> | Collector-emitter saturation voltage |        | I <sub>C</sub> =16A; I <sub>B</sub> =80mA |      |      | 4.0 | V    |
| V <sub>BE</sub>        | Base-emitter on voltage              |        | I <sub>C</sub> =10A ; V <sub>CE</sub> =3V |      |      | 3.0 | V    |
| I <sub>CEO</sub>       | Collector cut-off current            |        | V <sub>CE</sub> =30V; I <sub>B</sub> =0   |      |      | 3.0 | mA   |
|                        |                                      |        | V <sub>CE</sub> =40V; I <sub>B</sub> =0   |      |      |     |      |
|                        |                                      |        | V <sub>CE</sub> =50V; I <sub>B</sub> =0   |      |      |     |      |
| I <sub>EBO</sub>       | Emitter cut-off current              |        | V <sub>EB</sub> =5V; I <sub>C</sub> =0    |      |      | 5.0 | mA   |
| h <sub>FE</sub>        | DC current gain                      |        | I <sub>C</sub> =10A ; V <sub>CE</sub> =3V | 1000 |      |     |      |

## THERMAL CHARACTERISTICS

| SYMBOL              | PARAMETER                           | MAX  | UNIT |
|---------------------|-------------------------------------|------|------|
| R <sub>th j-c</sub> | Thermal resistance junction to case | 1.17 | °C/W |

## Silicon NPN Power Transistors

MJ4033/4034/4035

## PACKAGE OUTLINE

www.datasheet4u.com

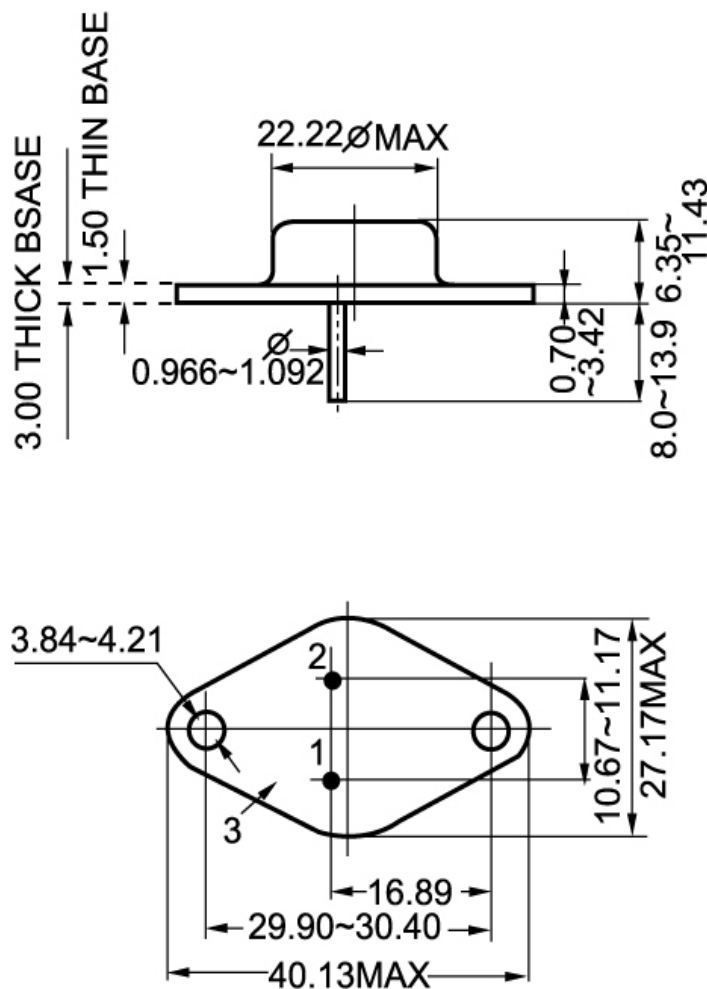


Fig.2 outline dimensions (unindicated tolerance:±0.1mm)