

## Silicon NPN Power Transistors

## 2N6355

## DESCRIPTION

- With TO-3 package
- High DC current gain
- DARLINGTON

## APPLICATIONS

- For general-purpose amplifier and low-frequency switching applications

## PINNING

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

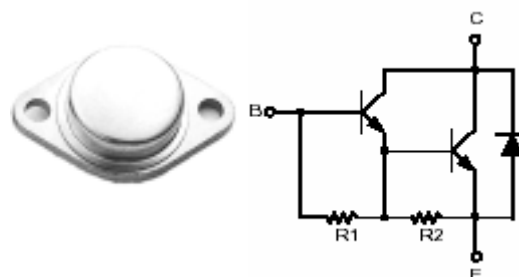


Fig.1 simplified outline (TO-3) and symbol

Absolute maximum ratings( $T_a =$  )

| SYMBOL    | PARAMETER                 | CONDITIONS     | VALUE   | UNIT |
|-----------|---------------------------|----------------|---------|------|
| $V_{CBO}$ | Collector-base voltage    | Open emitter   | 50      | V    |
| $V_{CEO}$ | Collector-emitter voltage | Open base      | 40      | V    |
| $V_{EBO}$ | Emitter-base voltage      | Open collector | 5       | V    |
| $I_C$     | Collector current         |                | 20      | A    |
| $I_B$     | Base current              |                | 0.5     | A    |
| $P_D$     | Total Power Dissipation   | $T_C = 25$     | 150     | W    |
| $T_j$     | Junction temperature      |                | 200     |      |
| $T_{stg}$ | Storage temperature       |                | -65~200 |      |

## THERMAL CHARACTERISTICS

| SYMBOL        | PARAMETER                           | VALUE | UNIT |
|---------------|-------------------------------------|-------|------|
| $R_{th\ j-c}$ | Thermal resistance junction to case | 1.09  | /W   |

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## CHARACTERISTICS

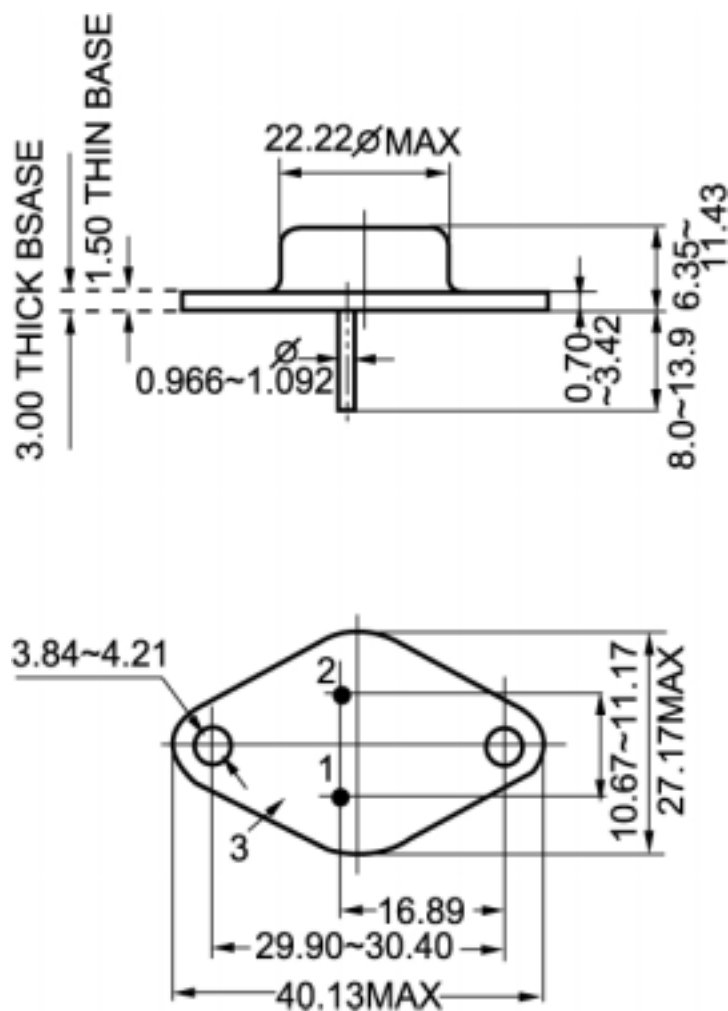
T<sub>j</sub>=25 unless otherwise specified

| SYMBOL               | PARAMETER                            | CONDITIONS                                 | MIN | TYP. | MAX  | UNIT |
|----------------------|--------------------------------------|--------------------------------------------|-----|------|------|------|
| V <sub>(BR)CEO</sub> | Collector-emitter breakdown voltage  | I <sub>C</sub> =0.2A ; I <sub>B</sub> =0   | 40  |      |      | V    |
| V <sub>CEsat-1</sub> | Collector-emitter saturation voltage | I <sub>C</sub> =10A ; I <sub>B</sub> =40mA |     |      | 2.0  | V    |
| V <sub>CEsat-2</sub> | Collector-emitter saturation voltage | I <sub>C</sub> =20A ; I <sub>B</sub> =1A   |     |      | 4.0  | V    |
| V <sub>BE sat</sub>  | Base-emitter saturation voltage      | I <sub>C</sub> =20A ; I <sub>B</sub> =1A   |     |      | 4.0  | V    |
| V <sub>BE</sub>      | Base-emitter on voltage              | I <sub>C</sub> =10A ; V <sub>CE</sub> =4V  |     |      | 2.8  | V    |
| I <sub>CEO</sub>     | Collector cut-off current            | V <sub>CE</sub> =40V; I <sub>B</sub> =0    |     |      | 1.0  | mA   |
| I <sub>CBO</sub>     | Collector cut-off current            | V <sub>CB</sub> =50V; I <sub>E</sub> =0    |     |      | 0.5  | 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> =4A ; V <sub>CE</sub> =5V   | 500 |      | 5000 |      |
| h <sub>FE-2</sub>    | DC current gain                      | I <sub>C</sub> =20A ; V <sub>CE</sub> =5V  | 100 |      |      |      |

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## PACKAGE OUTLINE

Fig.2 outline dimensions (unindicated tolerance:  $\pm 0.10\text{mm}$ )