

## Inchange Semiconductor

## Product Specification

## Silicon NPN Power Transistors

2N5734

## DESCRIPTION

- With TO-3 package
- High current capability

## APPLICATIONS

- For linear amplifier and inductive switching applications

## PINNING(see fig.2)

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

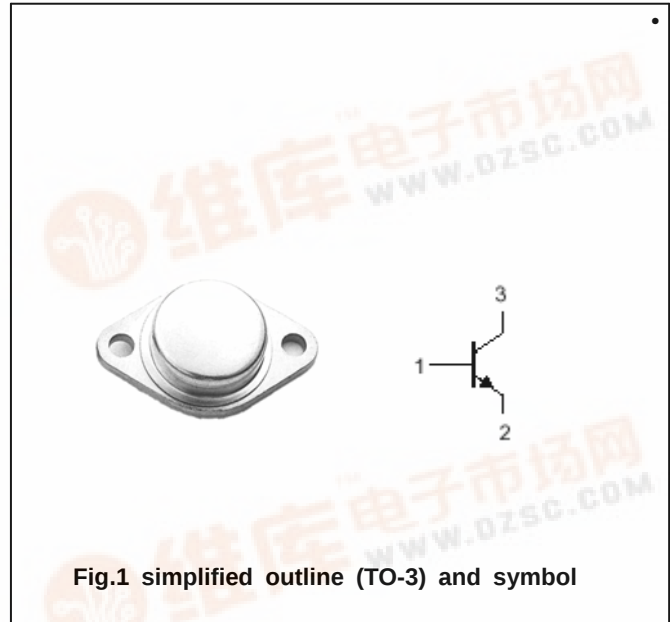


Fig.1 simplified outline (TO-3) and symbol

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

| SYMBOL    | PARAMETER                 | CONDITIONS               | VALUE   | UNIT               |
|-----------|---------------------------|--------------------------|---------|--------------------|
| $V_{CBO}$ | Collector-base voltage    | Open emitter             | 100     | V                  |
| $V_{CEO}$ | Collector-emitter voltage | Open base                | 80      | V                  |
| $V_{EBO}$ | Emitter-base voltage      | Open collector           | 7       | V                  |
| $I_C$     | Collector current         |                          | 30      | A                  |
| $I_{CM}$  | Collector current-peak    |                          | 30      | A                  |
| $P_T$     | Total power dissipation   | $T_C=25^{\circ}\text{C}$ | 150     | W                  |
| $T_j$     | Junction temperature      |                          | 150     | $^{\circ}\text{C}$ |
| $T_{stg}$ | Storage temperature       |                          | -65~200 | $^{\circ}\text{C}$ |

## THERMAL CHARACTERISTICS

| SYMBOL        | PARAMETER                           | MAX  | UNIT                        |
|---------------|-------------------------------------|------|-----------------------------|
| $R_{th\ j-c}$ | Thermal resistance junction to case | 1.17 | $^{\circ}\text{C}/\text{W}$ |

**Silicon NPN Power Transistors****2N5734****CHARACTERISTICS****T<sub>j</sub>=25°C unless otherwise specified**

| SYMBOL                | PARAMETER                            | CONDITIONS                                  | MIN | TYP. | MAX | UNIT |
|-----------------------|--------------------------------------|---------------------------------------------|-----|------|-----|------|
| V <sub>CEO(SUS)</sub> | Collector-emitter sustaining voltage | I <sub>C</sub> =0.2A; I <sub>B</sub> =0     | 80  |      |     | V    |
| V <sub>CEsat-1</sub>  | Collector-emitter saturation voltage | I <sub>C</sub> =15 A; I <sub>B</sub> =1.5 A |     |      | 2.0 | V    |
| V <sub>CEsat-2</sub>  | Collector-emitter saturation voltage | I <sub>C</sub> =30 A; I <sub>B</sub> =6 A   |     |      | 4.0 | V    |
| V <sub>BE</sub>       | Base-emitter on voltage              | I <sub>C</sub> =15A ; V <sub>CE</sub> =2V   |     |      | 2.7 | V    |
| I <sub>CBO</sub>      | Collector cut-off current            | V <sub>CB</sub> =100V; I <sub>E</sub> =0    |     |      | 0.1 | mA   |
| I <sub>EBO</sub>      | Emitter cut-off current              | V <sub>EB</sub> =7V; I <sub>C</sub> =0      |     |      | 0.1 | mA   |
| h <sub>FE-1</sub>     | DC current gain                      | I <sub>C</sub> =10A ; V <sub>CE</sub> =2V   | 30  |      | 300 |      |
| h <sub>FE-2</sub>     | DC current gain                      | I <sub>C</sub> =20A ; V <sub>CE</sub> =4V   | 5   |      |     |      |
| f <sub>T</sub>        | Transition frequency                 | I <sub>C</sub> =1A ; V <sub>CE</sub> =10V   | 30  |      |     | MHz  |

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PACKAGE OUTLINE

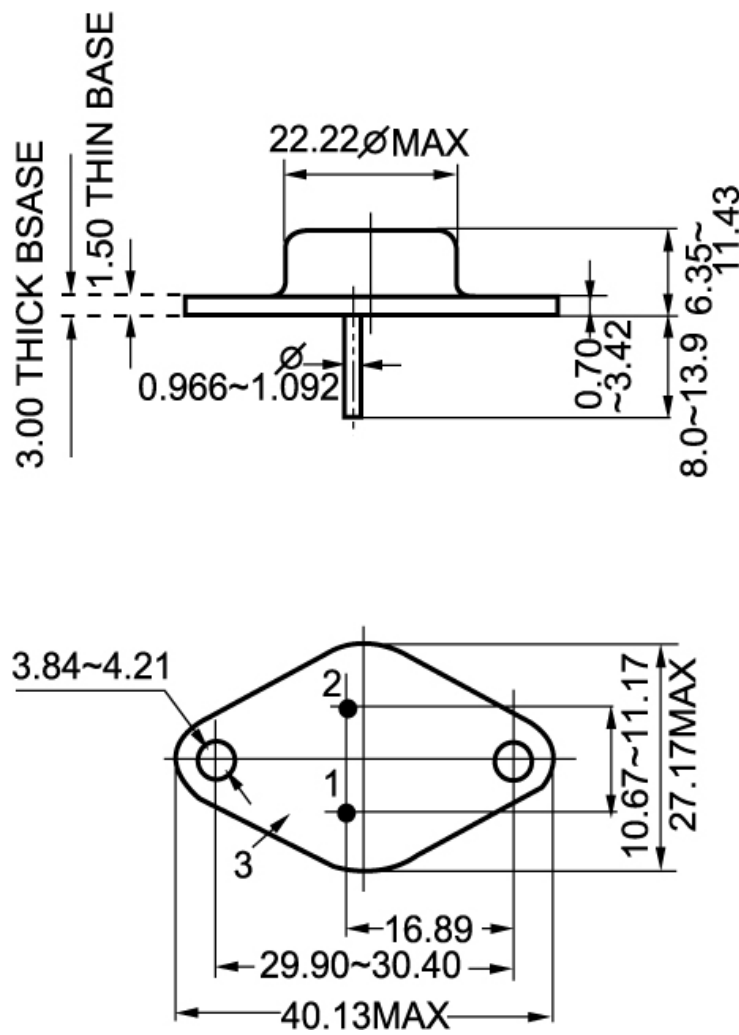


Fig.2 Outline dimensions