

## Silicon NPN Power Transistors

3DD207

## DESCRIPTION

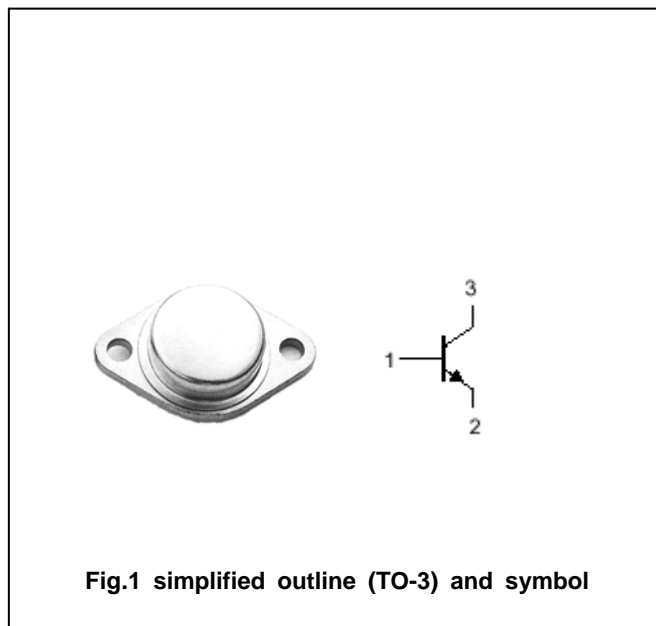
- With TO-3 package
- Low collector saturation voltage

## APPLICATIONS

- For audio amplifier applications

## PINNING(see Fig.2)

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

Absolute maximum ratings( $T_a = ^\circ\text{C}$ )

| SYMBOL    | PARAMETER                   | CONDITIONS               | VALUE   | UNIT             |
|-----------|-----------------------------|--------------------------|---------|------------------|
| $V_{CBO}$ | Collector-base voltage      | Open emitter             | 60      | V                |
| $V_{CEO}$ | Collector-emitter voltage   | Open base                | 60      | V                |
| $V_{EBO}$ | Emitter-base voltage        | Open collector           | 6       | V                |
| $I_C$     | Collector current           |                          | 5       | A                |
| $P_C$     | Collector power dissipation | $T_C = 75^\circ\text{C}$ | 50      | W                |
| $T_j$     | Junction temperature        |                          | 150     | $^\circ\text{C}$ |
| $T_{stg}$ | Storage temperature         |                          | -55~150 | $^\circ\text{C}$ |

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## CHARACTERISTICS

 $T_j=25^{\circ}\text{C}$  unless otherwise specified

| SYMBOL        | PARAMETER                            | CONDITIONS                        | MIN | TYP. | MAX | UNIT |
|---------------|--------------------------------------|-----------------------------------|-----|------|-----|------|
| $V_{(BR)CEO}$ | Collector-emitter breakdown voltage  | $I_C=50\text{mA}; I_B=0$          | 60  |      |     | V    |
| $V_{(BR)CBO}$ | Collector-base breakdown voltage     | $I_C=1\text{mA}; I_E=0$           | 60  |      |     | V    |
| $V_{(BR)EBO}$ | Emitter-base breakdown voltage       | $I_E=1\text{mA}; I_C=0$           | 6   |      |     | V    |
| $V_{CEsat}$   | Collector-emitter saturation voltage | $I_C=3\text{A}; I_B=0.3\text{A}$  |     |      | 1.0 | V    |
| $V_{BEsat}$   | Base-emitter saturation voltage      | $I_C=3\text{A}; I_B=0.3\text{A}$  |     |      | 1.5 | V    |
| $I_{CBO}$     | Collector cut-off current            | $V_{CB}=60\text{V}; I_E=0$        |     |      | 0.5 | mA   |
| $I_{EBO}$     | Emitter cut-off current              | $V_{EB}=6\text{V}; I_C=0$         |     |      | 0.1 | mA   |
| $h_{FE}$      | DC current gain                      | $I_C=2\text{A}; V_{CE}=5\text{V}$ | 40  |      | 250 |      |

PACKAGE OUTLINE

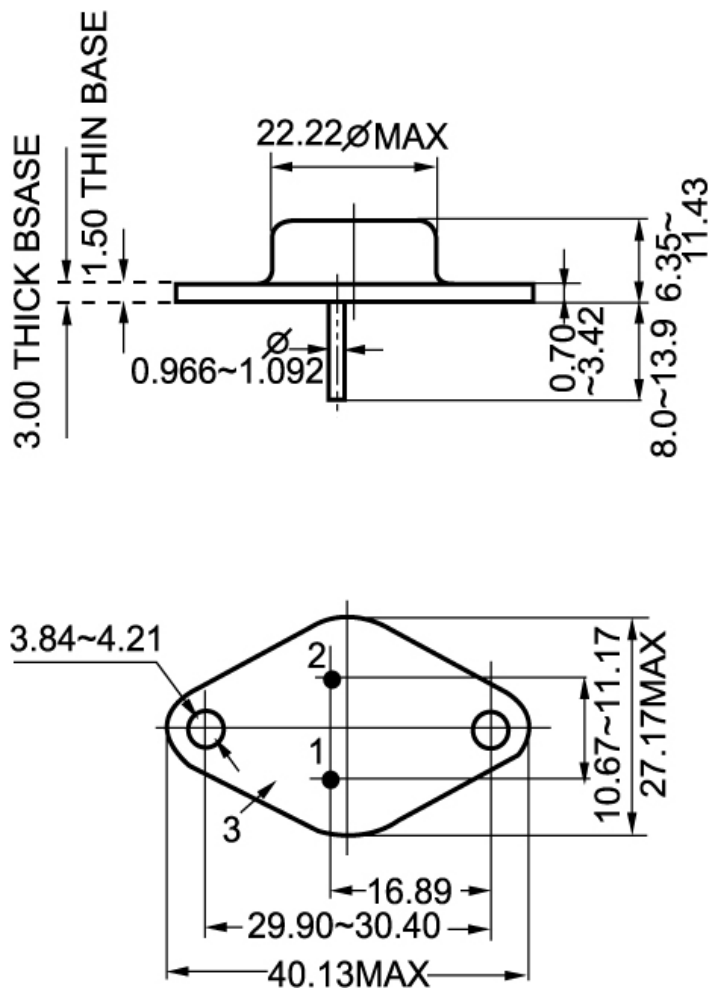


Fig.2 outline dimensions (unindicated tolerance:  $\pm 0.1$ mm)