# Silicon NPN Power Transistors 2N6259

## DESCRIPTION

- ·With TO-3 package
- ·Low collector saturation voltage
- ·High power dissipation

## APPLICATIONS

- ·Designed for high power audio ,disk head positioners,linear amplifiers,switching regulators solenoid drivers,and DC-DC converters or inverters

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

## PINNING

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

## Absolute maximum ratings(Ta=□)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|---|---|---|---|---|
| $V_{CBO}$ | Collector-base voltage | Open emitter | 170 | V |
| $V_{CEO}$ | Collector-emitter voltage | Open base | 150 | V |
| $V_{EBO}$ | Emitter-base voltage | Open collector | 7 | V |
| $I_C$ | Collector current | | 16 | A |
| $I_{CM}$ | Collector current-peak | | 30 | A |
| $I_B$ | Base current | | 4 | A |
| $I_{BM}$ | Base current-peak | | 15 | 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 |
|---|---|---|---|
| $R_{th\ j\text{-}c}$ | Thermal resistance junction to case | 1.17 | □/W |

## CHARACTERISTICS

**Tj=25□ unless otherwise specified**

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|---|---|---|---|---|---|---|
| $V_{CEO(SUS)}$ | Collector-emitter sustaining voltage | $I_C$=0.1A ;$I_B$=0 | 150 | | | V |
| $V_{CEsat-1}$ | Collector-emitter saturation voltge | $I_C$=8A ;$I_B$=0.8A | | | 1.5 | V |
| $V_{CEsat-2}$ | Collector-emitter saturation voltge | $I_C$=16A ;$I_B$=3.2A | | | 2.5 | V |
| $V_{BE}$ | Base-emitter on voltage | $I_C$=8A ; $V_{CE}$=2V | | | 2.0 | V |
| $I_{CEO}$ | Collector cut-off current | $V_{CE}$=130V; $I_B$=0 | | | 10 | mA |
| $I_{CEX}$ | Collector cut-off current | $V_{CE}$=150V; $V_{BE(off)}$=1.5V | | | 2.0 | mA |
| $I_{CBO}$ | Collector cut-off current | $V_{CB}$=150V; $I_E$=0 | | | 2.0 | mA |
| $I_{EBO}$ | Emitter cut-off current | $V_{EB}$=7V; $I_C$=0 | | | 5.0 | mA |
| $h_{FE-1}$ | DC current gain | $I_C$=8A ; $V_{CE}$=2V | 15 | | 60 | |
| $h_{FE-2}$ | DC current gain | $I_C$=16A ; $V_{CE}$=4V | 10 | | | |

**PACKAGE OUTLINE**

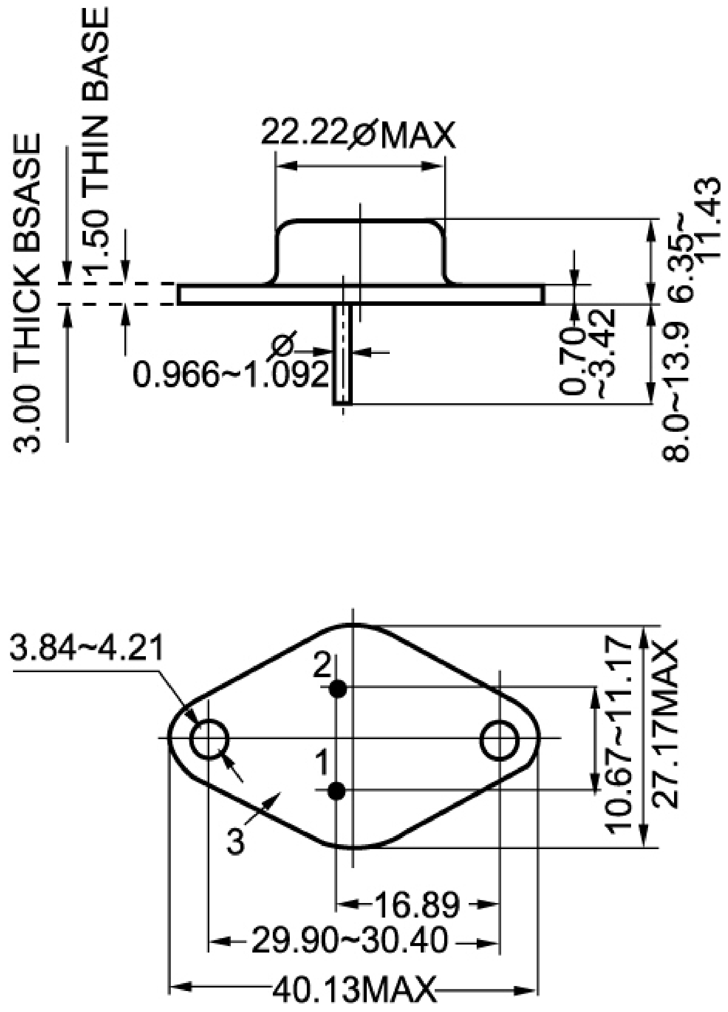

Fig.2 outline dimensions (unindicated tolerance:±0.10mm)