

Silicon PNP Power Transistors

2N5875 2N5876

DESCRIPTION

- With TO-3 package
- Low collector saturation voltage
- Complement to type 2N5877 2N5878

APPLICATIONS

- For general-purpose power amplifier and switching applications

PINNING

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

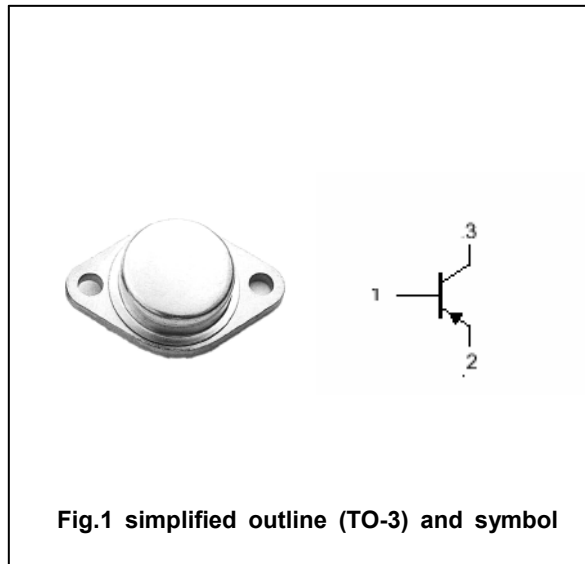


Fig.1 simplified outline (TO-3) and symbol

Absolute maximum ratings(Ta=□)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|------------------|---------------------------|---------------------|---------|------|
| V _{CBO} | Collector-base voltage | 2N5875 | -60 | V |
| | | 2N5876 | -80 | |
| V _{CEO} | Collector-emitter voltage | 2N5875 | -60 | V |
| | | 2N5876 | -80 | |
| V _{EBO} | Emitter-base voltage | Open collector | -5 | V |
| I _C | Collector current | | -10 | A |
| I _{CM} | Collector current-peak | | -20 | A |
| I _B | Base current | | -4 | 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 | 1.17 | □/W |

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CHARACTERISTICS

T_j=25°C unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT | |
|-----------------------|--------------------------------------|--|---|------|--------------|------|--|
| V _{CEO(SUS)} | Collector-emitter sustaining voltage | 2N5875 | I _C =-0.2A ; I _B =0 | -60 | | | V |
| | | 2N5876 | | -80 | | | |
| V _{CEsat-1} | Collector-emitter saturation voltage | I _C =-5A; I _B =-0.5A | | | -1.0 | V | |
| V _{CEsat-2} | Collector-emitter saturation voltage | I _C =-10A; I _B =-2.5A | | | -3.0 | V | |
| V _{BEsat} | Base-emitter saturation voltage | I _C =-10A; I _B =-2.5A | | | -2.5 | V | |
| V _{BE} | Base-emitter on voltage | I _C =-4A ; V _{CE} =-4V | | | -1.5 | V | |
| I _{CBO} | Collector cut-off current | V _{CB} =ratedV _{CBO} ; I _B =0 | | | -0.5 | mA | |
| I _{CEO} | Collector cut-off current | 2N5875 | | | -1.0 | mA | |
| | | 2N5876 | | | | | V _{CE} =-40V; I _B =0 |
| I _{CEX} | Collector cut-off current | V _{CE} =ratedV _{CE} ; V _{BE} =1.5V T _C =150°C | | | -0.5 -5.0 | mA | |
| I _{EBO} | Emitter cut-off current | V _{EB} =-5V; I _C =0 | | | -1.0 | mA | |
| h _{FE-1} | DC current gain | I _C =-1A ; V _{CE} =-4V | 35 | | | | |
| h _{FE-2} | DC current gain | I _C =-4A ; V _{CE} =-4V | 20 | | 100 | | |
| h _{FE-3} | DC current gain | I _C =-10A ; V _{CE} =-4V | 4 | | | | |
| f _T | Transistion frequency | I _C =-0.5A ; V _{CE} =-10V; f=1MHz | 4 | | | MHz | |

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PACKAGE OUTLINE

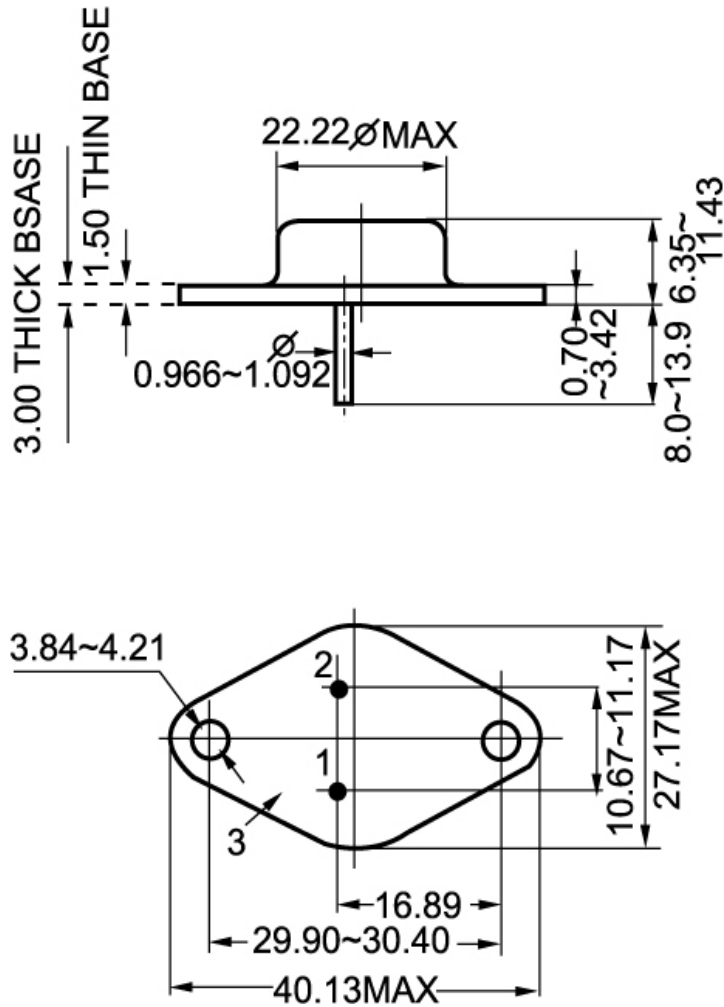


Fig.2 outline dimensions (unindicated tolerance:±0.10mm)