

Silicon PNP Power Transistors

2SA1072 2SA1073

DESCRIPTION

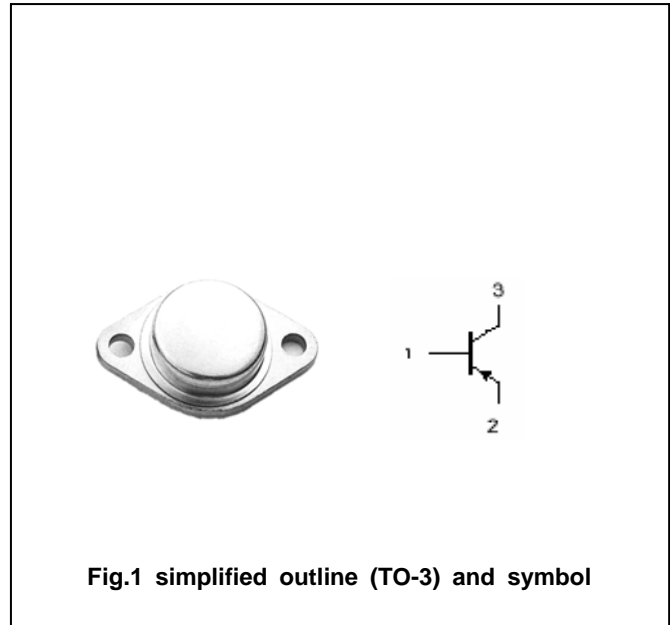
- With TO-3 package
- Complement to type 2SC2522/2523
- Excellent safe operating area
- Fast switching speed

APPLICATIONS

- High frequency power amplifier
- Audio power amplifiers
- Switching regulators
- DC-DC converters

PINNING(see Fig.2)

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



Absolute maximum ratings(Ta=°C)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|------------------|-----------------------------|----------------------|---------|------|
| V _{CBO} | Collector-base voltage | 2SA1072 | -120 | V |
| | | 2SA1073 | -160 | |
| V _{CEO} | Collector-emitter voltage | 2SA1072 | -120 | V |
| | | 2SA1073 | -160 | |
| V _{EBO} | Emitter-base voltage | Open collector | -7 | V |
| I _C | Collector current | | -12 | A |
| P _C | Collector power dissipation | T _C =25°C | 120 | W |
| T _j | Junction temperature | | 150 | °C |
| T _{stg} | Storage temperature | | -65~150 | °C |

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CHARACTERISTICS

T_j=25°C unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|----------------------|--------------------------------------|---|---|-------|------|------|
| V _{(BR)CEO} | Collector-emitter breakdown voltage | 2SA1072 | I _C =-1mA ; R _{BE} =∞ | | | V |
| | | 2SA1073 | | | | |
| V _{(BR)CBO} | Collector-base breakdown voltage | 2SA1072 | I _C =-50 μ A ; I _E =0 | | | V |
| | | 2SA1073 | | | | |
| V _{(BR)EBO} | Emitter-base breakdown voltage | I _E =-50 μ A ; I _C =0 | -7 | | | V |
| V _{CEsat} | Collector-emitter saturation voltage | I _C =-5A ; I _B =-0.5A | | -0.9 | -1.8 | V |
| V _{BE} | Base-emitter on voltage | I _C =-5A ; V _{CE} =-5V | | -1.25 | -1.7 | V |
| I _{CBO} | Collector cut-off current | 2SA1072 | V _{CB} =-120V ; I _E =0 | | | μ A |
| | | 2SA1073 | | | | |
| I _{CEO} | Collector cut-off current | 2SA1072 | V _{CE} =-120V ; R _{BE} =∞ | | | mA |
| | | 2SA1073 | | | | |
| I _{EBO} | Emitter cut-off current | V _{EB} =-7V ; I _C =0 | | | -50 | μ A |
| h _{FE-1} | DC current gain | I _C =-1A ; V _{CE} =-5V | 60 | | 200 | |
| h _{FE-2} | DC current gain | I _C =-7A ; V _{CE} =-5V | 40 | | | |
| C _{OB} | Output capacitance | I _E =0 ; V _{CB} =-10V ; f=1MHz | | 300 | | pF |
| f _T | Transition frequency | I _C =-1A ; V _{CE} =-10V ; f=10MHz | | 60 | | MHz |

Switching times

| | | | | | | |
|------------------|--------------|--|--|------|--|-----|
| t _r | Rise time | I _C =-7.5A I _{B1} =-I _{B2} =-0.75A ; R _L =4 Ω | | 0.15 | | μ s |
| t _{stg} | Storage time | | | 0.50 | | μ s |
| t _f | Fall time | | | 0.11 | | μ s |

PACKAGE OUTLINE

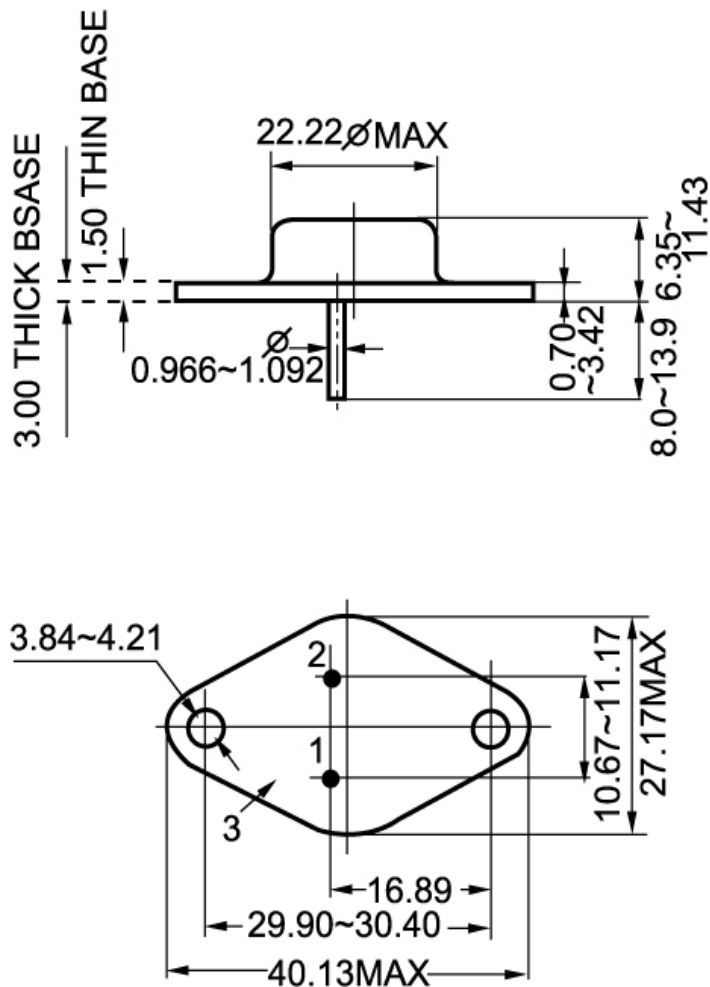


Fig.2 outline dimensions (unindicated tolerance: ±0.1mm)