

Silicon PNP Power Transistors

2SA1075 2SA1076

DESCRIPTION

- With MT-200 package
- Complement to type 2SC2525,2SC2526
- Fast switching speed
- Excellent safe operating area

APPLICATIONS

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

PINNING(see Fig.2)

| PIN | DESCRIPTION |
|-----|--------------------------------------|
| 1 | Base |
| 2 | Collector;connected to mounting base |
| 3 | Emitter |

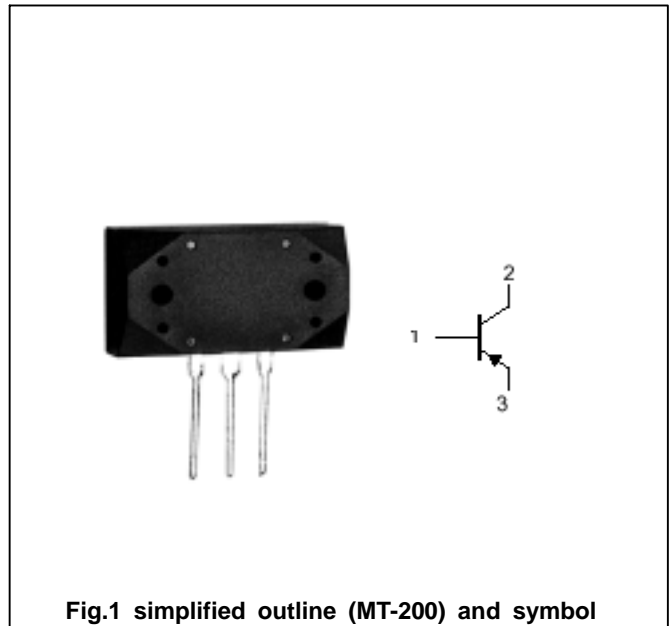


Fig.1 simplified outline (MT-200) and symbol

Absolute maximum ratings(Ta=25)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|------------------|-----------------------------|--------------------|---------|------|
| V _{CBO} | Collector-base voltage | 2SA1075 | -120 | V |
| | | 2SA1076 | -160 | V |
| V _{CEO} | Collector-emitter voltage | 2SA1075 | -120 | V |
| | | 2SA1076 | -160 | V |
| V _{EBO} | Emitter-base voltage | Open collector | -7 | V |
| I _C | Collector current | | -12 | A |
| P _C | Collector power dissipation | T _C =25 | 120 | W |
| T _j | Junction temperature | | 150 | |
| T _{stg} | Storage temperature | | -65~150 | |

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CHARACTERISTICS

T_j=25 unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT | |
|----------------------|--------------------------------------|---|---|--|------|------|-----|
| V _{(BR)CEO} | Collector-emitter breakdown voltage | 2SA1075 | I _C =-1mA ; R _{BE} = | -120 | | | V |
| | | 2SA1076 | | -160 | | | |
| V _{(BR)CBO} | Collector-base breakdown voltage | 2SA1075 | I _C =-50 μ A ; I _E =0 | -120 | | | V |
| | | 2SA1076 | | -160 | | | |
| 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 | | | -1.8 | V | |
| V _{BE} | Base-emitter voltage | I _C =-5A ; V _{CE} =-5V | | | -1.7 | V | |
| I _{CBO} | Collector cut-off current | 2SA1075 | V _{CB} =-120V ; I _E =0 | | | -50 | μ A |
| | | 2SA1076 | | V _{CB} =-160V ; I _E =0 | | | |
| I _{CEO} | Collector cut-off current | 2SA1075 | V _{CE} =-120V ; I _B =0 | | | -1 | mA |
| | | 2SA1076 | | V _{CE} =-160V ; I _B =0 | | | |
| 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 | | 300 | | pF | |
| f _T | Transition frequency | I _C =-1A ; V _{CE} =-10V | 45 | | | MHz | |

Switching times

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

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PACKAGE OUTLINE

