

Silicon PNP Power Transistors

2SA1075 2SA1076

DESCRIPTION

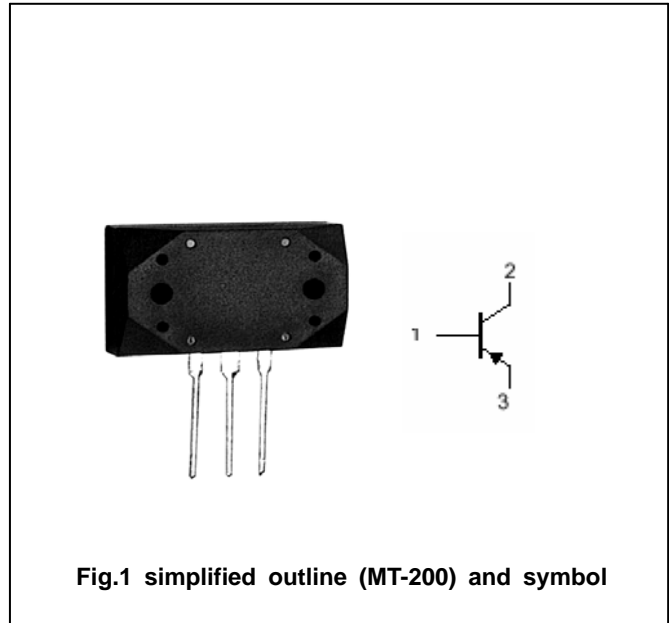
- With MT-200 package
- Complement to type 2SC2525,2SC2526
- Fast switching speed
- Excellent safe operating area

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 |

Absolute maximum ratings($T_a=25^\circ\text{C}$)

| 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 | $T_C=25^\circ\text{C}$ | 120 | W |
| T_j | Junction temperature | | 150 | $^\circ\text{C}$ |
| T_{stg} | Storage temperature | | -65~150 | $^\circ\text{C}$ |

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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 | 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 | | 60 | | MHz |

Switching times

| | | | | | | |
|----------------|--------------|--|--|------|--|-----|
| t _r | Rise time | I _C =-7.5A ; R _L =4 Ω 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 |

PACKAGE OUTLINE

