

Silicon NPN Power Transistors

2SC2525

DESCRIPTION

- With MT-200 package
- Complement to type 2SA1075
- Excellent safe operating area
- Ultra fast switching speed

APPLICATIONS

- Suited for high frequency power amplifiers, audio power amplifiers, switching regulators and DC-DC converters applications

PINNING(see Fig.2)

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

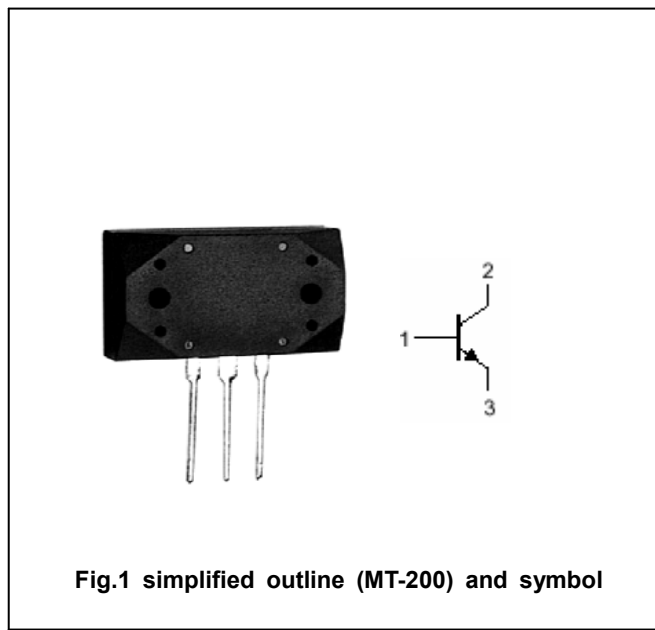


Fig.1 simplified outline (MT-200) and symbol

Absolute maximum ratings(Ta=25°C)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|------------------|-----------------------------|----------------------|---------|------|
| V _{CBO} | Collector-base voltage | Open emitter | 120 | V |
| V _{CEO} | Collector-emitter voltage | Open base | 120 | V |
| 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 | I _C =1mA; R _{BE} =∞ | 120 | | | V |
| V _{(BR)CBO} | Collector-base breakdown voltage | I _C =50μA; I _E =0 | 120 | | | V |
| V _{(BR)EBO} | Emitter-base breakdown voltage | I _E =50μA; I _C =0 | 7 | | | V |
| V _{CEsat} | Collector-emitter saturation voltage | I _C =5 A; I _B =0.5 A | | 0.7 | 1.8 | V |
| V _{BE} | Base-emitter voltage | I _C =5A ; V _{CE} =5V | | 1.25 | 1.7 | V |
| I _{CBO} | Collector cut-off current | V _{CB} =120V; I _E =0 | | | 50 | μA |
| I _{EBO} | Emitter cut-off current | V _{EB} =7V; I _C =0 | | | 50 | μA |
| 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 | | | |
| f _T | Transition frequency | I _C =1A ; V _{CB} =10V; f=1MHz | 50 | 80 | | MHz |
| C _{OB} | Output capacitance | I _E =0; V _{CB} =10V; f=1MHz | | 180 | 300 | pF |

Switching times

| | | | | | | |
|----------------|--------------|--|--|-----|--|----|
| t _r | Rise time | I _C =7.5A; R _L =4Ω I _{B1} =-I _{B2} =0.75A | | 0.3 | | μs |
| t _s | Storage time | | | 1.3 | | μs |
| t _f | Fall time | | | 0.2 | | μs |

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PACKAGE OUTLINE

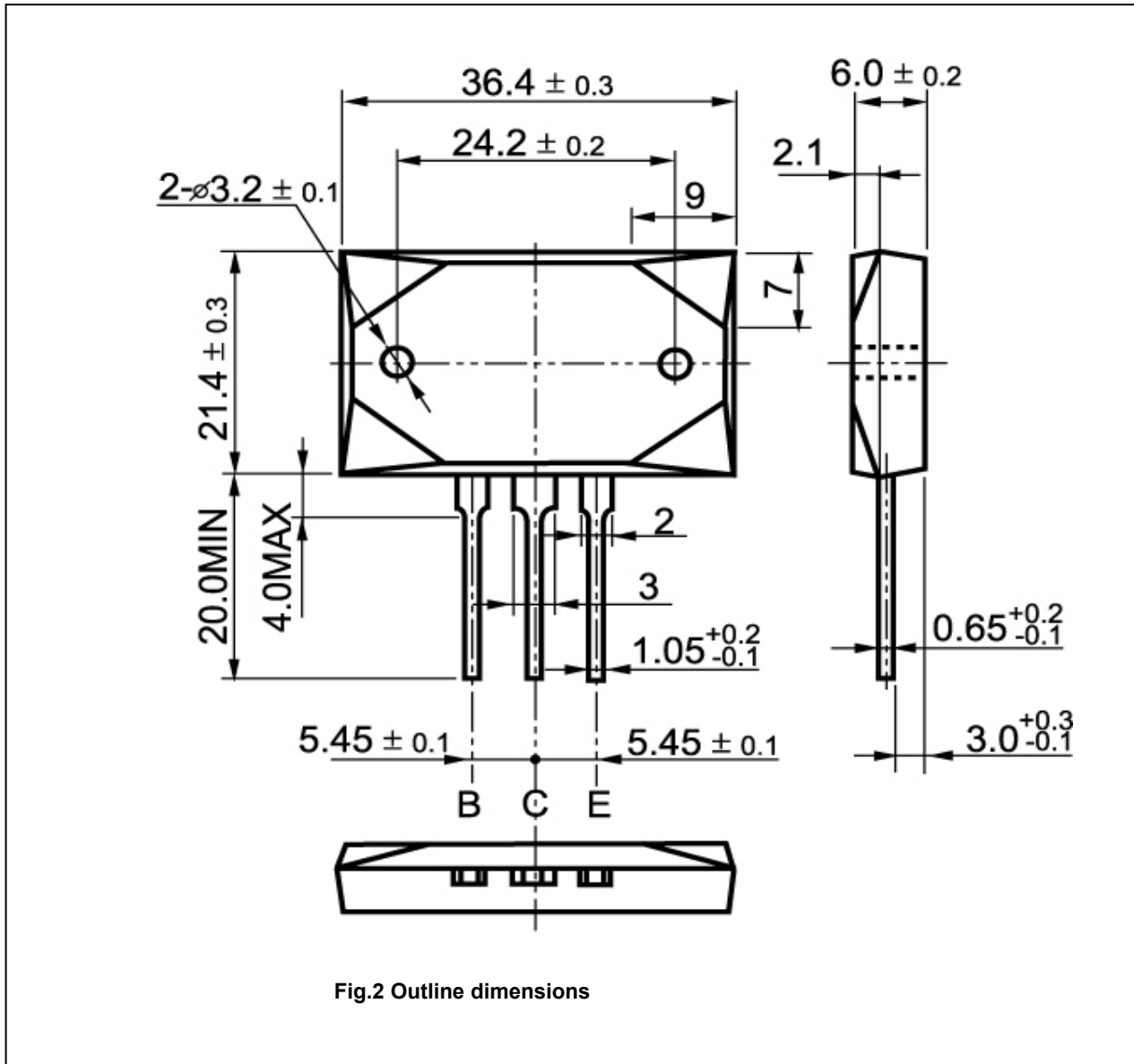


Fig.2 Outline dimensions