

Silicon NPN Power Transistors

2SC2565

DESCRIPTION

- With MT-200 package
- Complement to type 2SA1095
- High transition frequency

APPLICATIONS

- For power amplifier applications

PINNING(see Fig.2)

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

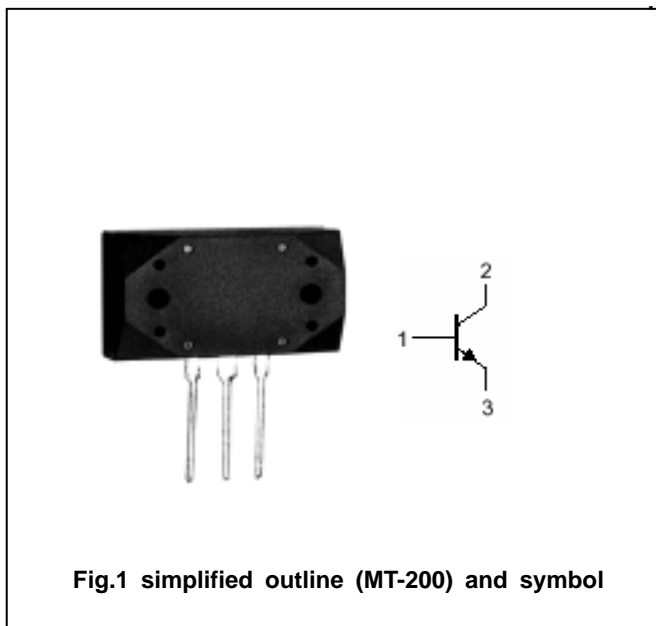


Fig.1 simplified outline (MT-200) and symbol

Absolute maximum ratings (Ta=25°C)

| SYMBOL    | PARAMETER                   | CONDITIONS     | VALUE   | UNIT |
|-----------|-----------------------------|----------------|---------|------|
| $V_{CBO}$ | Collector-base voltage      | Open emitter   | 160     | V    |
| $V_{CEO}$ | Collector-emitter voltage   | Open base      | 160     | V    |
| $V_{EBO}$ | Emitter-base voltage        | Open collector | 5       | V    |
| $I_C$     | Collector current           |                | 15      | A    |
| $I_B$     | Base current                |                | 1.5     | A    |
| $P_C$     | Collector power dissipation | $T_C=25$       | 150     | W    |
| $T_j$     | Junction temperature        |                | 150     |      |
| $T_{stg}$ | Storage temperature         |                | -55~150 |      |

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## CHARACTERISTICS

T<sub>j</sub>=25 unless otherwise specified

| SYMBOL               | PARAMETER                            | CONDITIONS                                     | MIN | TYP. | MAX | UNIT |
|----------------------|--------------------------------------|--|-----|------|-----|------|
| V <sub>(BR)CEO</sub> | Collector-emitter breakdown voltage  | I <sub>C</sub> =0.1A; I <sub>B</sub> =0        | 160 |      |     | V    |
| V <sub>(BR)EBO</sub> | Emitter-base breakdown voltage       | I <sub>E</sub> =10mA; I <sub>C</sub> =0        | 5   |      |     | V    |
| V <sub>CEsat</sub>   | Collector-emitter saturation voltage | I <sub>C</sub> =5 A; I <sub>B</sub> =0.5 A     |     |      | 2.0 | V    |
| V <sub>BE</sub>      | Base-emitter on voltage              | I <sub>C</sub> =5A ; V <sub>CE</sub> =5V       |     |      | 2.0 | V    |
| I <sub>CBO</sub>     | Collector cut-off current            | V <sub>CB</sub> =160V; I <sub>E</sub> =0       |     |      | 50  | μ A  |
| I <sub>EBO</sub>     | Emitter cut-off current              | V <sub>EB</sub> =5V; I <sub>C</sub> =0         |     |      | 50  | μ A  |
| h <sub>FE-1</sub>    | DC current gain                      | I <sub>C</sub> =1A ; V <sub>CE</sub> =5V       | 55  |      | 240 |      |
| h <sub>FE-2</sub>    | DC current gain                      | I <sub>C</sub> =5A ; V <sub>CE</sub> =5V       | 40  |      |     |      |
| f <sub>T</sub>       | Transition frequency                 | I <sub>C</sub> =1A ; V <sub>CE</sub> =10V      |     | 80   |     | MHz  |
| C <sub>OB</sub>      | Output capacitance                   | I <sub>E</sub> =0; V <sub>CB</sub> =10V;f=1MHz |     | 200  |     | pF   |

◆ h<sub>FE-1</sub> classifications

| R      | O      | Y       |
|--------|--------|---------|
| 55-110 | 80-160 | 120-240 |

PACKAGE OUTLINE

