

Silicon PNP Power Transistors

2SA1494

DESCRIPTION

- With MT-200 package
- Complement to type 2SC3858

APPLICATIONS

- Audio and general purpose

PINNING(see Fig.2)

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

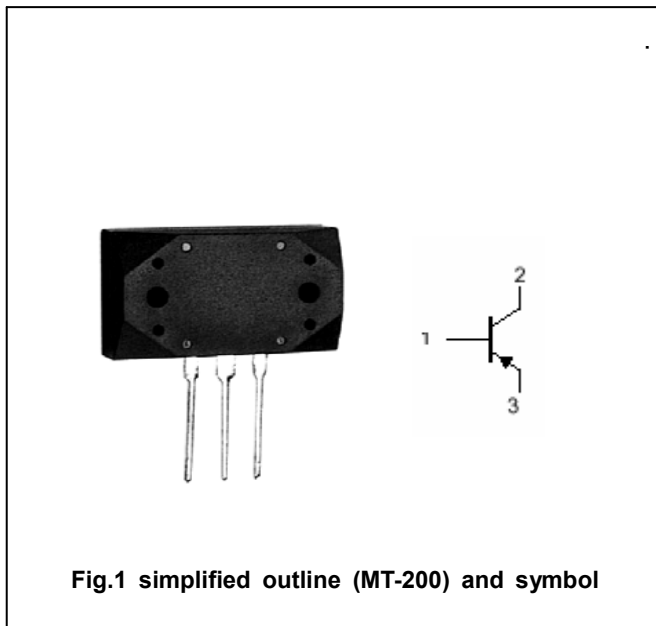


Fig.1 simplified outline (MT-200) and symbol

Absolute maximum ratings (Ta=25°C)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|------------------|-----------------------------|----------------------|---------|------|
| V _{CBO} | Collector-base voltage | Open emitter | -200 | V |
| V _{CEO} | Collector-emitter voltage | Open base | -200 | V |
| V _{EBO} | Emitter-base voltage | Open collector | -6 | V |
| I _C | Collector current | | -17 | A |
| I _B | Base current | | -5 | A |
| P _C | Collector power dissipation | T _C =25°C | 200 | W |
| T _j | Junction temperature | | 150 | °C |
| T _{stg} | Storage temperature | | -55~150 | °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 =-50mA; I _B =0 | -200 | | | V |
| V _{CEsat} | Collector-emitter saturation voltage | I _C =-10 A; I _B =-1 A | | | -2.5 | V |
| I _{CBO} | Collector cut-off current | V _{CB} =-200V; I _E =0 | | | -100 | μA |
| I _{EBO} | Emitter cut-off current | V _{EB} =-6V; I _C =0 | | | -100 | μA |
| h _{FE} | DC current gain | I _C =-8A ; V _{CE} =-4V | 50 | | 180 | |
| f _T | Transition frequency | I _C =-1A ; V _{CE} =-12V | | 20 | | MHz |
| C _{OB} | Output capacitance | I _E =0; V _{CB} =-10V; f=1MHz | | 500 | | pF |

Switching times

| | | | | | | |
|-----------------|--------------|---|--|------|--|----|
| t _{on} | Turn-on time | I _C =-10A; R _L =4Ω I _{B1} =-I _{B2} =-1A V _{CC} =-40V | | 0.60 | | μs |
| t _s | Storage time | | | 0.90 | | μs |
| t _f | Fall time | | | 0.20 | | μs |

◆ h_{FE} classifications

| Y | P | G |
|--------|--------|--------|
| 50-100 | 70-140 | 90-180 |

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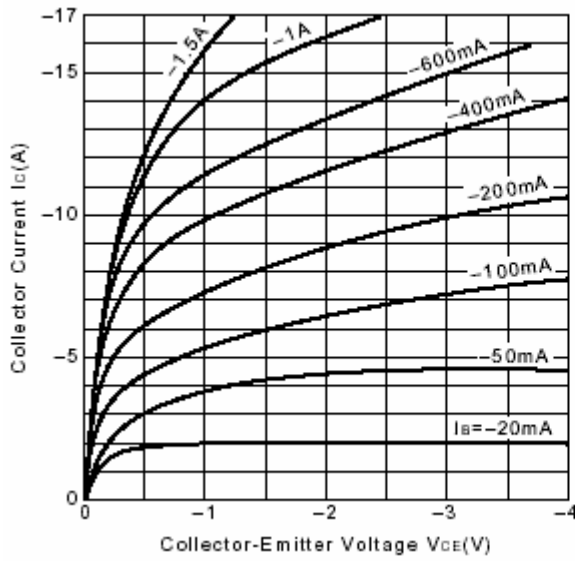


Fig.3 Static Characteristic

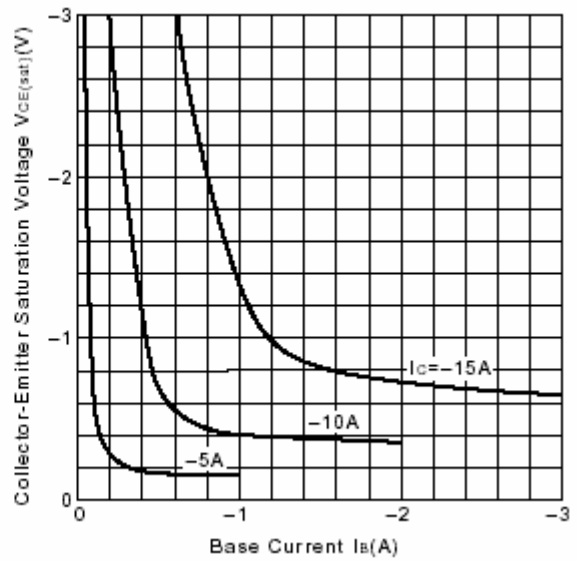


Fig.4 $V_{CE(sat)}$ - I_B Characteristics

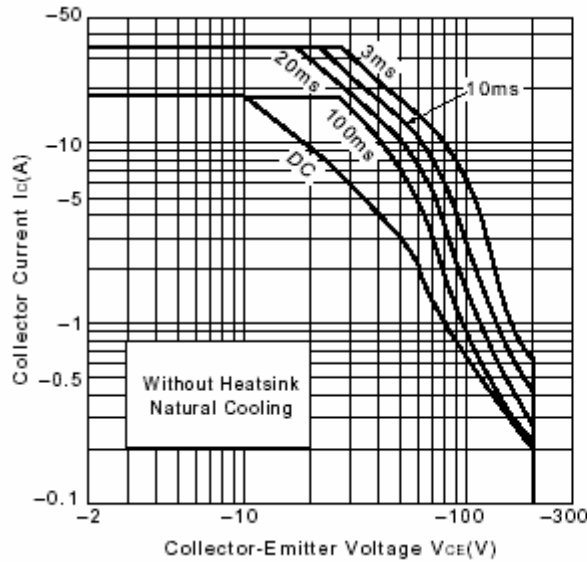


Fig.5 Safe Operating Area

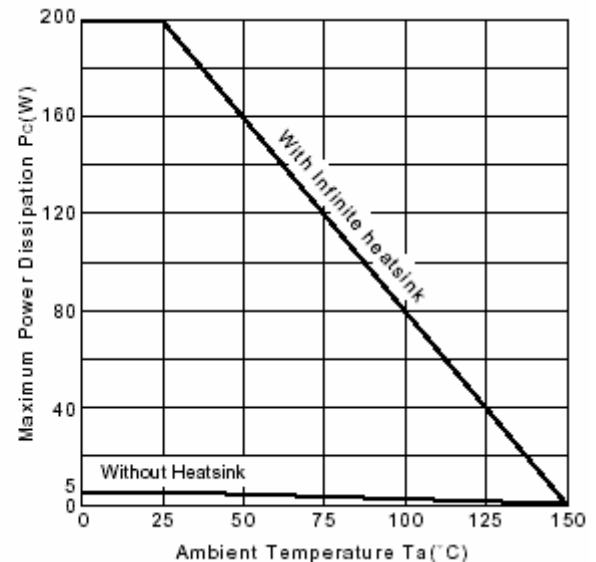


Fig.6 P_c - T_a Derating

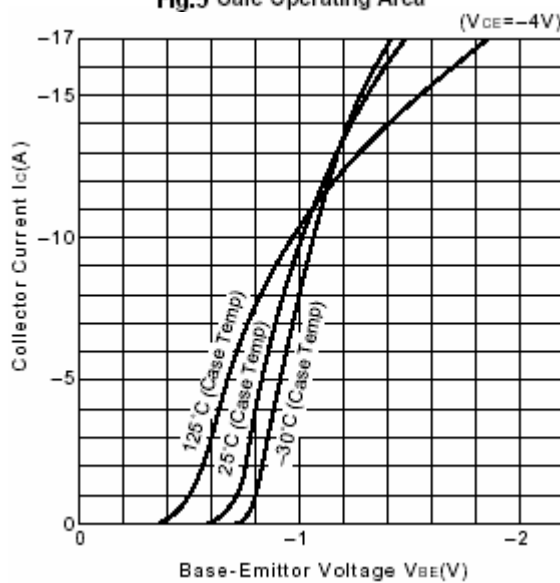


Fig.7 I_C - V_{BE}

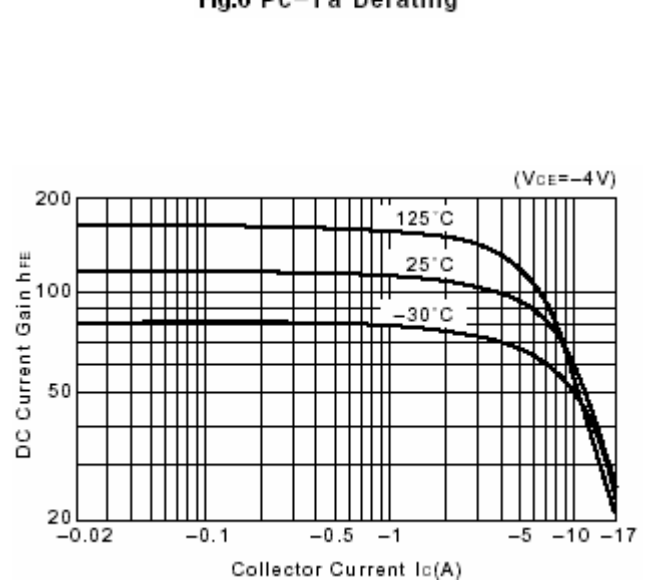


Fig.8 DC current Gain