

Silicon PNP Power Transistors

2SA1694

DESCRIPTION

- With TO-3PN package
- Complement to type 2SC4467

APPLICATIONS

- Audio and general purpose

PINNING

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

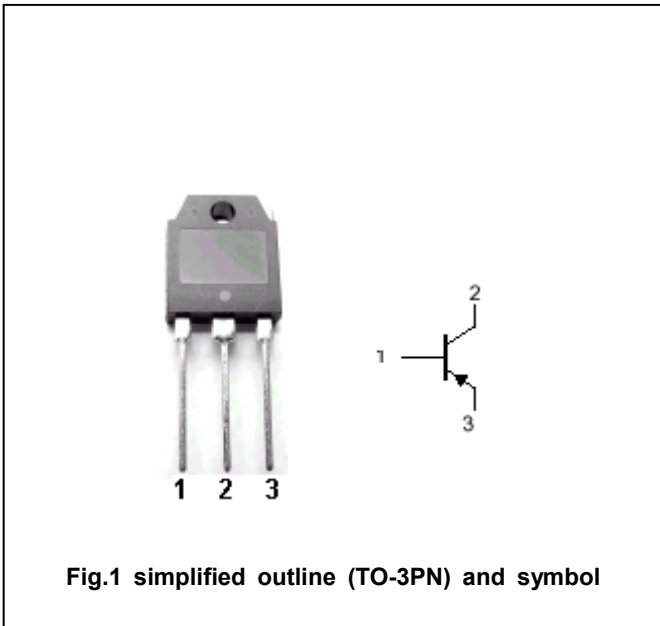


Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings(Ta=□)

| 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 | -6 | V |
| I _C | Collector current | | -8 | A |
| I _B | Base current | | -3 | A |
| P _C | Collector power dissipation | T _C =25□ | 80 | W |
| T _j | Junction temperature | | 150 | □ |
| T _{stg} | Storage temperature | | -55~150 | □ |

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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 | -120 | | | V |
| V _{CEsat} | Collector-emitter saturation voltage | I _C =-3A ; I _B =-0.3A | | | -1.5 | V |
| I _{CBO} | Collector cut-off current | V _{CB} =-120V; I _E =0 | | | -10 | μA |
| I _{EBO} | Emitter cut-off current | V _{EB} =-6V; I _C =0 | | | -10 | μA |
| h _{FE} | DC current gain | I _C =-3A ; V _{CE} =-4V | 50 | | 180 | |
| C _{OB} | Output capacitance | I _E =0 ; V _{CB} =-10V, f=1MHz | | 300 | | pF |
| f _T | Transition frequency | I _C =-0.5A ; V _{CE} =-12V | | 20 | | MHz |

Switching times

| | | | | | | |
|-----------------|--------------|--|--|------|--|----|
| t _{on} | Turn-on time | I _C =-4A; R _L =10Ω I _{B1} =- I _{B2} =-0.4A V _{CC} =-40V | | 0.14 | | μs |
| t _s | Storage time | | | 1.40 | | μs |
| t _f | Fall time | | | 0.21 | | μs |

◆ h_{FE} Classifications

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

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PACKAGE OUTLINE

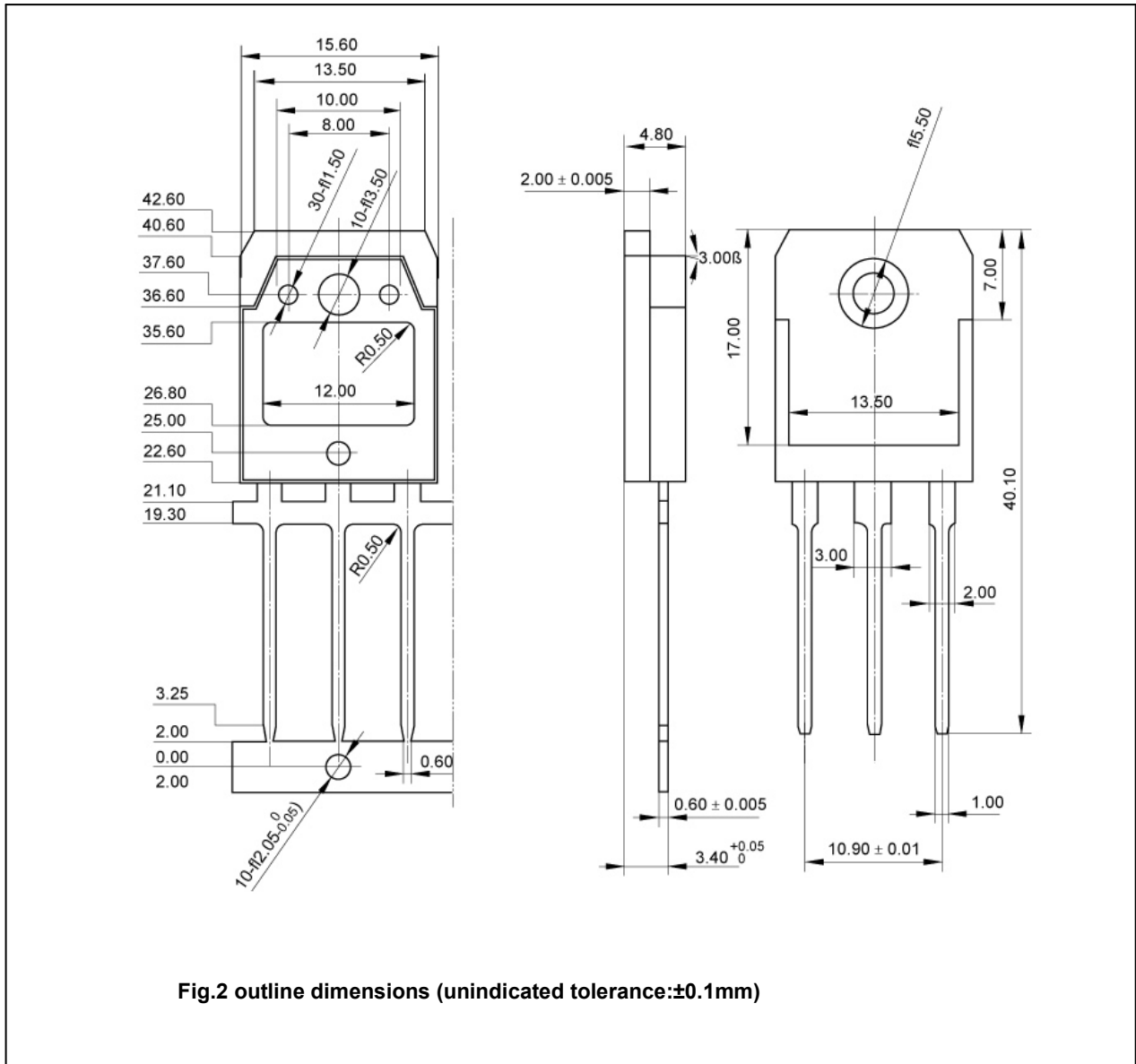


Fig.2 outline dimensions (unindicated tolerance:±0.1mm)

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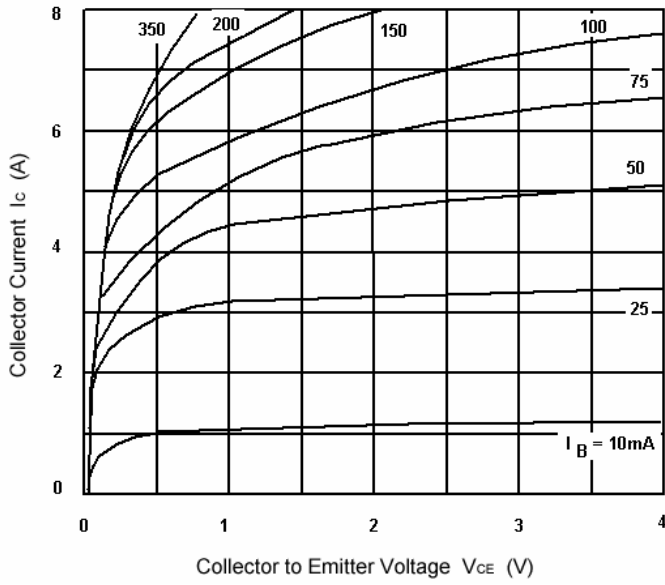


Fig.3 Static Characteristic

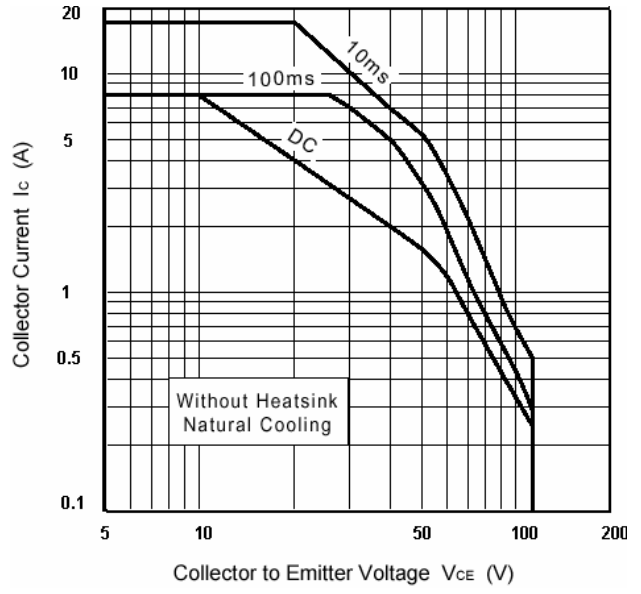


Fig.4 Safe Operating Area

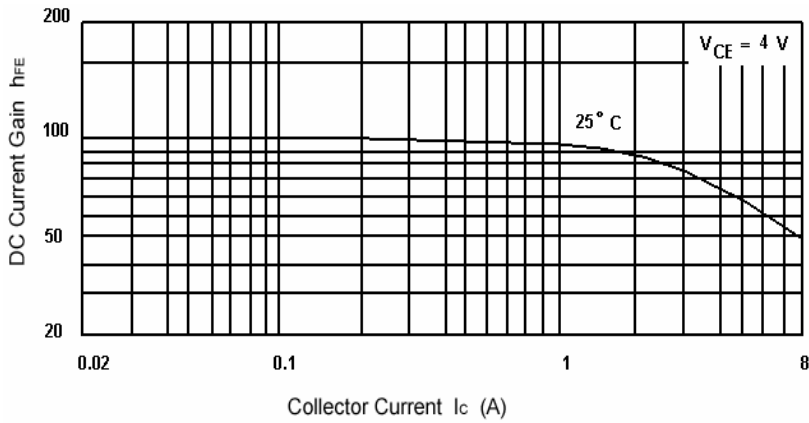


Fig.5 DC current Gain