

DESCRIPTION

- With TO-3PN package
- Complement to type 2SA1694

APPLICATIONS

- Audio and general purpose

PINNING

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

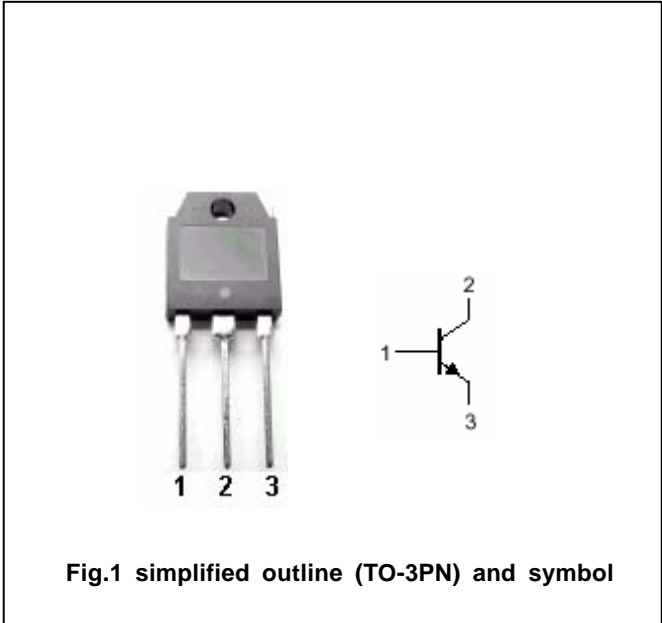


Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings(Ta=)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|------------------|-----------------------------|--------------------|---------|------|
| V _{CBO} | Collector-base voltage | Open emitter | 160 | 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 | |

CHARACTERISTICS

T_j=25 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} =160V; I _E =0 | | | 10 | μ A |
| I _{EBO} | Emitter cut-off current | V _{EB} =6V; I _C =0 | | | 10 | μ A |
| 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 | | 200 | | 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 =10 I _{B1} =- I _{B2} =0.4A V _{CC} =40V | | 0.13 | | s |
| t _s | Storage time | | | 3.50 | | s |
| t _f | Fall time | | | 0.32 | | s |

◆ **h_{FE} Classifications**

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

PACKAGE OUTLINE

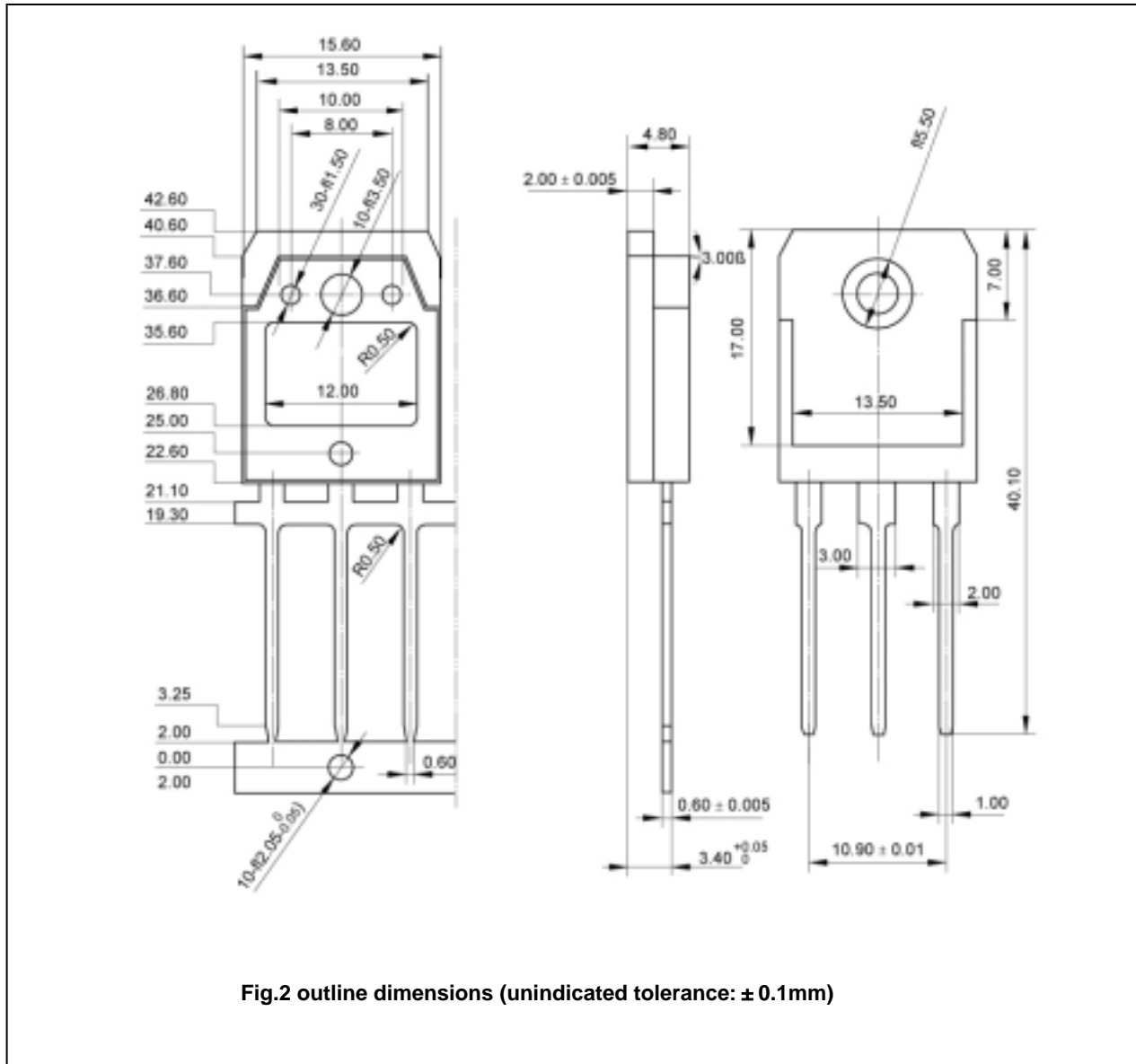


Fig.2 outline dimensions (unindicated tolerance: ± 0.1mm)

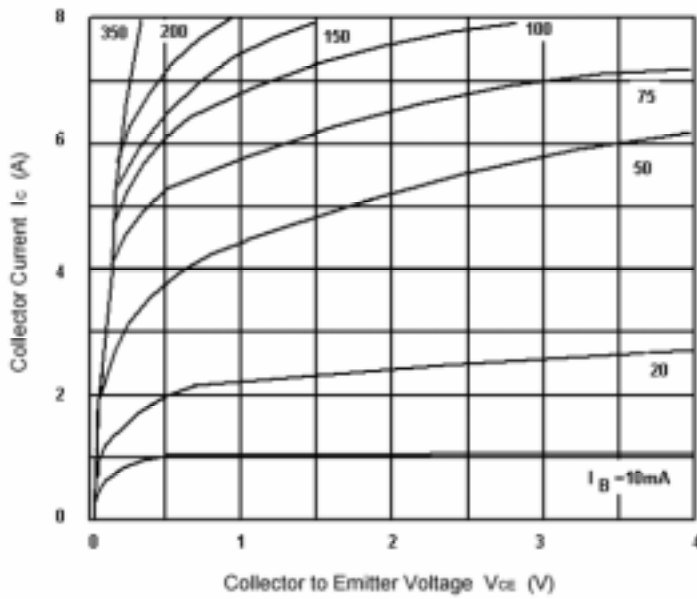


Fig.3 Static Characteristic

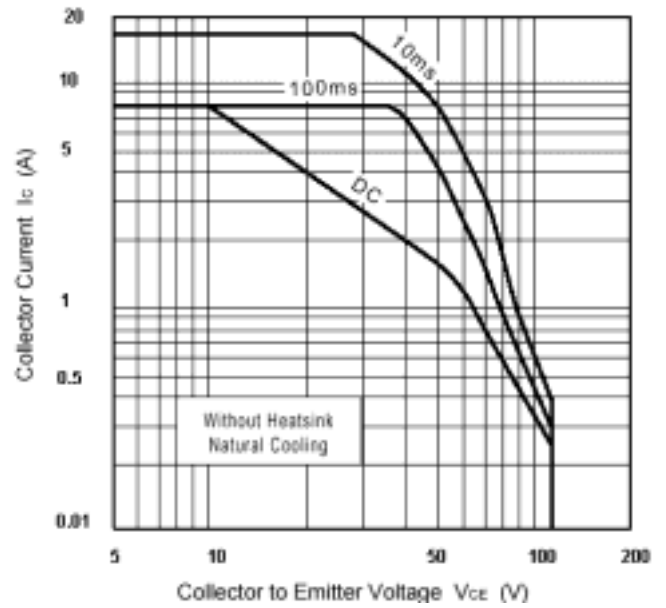


Fig.4 Safe Operating Area

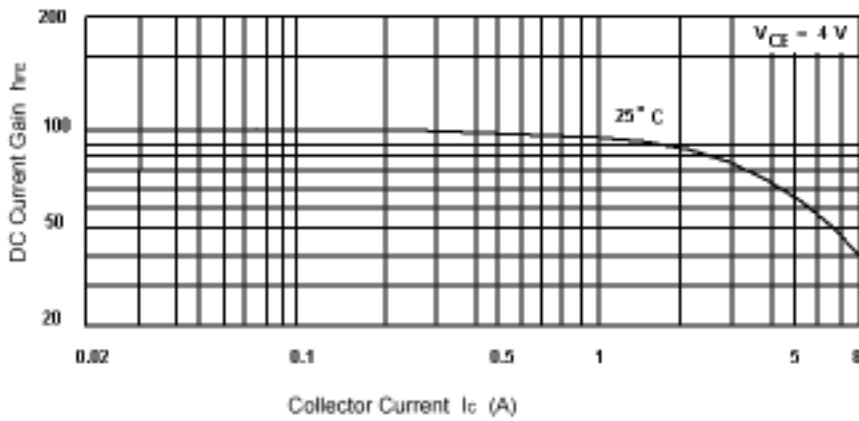


Fig.5 DC current Gain