

Silicon NPN Power Transistors

2SC4381 2SC4382

DESCRIPTION

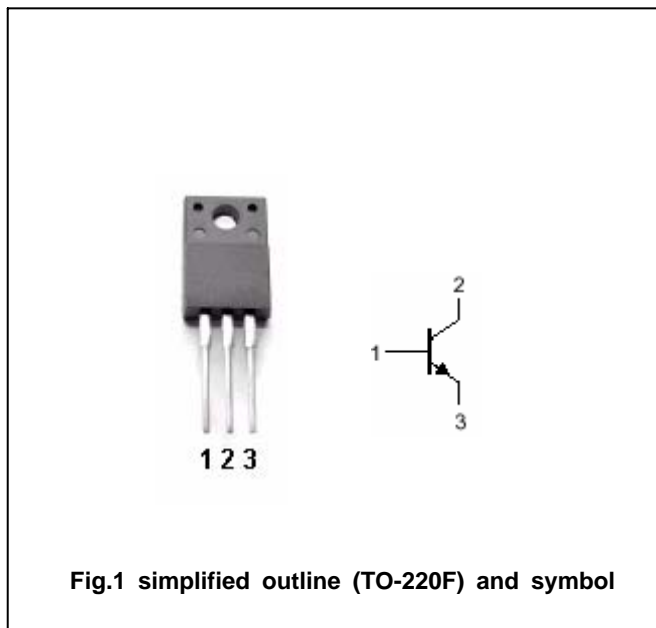
- With TO-220F package
- Complement to type 2SA1667/1668

APPLICATIONS

- For TV vertical output ,audio output driver and general purpose applications

PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1 | Base |
| 2 | Collector |
| 3 | Emitter |



Absolute maximum ratings (Ta=25)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|------------------|---------------------------|--------------------|---------|------|
| V _{CBO} | Collector-base voltage | 2SC4381 | 150 | V |
| | | 2SC4382 | 200 | |
| V _{CEO} | Collector-emitter voltage | 2SC4381 | 150 | V |
| | | 2SC4382 | 200 | |
| V _{EBO} | Emitter-base voltage | Open collector | 6 | V |
| I _C | Collector current | | 2 | A |
| I _B | Base current | | 1 | A |
| P _C | Collector dissipation | T _C =25 | 25 | W |
| T _j | Junction temperature | | 150 | |
| T _{stg} | Storage temperature | | -55~150 | |

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CHARACTERISTICS

T_j=25 unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT | |
|----------------------|--------------------------------------|---|--|------|-----|------|----|
| V _{(BR)CEO} | Collector-emitter breakdown voltage | 2SC4381 | I _C =25mA ; I _B =0 | 150 | | | V |
| | | 2SC4382 | | 200 | | | |
| V _{CEsat} | Collector-emitter saturation voltage | I _C =0.7A; I _B =70mA | | | 1.0 | V | |
| I _{CBO} | Collector cut-off current | 2SC4381 | V _{CB} =150V; I _E =0 | | | 10 | μA |
| | | 2SC4382 | V _{CB} =200V; 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 =0.7A ; V _{CE} =10V | 60 | | | | |
| f _T | Transition frequency | I _C =0.2A ; V _{CE} =12V | | 15 | | MHz | |
| C _{OB} | Output capacitance | I _E =0 ; V _{CB} =10V; f=1MHz | | 35 | | pF | |
| Switching time | | | | | | | |
| t _{on} | Turn-on time | I _C =1A ; I _{B1} =-I _{B2} =0.1A V _{CC} =20V , R _L =20 | | 1.0 | | μs | |
| t _s | Storage time | | | 3.0 | | μs | |
| t _f | Fall time | | | 1.5 | | μs | |

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PACKAGE OUTLINE

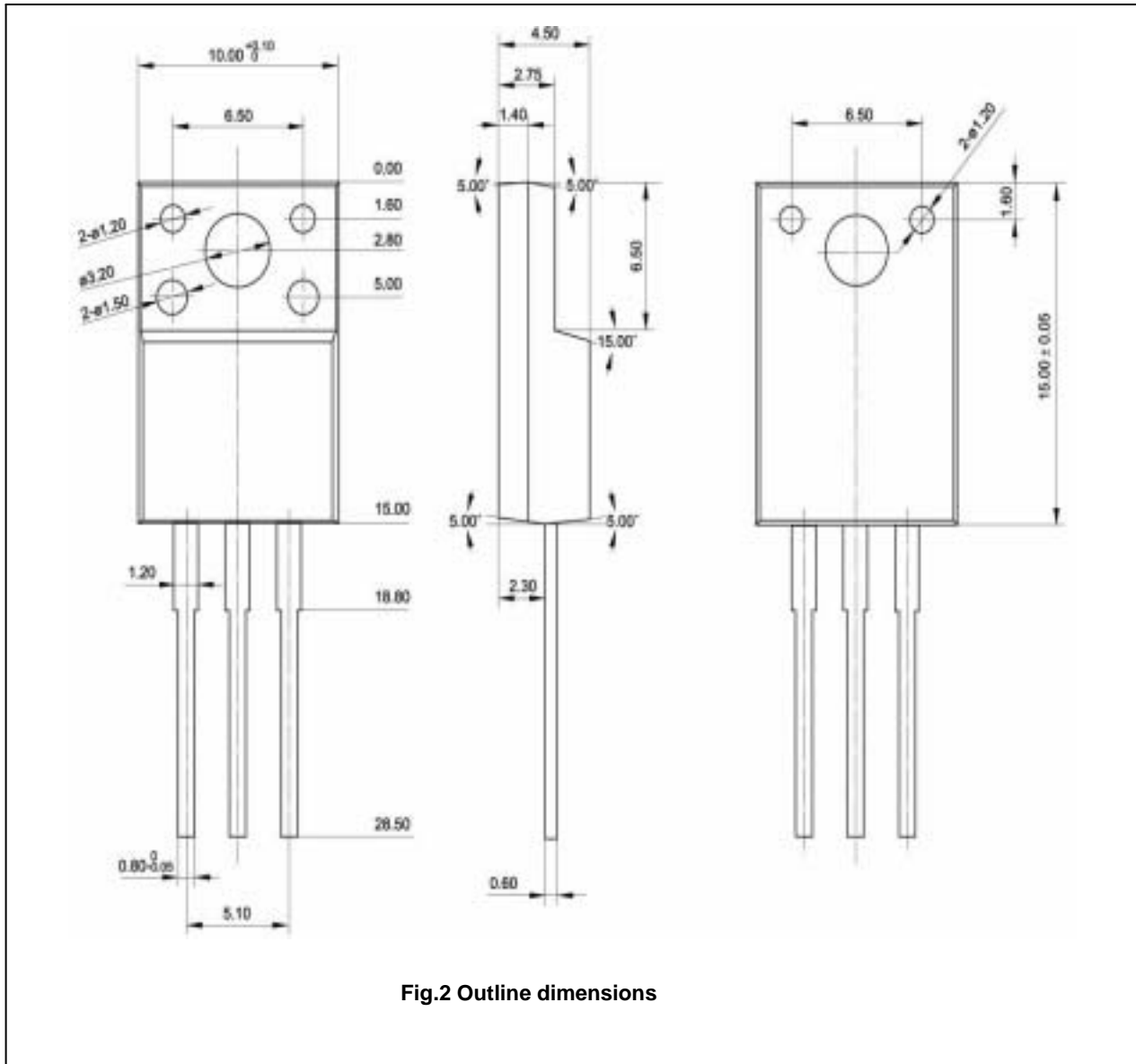


Fig.2 Outline dimensions

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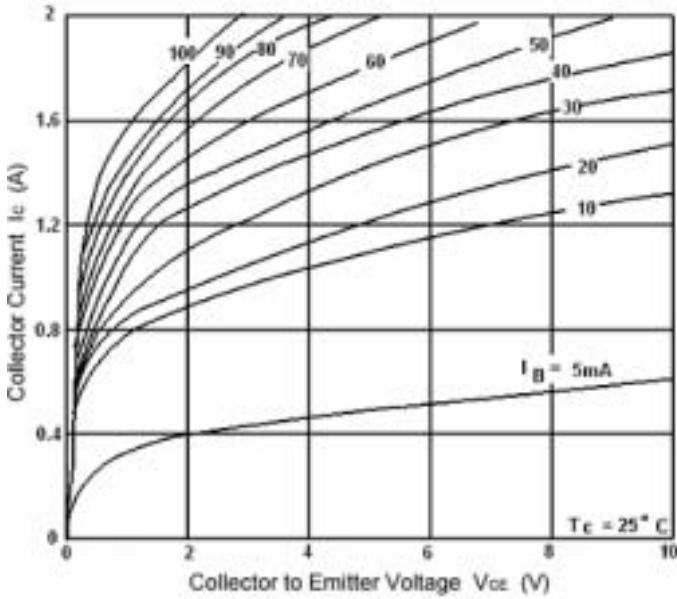


Fig.3 Static Characteristic

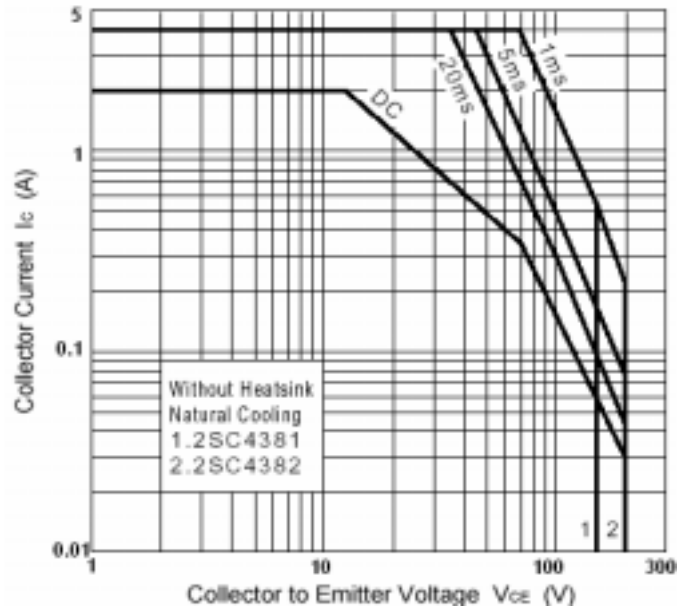


Fig.4 Safe Operating Area

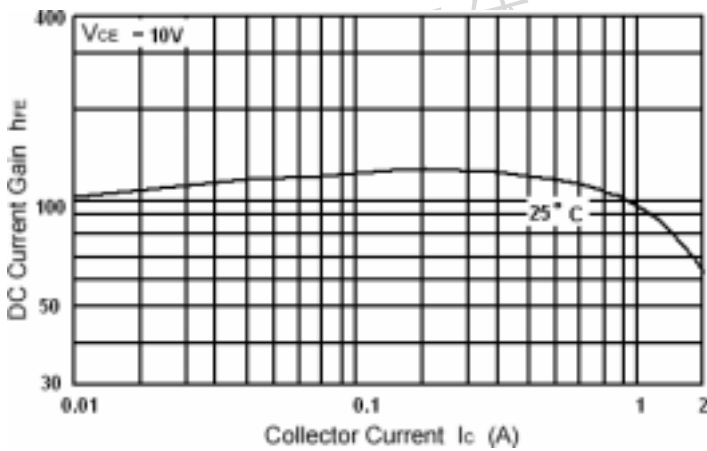


Fig.5 DC current Gain