

Silicon NPN Power Transistors

2SC4689

DESCRIPTION

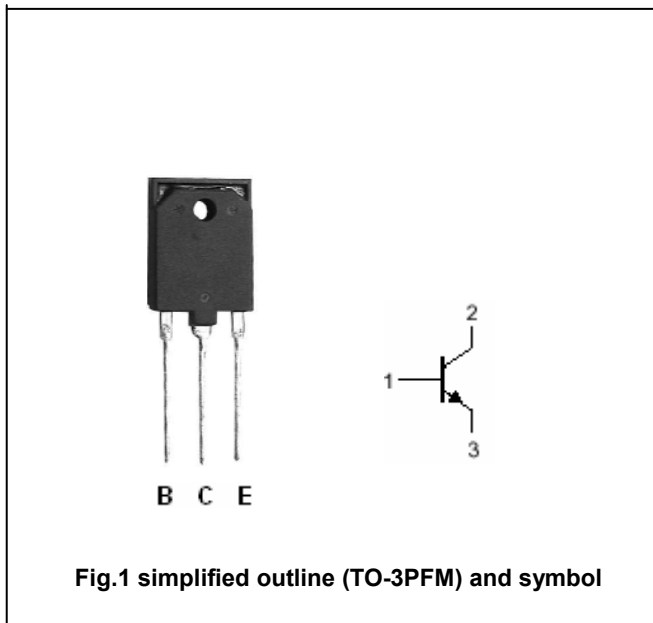
- With TO-3PFM package
- Complementary to 2SA1804
- Recommend for 70W high fidelity audio frequency amplifier output stage

APPLICATIONS

- Power amplifier applications

PINNING

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



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 | 5 | V |
| I _C | Collector current | | 8 | A |
| I _{CP} | Collector current-peak | | 16 | A |
| I _B | Base current | | 0.8 | A |
| P _C | Collector power dissipation | T _C =25□ | 70 | 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 |
| I _{CBO} | Collector cut-off current | V _{CB} =120V; I _E =0 | | | 5 | μA |
| I _{EBO} | Emitter cut-off current | V _{EB} =5V; I _C =0 | | | 5 | μA |
| h _{FE-1} | DC current gain | I _C =1A ; V _{CE} =5V | 55 | | 160 | |
| h _{FE-2} | DC current gain | I _C =4A ; V _{CE} =5V | 35 | 75 | | |
| V _{CE(sat)} | Collector-emitter saturation voltage | I _C =6A ; I _B =0.6A | | 0.35 | 2 | V |
| V _{BE} | Base-emitter voltage | I _C =4A ; V _{CE} =5V | | 0.95 | 1.5 | V |
| f _T | Transition frequency | I _C =1A ; V _{CE} =5V | | 30 | | MHz |
| C _{ob} | Collector output capacitance | I _E =0; V _{CB} =10V; f=1MHz | | 190 | | pF |

◆ h_{FE-1} classifications

| R | O |
|--------|--------|
| 55-110 | 80-160 |

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PACKAGE OUTLINE

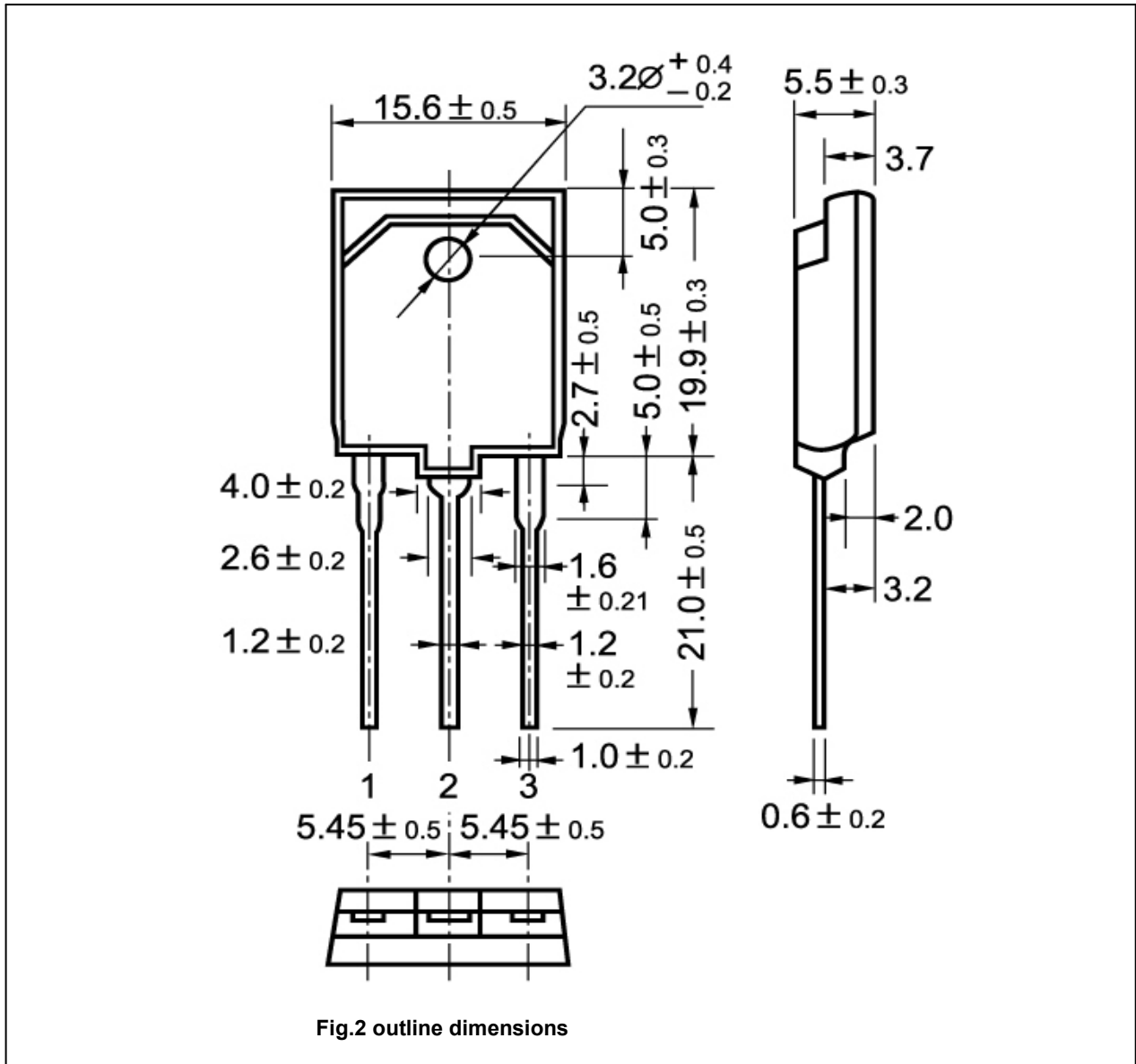


Fig.2 outline dimensions

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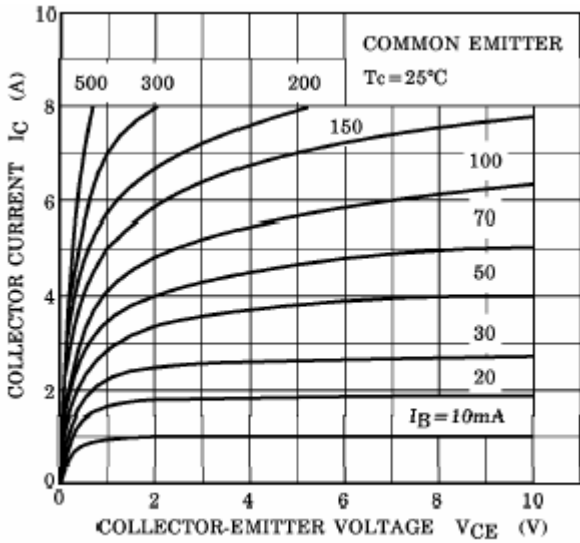


Fig.3 Static Characteristic

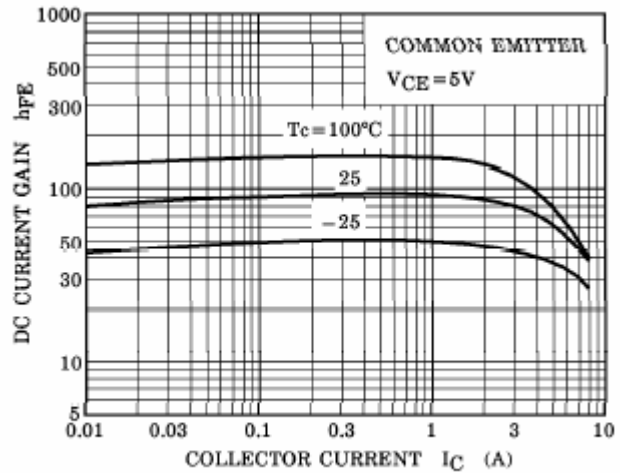


Fig.4 DC current Gain

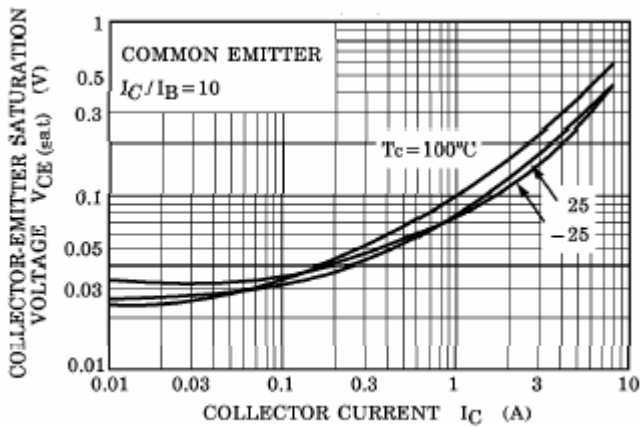


Fig.5 Collector-Emitter Saturation Voltage

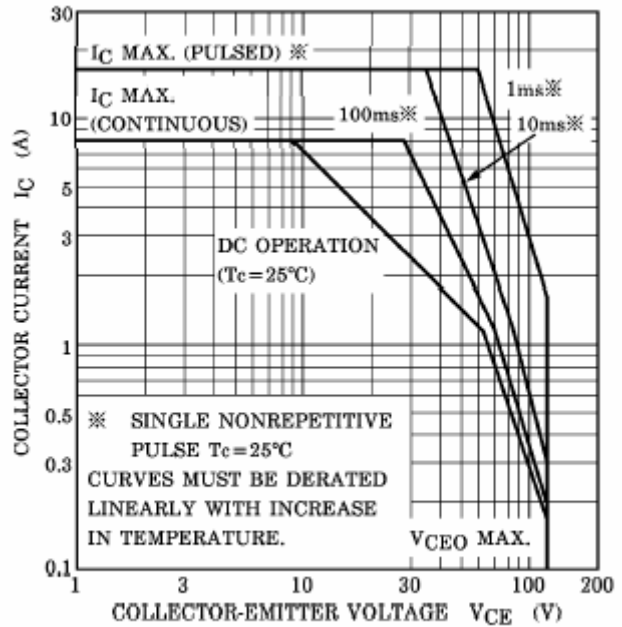


Fig.6 Safe Operating Area