

Silicon PNP Power Transistors

2SA1804

DESCRIPTION

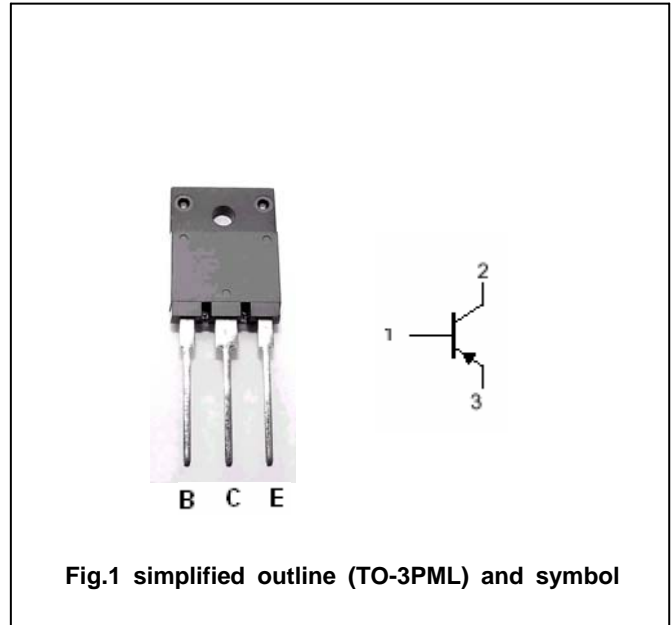
- With TO-3PML package
- Complement to type 2SC4689

APPLICATIONS

- Power amplifier applications
- Recommend for 55W high fidelity audio frequency amplifier output stage

PINNING

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



Absolute maximum ratings($T_a=25^{\circ}\text{C}$)

| 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_{CM} | Collector current-peak | | -16 | A |
| I_B | Base current | | -0.8 | A |
| P_C | Collector power dissipation | $T_C=25^{\circ}\text{C}$ | 70 | W |
| T_j | Junction temperature | | 150 | $^{\circ}\text{C}$ |
| T_{stg} | Storage temperature | | -55~150 | $^{\circ}\text{C}$ |

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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 | -120 | | | V |
| V _{CE(sat)} | Collector-emitter saturation voltage | I _C =-6A; I _B =-0.6 A | | | -2.0 | V |
| V _{BE} | Base-emitter voltage | I _C =-4A ; V _{CE} =-5V | | | -1.5 | V |
| I _{CBO} | Collector cut-off current | V _{CB} =-120V; I _E =0 | | | -5 | μ A |
| I _{EBO} | Emitter cut-off current | V _{EB} =-5V; I _C =0 | | | -5 | μ A |
| 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 | | | |
| f _T | Transition frequency | I _C =-1A ; V _{CE} =-5V | | 30 | | MHz |
| C _{OB} | Output capacitance | I _E =0; V _{CB} =10V; f=1MHz | | 420 | | pF |

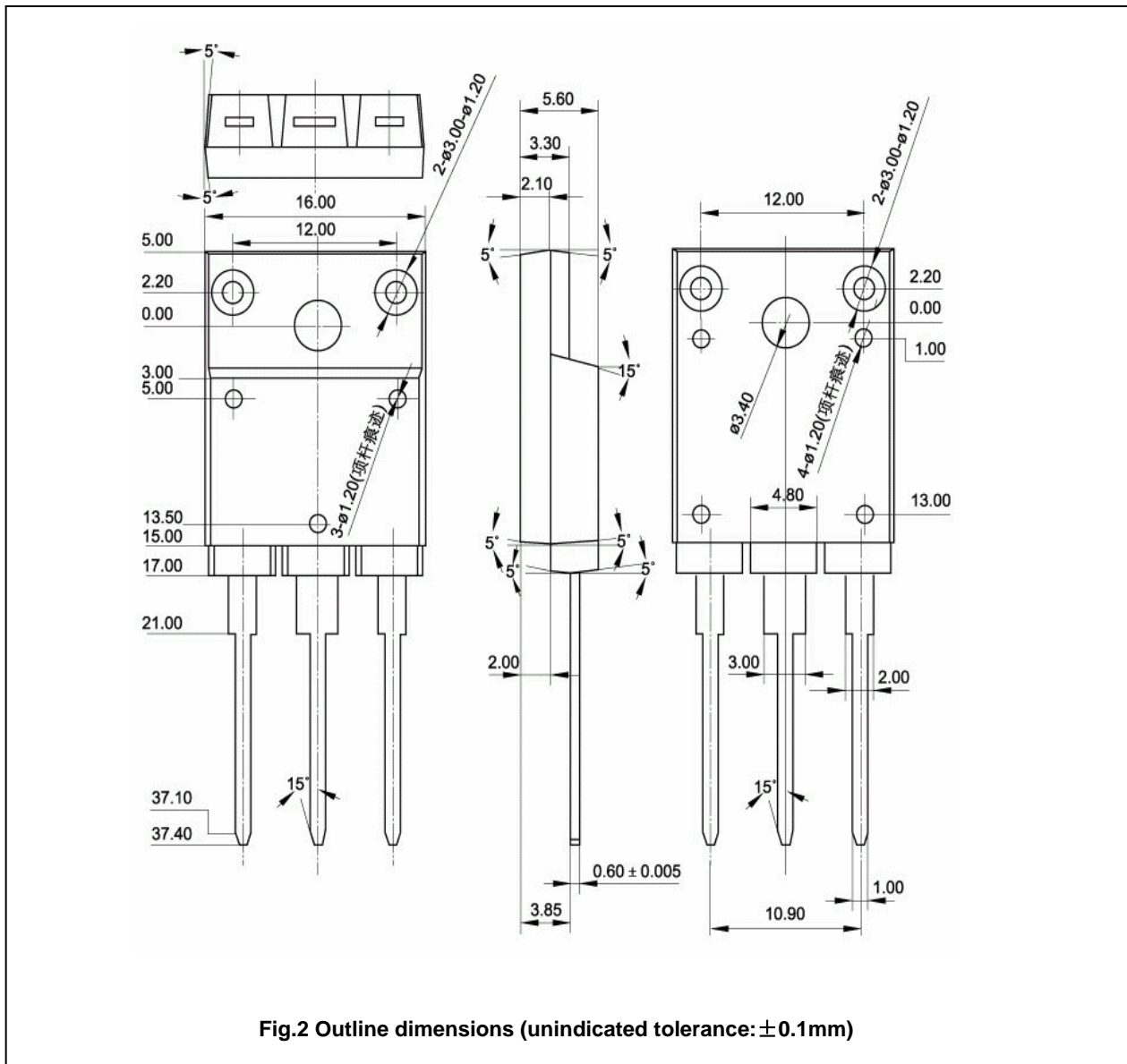
◆ h_{FE} classifications

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

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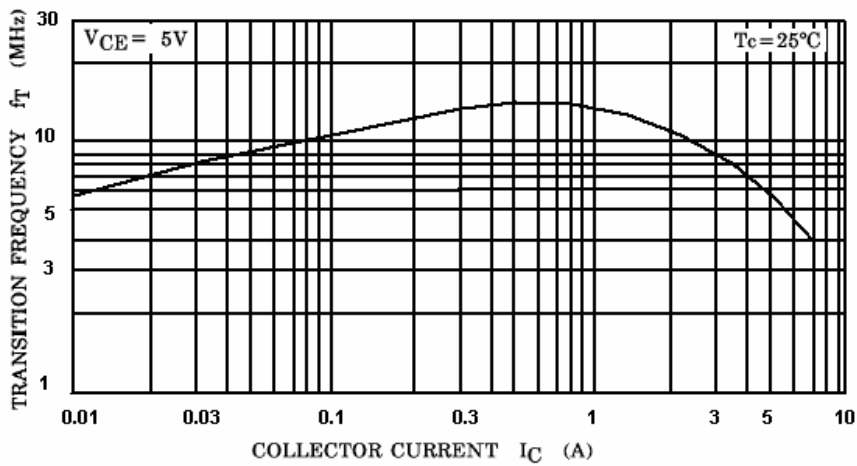
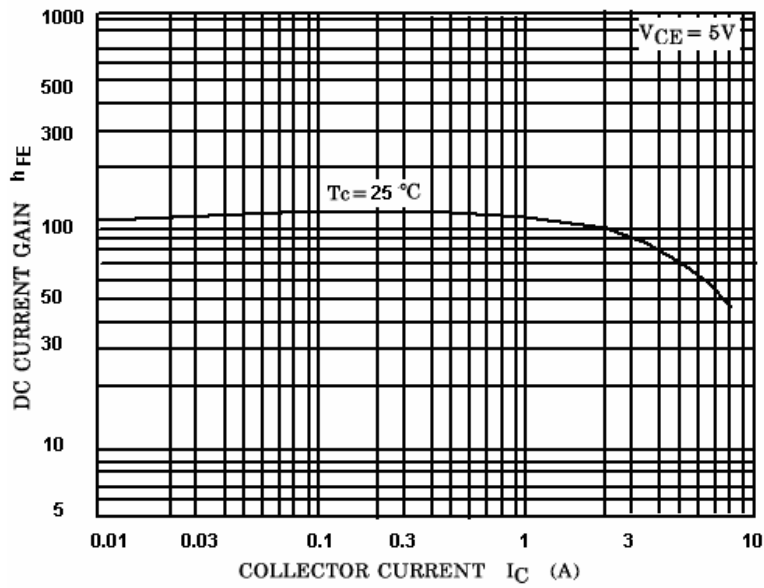
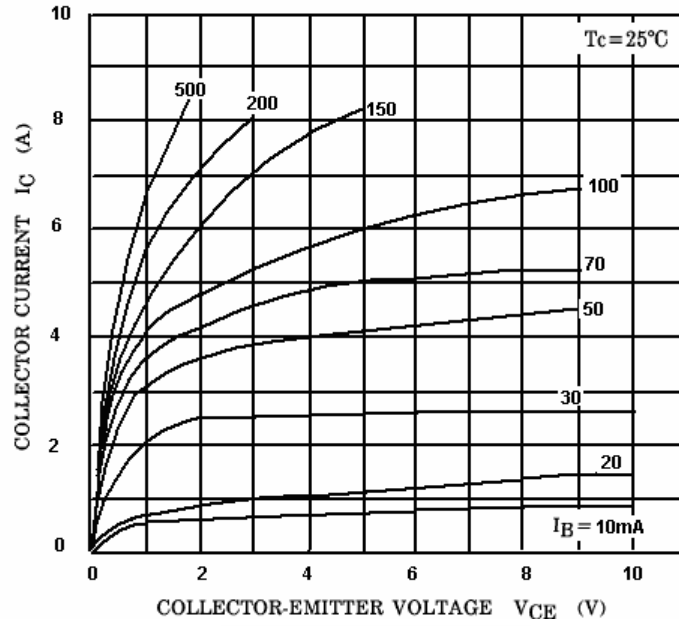
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PACKAGE OUTLINE



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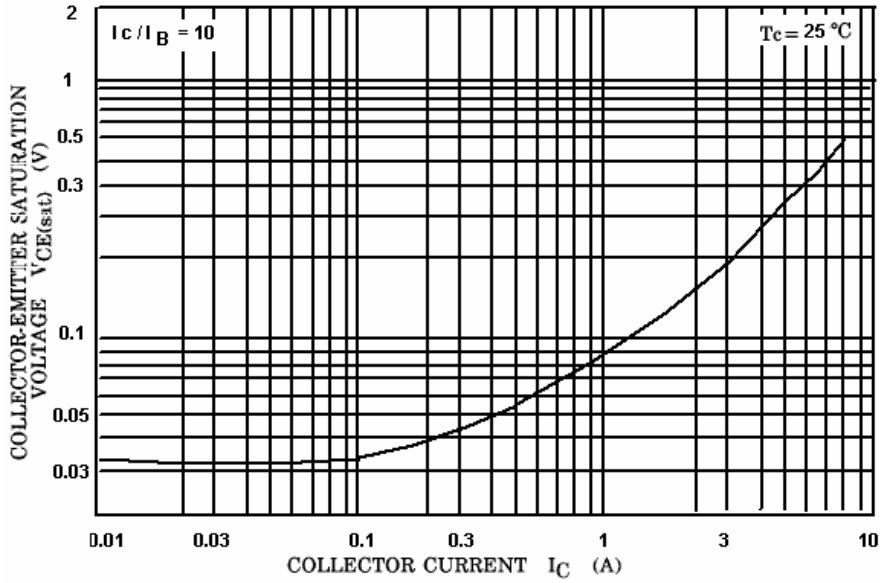


Fig.5 Collector-Emitter Saturation Voltage

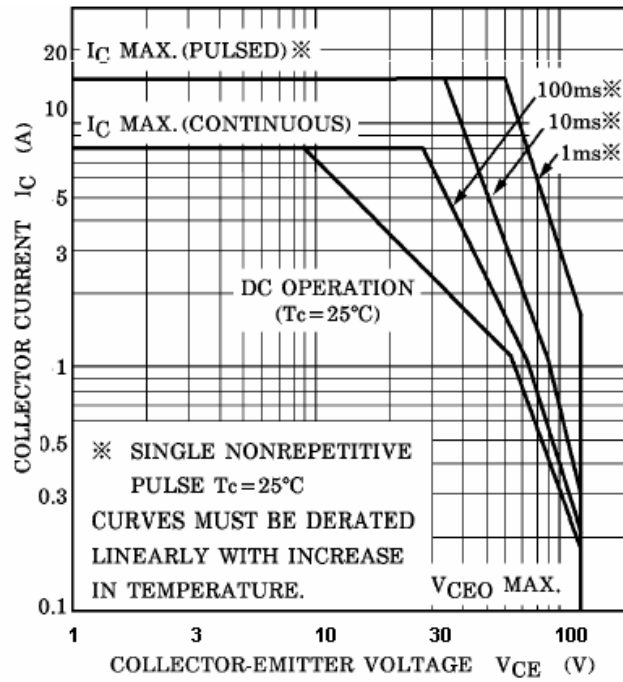


Fig.7 Safe Operating Area