

Silicon NPN Power Transistors

2SC4029

DESCRIPTION

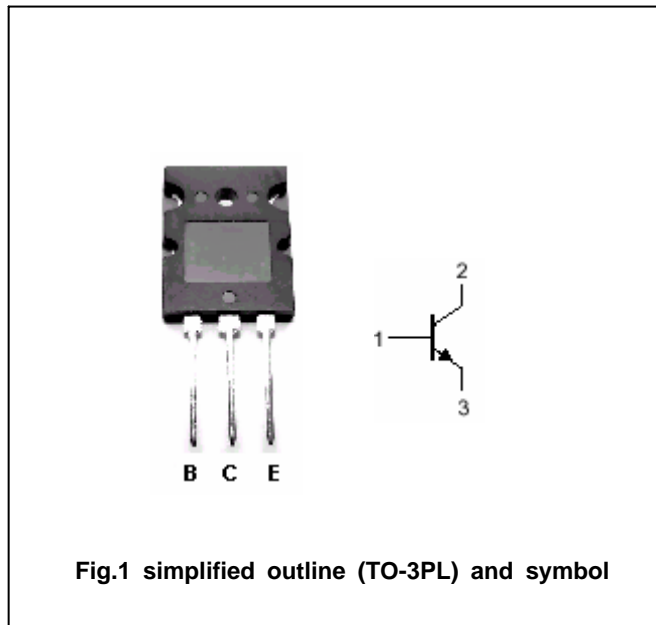
- With TO-3PL package
- Complement to type 2SA1553

APPLICATIONS

- Power amplifier applications
- Recommended for 120W high fidelity audio frequency amplifier output stage

PINNING

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

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

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|-----------|-----------------------------|----------------|---------|------|
| V_{CBO} | Collector-base voltage | Open emitter | 230 | V |
| V_{CEO} | Collector-emitter voltage | Open base | 230 | V |
| V_{EBO} | Emitter-base voltage | Open collector | 5 | V |
| I_C | Collector current | | 15 | A |
| I_B | Base current | | 1.5 | A |
| P_C | Collector power dissipation | $T_C=25$ | 150 | 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 | I _C =50mA ; I _B =0 | 230 | | | V |
| V _{CEsat} | Collector-emitter saturation voltage | I _C =8A ; I _B =0.8A | | | 3.0 | V |
| V _{BE} | Base-emitter voltage | I _C =7A ; V _{CE} =5V | | | 1.5 | V |
| I _{CBO} | Collector cut-off current | V _{CB} =230V 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 =7A ; V _{CE} =5V | 35 | | | |
| f _T | Transition frequency | I _C =1A ; V _{CE} =5V | | 30 | | MHz |
| C _{OB} | Collector output capacitance | f=1MHz; V _{CB} =10V | | 270 | | pF |

◆ h_{FE-1} classifications

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

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PACKAGE OUTLINE

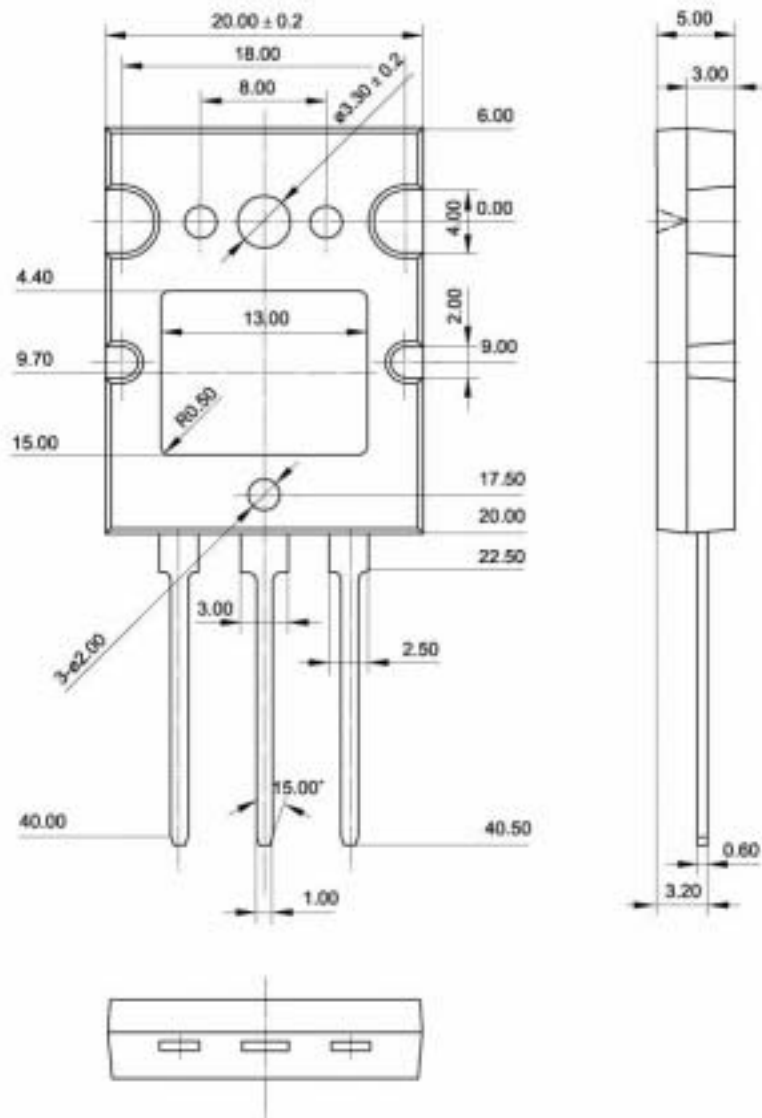


Fig.2 Outline dimensions (unindicated tolerance: ± 0.50 mm)

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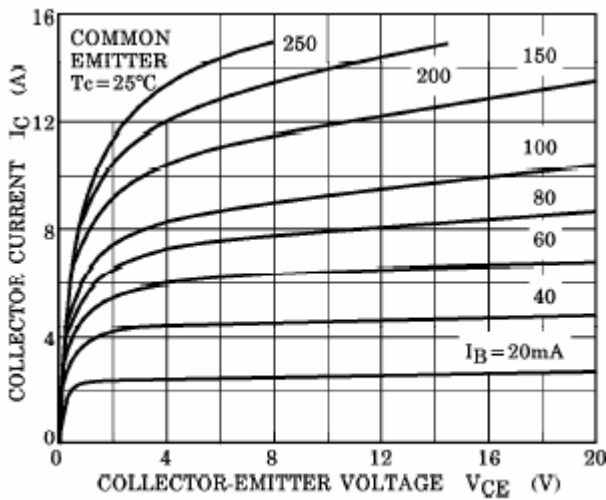


Fig.3 Static Characteristic

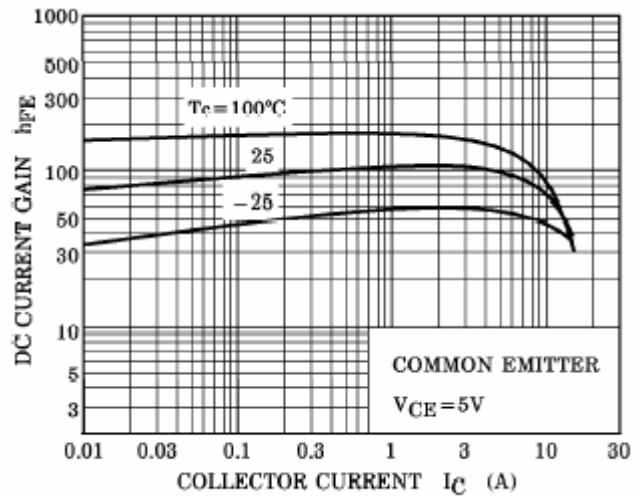


Fig.4 DC current Gain

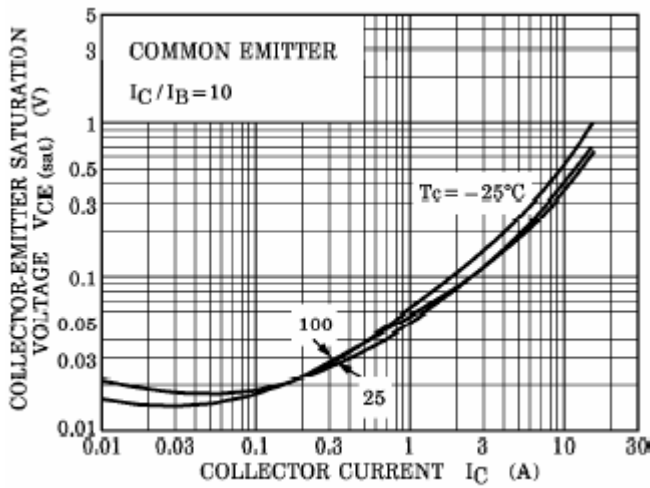


Fig.5 Collector-Emitter Saturation Voltage

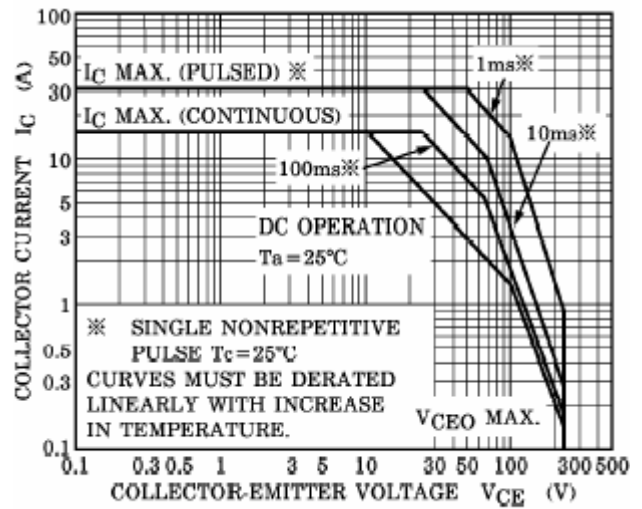


Fig.6 Safe Operating Area