

Silicon NPN Power Transistors

2SC2979

DESCRIPTION

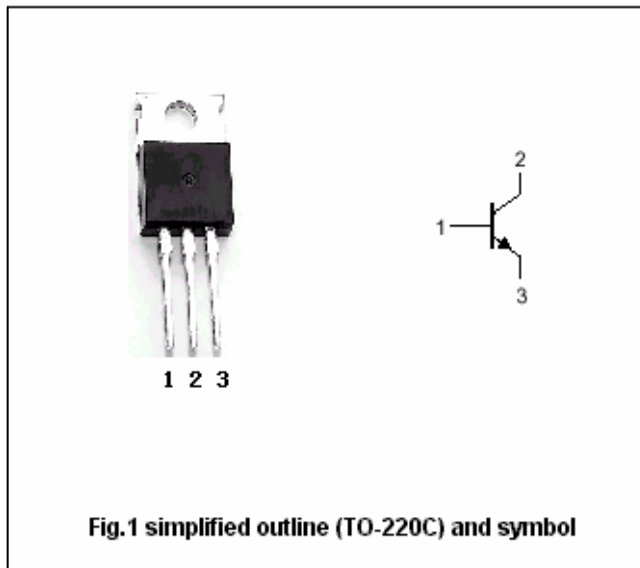
- With TO-220C package
- High V_{CBO}
- Fast switching speed.

APPLICATIONS

- For high voltage ,high speed and high power switching applications

PINNING

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



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

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|-----------|---------------------------|----------------|---------|------|
| V_{CBO} | Collector-base voltage | Open emitter | 900 | V |
| V_{CEO} | Collector-emitter voltage | Open base | 800 | V |
| V_{EBO} | Emitter-base voltage | Open collector | 7 | V |
| I_C | Collector current | | 3 | A |
| I_{CM} | Collector current-peak | | 6 | A |
| I_B | Base current | | 1.5 | A |
| P_C | Collector dissipation | $T_C=25$ | 40 | 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 _{CE0(SUS)} | Collector-emitter sustaining voltage | I _C =0.2A; R _{BE} = , L=100mH | 800 | | | V |
| V _{(BR)EBO} | Base-emitter breakdown voltage | I _E =10mA ; I _C =0 | 7 | | | V |
| V _{CEsat} | Collector-emitter saturation voltage | I _C =0.75A; I _B =0.15A | | | 1.0 | V |
| V _{BEsat} | Base-emitter saturation voltage | I _C =0.75A; I _B =0.15A | | | 1.5 | V |
| I _{CBO} | Collector cut-off current | V _{CB} =750V ; I _E =0 | | | 100 | μA |
| I _{CEO} | Collector cut-off current | V _{CE} =650V; R _{BE} = | | | 100 | μA |
| h _{FE-1} | DC current gain | I _C =0.3A ; V _{CE} =5V | 15 | | | |
| h _{FE-2} | DC current gain | I _C =1.5A ; V _{CE} =5V | 7 | | | |

Switching times

| | | | | | | |
|------------------|--------------|--|--|--|-----|----|
| t _{on} | Turn-on time | V _{CC} 250V; I _C =1.5A I _{B1} =0.3A; I _{B2} =-0.75A | | | 1.0 | μs |
| t _{stg} | Storage time | | | | 3.0 | μs |
| t _f | Fall time | | | | 1.0 | μs |

PACKAGE OUTLINE

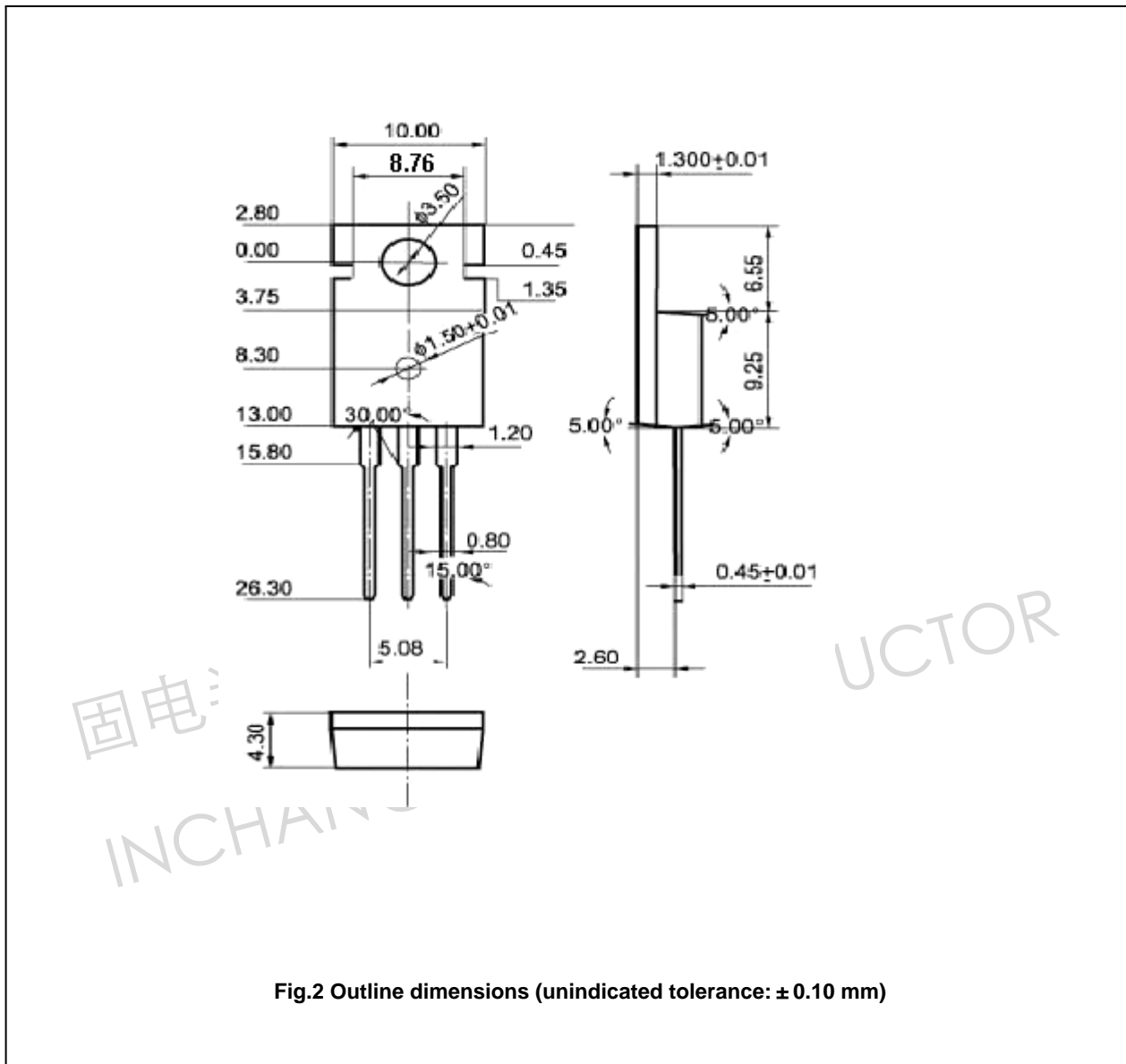


Fig.2 Outline dimensions (unindicated tolerance: ± 0.10 mm)

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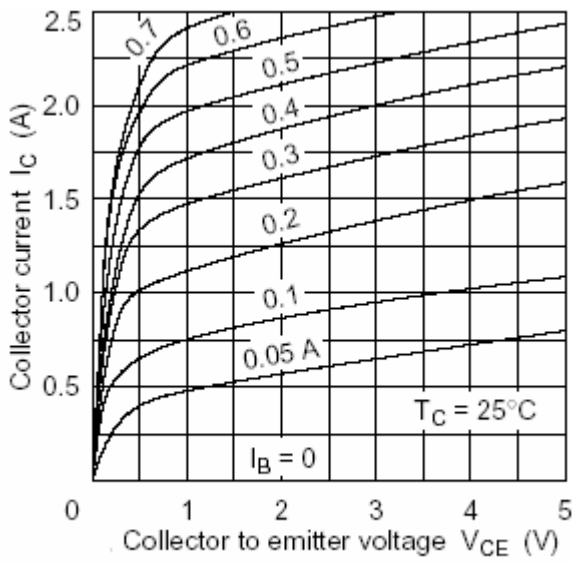


Fig.3 Static Characteristic

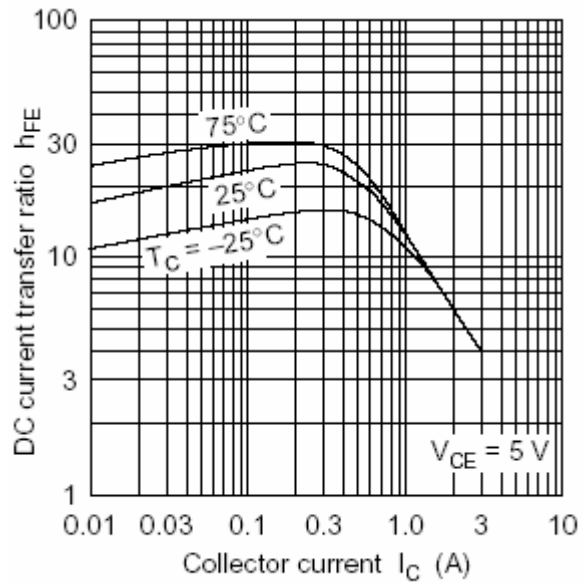


Fig.4 DC current Gain

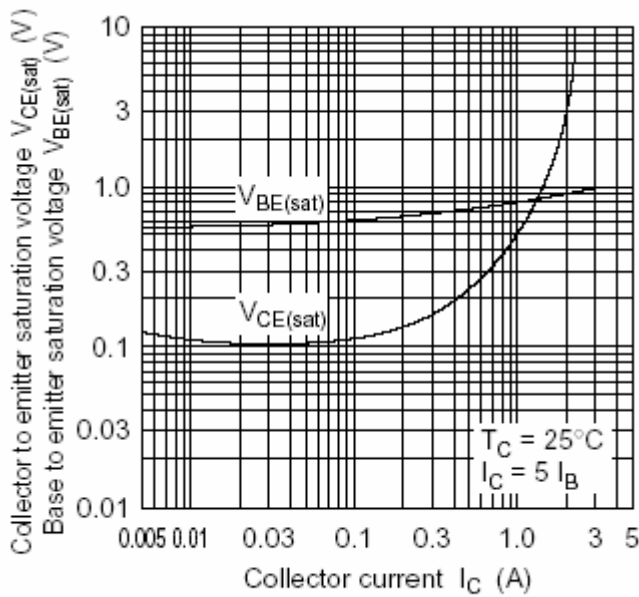


Fig.5 Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

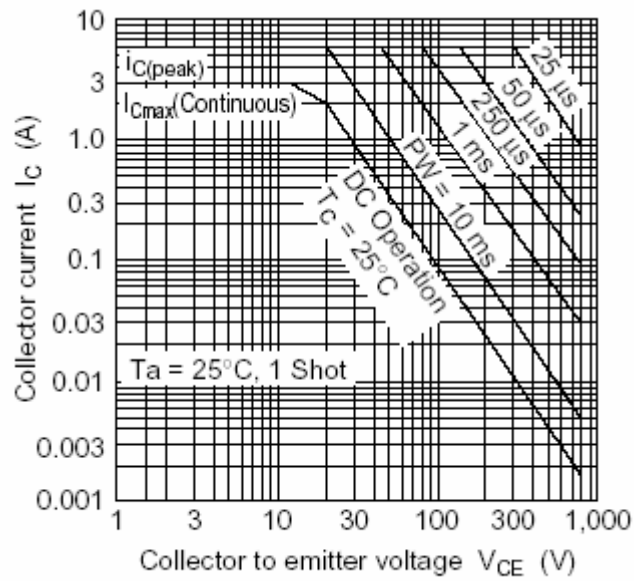


Fig.6 Safe Operating Area