

Silicon NPN Power Transistors

2SC2517

DESCRIPTION

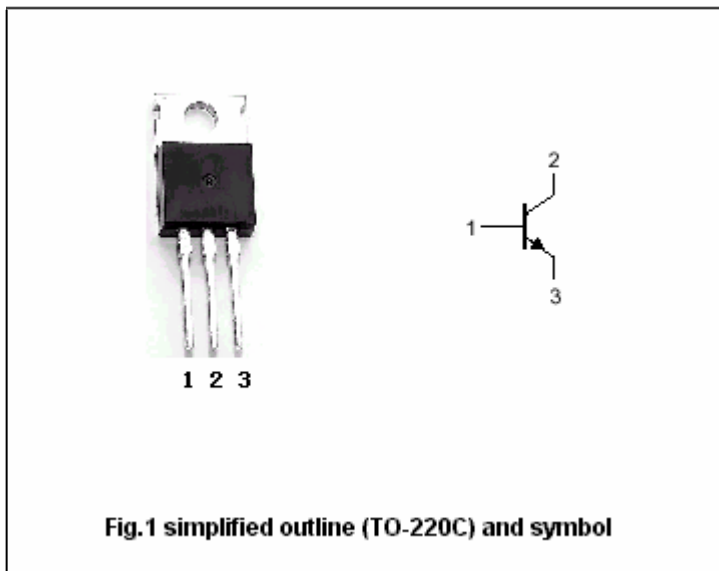
- With TO-220C package
- Low collector saturation voltage
- Wide area of safe operation

APPLICATIONS

- Switching regulators
- DC-DC converters
- High frequency power amplifiers

PINNING

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



Absolute maximum ratings(Ta=25)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|------------------|---------------------------|--------------------|---------|------|
| V _{CBO} | Collector-base voltage | Open emitter | 150 | V |
| V _{CEO} | Collector-emitter voltage | Open base | 100 | V |
| V _{EBO} | Emitter-base voltage | Open collector | 12 | V |
| I _C | Collector current | | 5 | A |
| I _{CM} | Collector current-peak | | 10 | A |
| I _B | Base current | | 2.5 | A |
| P _T | Total power dissipation | T _a =25 | 1.5 | W |
| | | T _C =25 | 30 | |
| 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 _{CEO(SUS)} | Collector-emitter sustaining voltage | I _C =3.0A ; I _B =0; L=1mH | 100 | | | V |
| V _{CEsat} | Collector-emitter saturation voltage | I _C =3A; I _B =0.3A | | | 0.6 | V |
| V _{BEsat} | Base-emitter saturation voltage | I _C =3A; I _B =0.3A | | | 1.5 | V |
| I _{CBO} | Collector cut-off current | V _{CB} =100V ; I _E =0 | | | 10 | μA |
| I _{CEX} | Collector cut-off current | V _{CE} =100V; V _{BE} =-1.5V T _a =125 | | | 10 1 | μA mA |
| I _{EBO} | Emitter cut-off current | V _{EB} =10V ; I _C =0 | | | 10 | μA |
| h _{FE-1} | DC current gain | I _C =0.2 A ; V _{CE} =5V | 40 | | | |
| h _{FE-2} | DC current gain | I _C =2 A ; V _{CE} =5V | 40 | | 200 | |

Switching times

| | | | | | | |
|-----------------|--------------|--|--|--|-----|----|
| t _{on} | Turn-on time | I _C =3A; I _{B1} =-I _{B2} =0.3A R _L =17 ; V _{CC} =50V | | | 0.5 | μs |
| t _s | Storage time | | | | 2.5 | μs |
| t _f | Fall time | | | | 0.5 | μs |

◆ h_{FE-2} Classifications

| M | L | K |
|-------|--------|---------|
| 40-80 | 60-120 | 100-200 |

PACKAGE OUTLINE

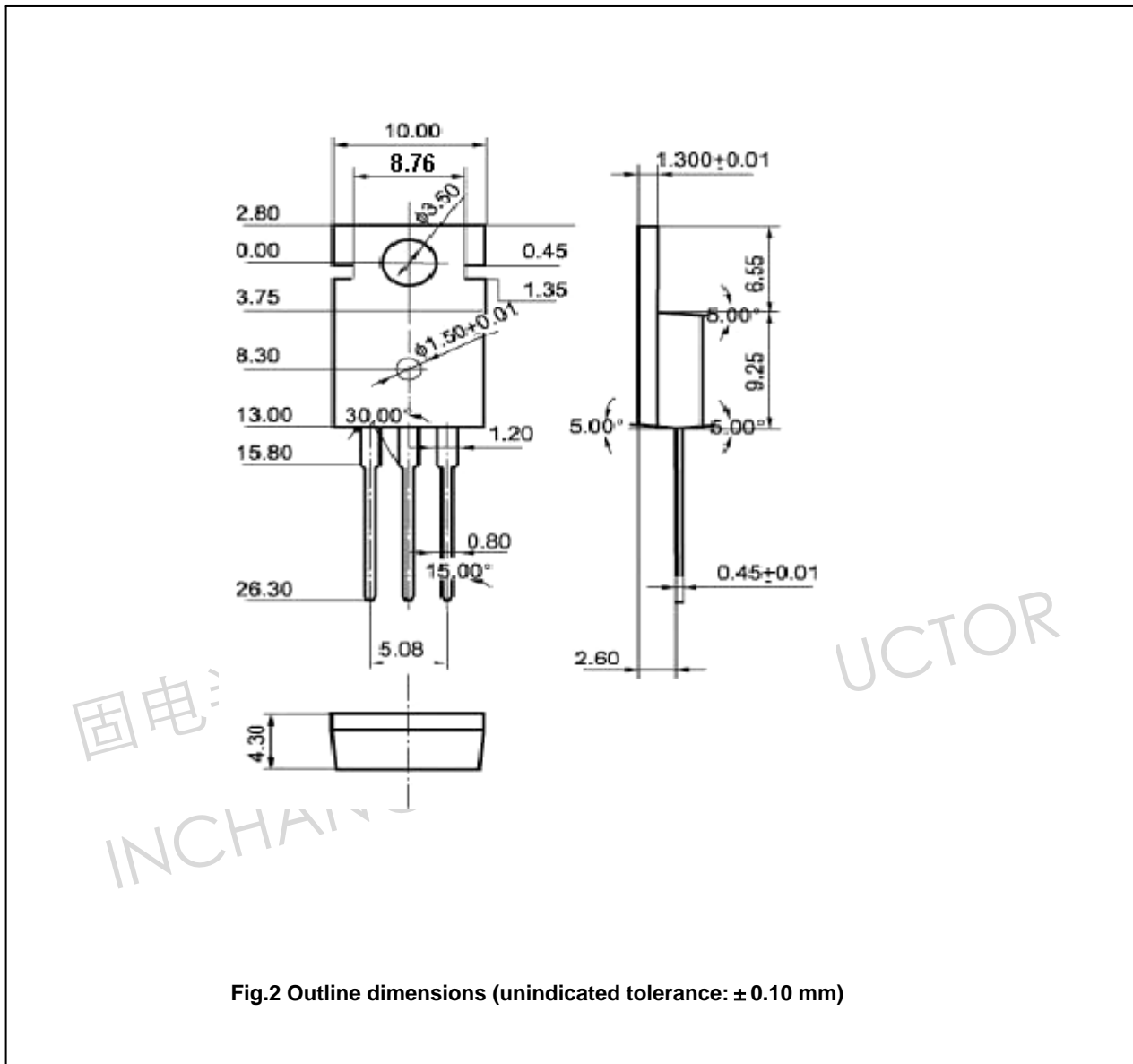


Fig.2 Outline dimensions (unindicated tolerance: ±0.10 mm)