

Silicon NPN Power Transistors

2SC2502

DESCRIPTION

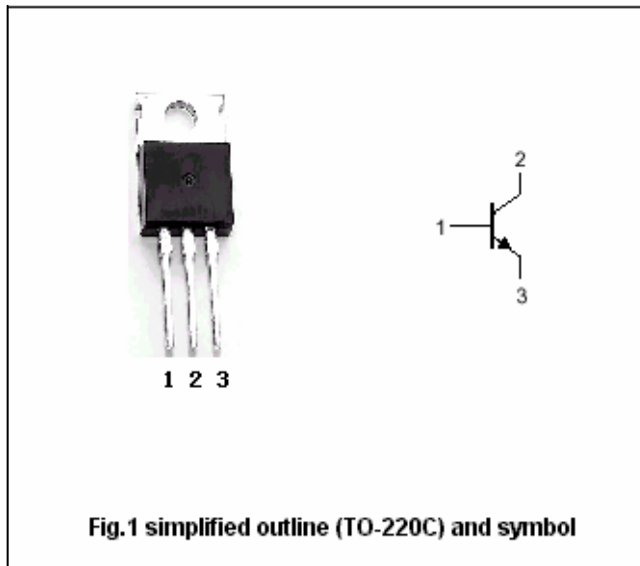
- With TO-220C package
- High breakdown voltage
- High speed switching time

APPLICATIONS

- For use in high-voltage,high-speed ,power switching in inductive circuit.

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 | 500 | V |
| V _{CEO} | Collector-emitter voltage | Open base | 400 | V |
| V _{EBO} | Emitter-base voltage | Open collector | 7 | V |
| I _C | Collector current | | 6 | A |
| I _{CM} | Collector current-peak | | 12 | A |
| I _B | Base current | | 2 | A |
| P _C | Collector dissipation | T _C =25 | 50 | W |
| T _j | Junction temperature | | 150 | |
| T _{stg} | Storage temperature | | -55~150 | |

THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---------------------|----------------------------------|-----|------|
| R _{th j-c} | Thermal resistance junction case | 2.5 | /W |

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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 =100mA ; I _B =0 | 400 | | | V |
| V _{CEsat} | Collector-emitter saturation voltage | I _C =3A; I _B =0.3A | | | 0.7 | V |
| V _{BEsat} | Base-emitter saturation voltage | I _C =3A; I _B =0.3A | | | 1.5 | V |
| I _{CEO} | Collector cut-off current | V _{CE} =320V ; I _B =0 | | | 100 | μA |
| I _{CBO} | Collector cut-off current | V _{CB} =500V ; I _E =0 | | | 100 | μA |
| I _{EBO} | Emitter cut-off current | V _{EB} =7V; I _C =0 | | | 1 | mA |
| h _{FE-1} | DC current gain | I _C =3A ; V _{CE} =2V | 15 | | | |
| h _{FE-2} | DC current gain | I _C =6A ; V _{CE} =2V | 8 | | | |
| f _T | Transition frequency | I _C =0.6A ; V _{CE} =10V;f=1MHz | 10 | | | MHz |
| Switching times | | | | | | |
| t _{on} | Turn-on time | I _C =3A I _{B1} =-I _{B2} =0.6A; R _L =10 Ω, V _{CC} =30V | | | 1.0 | μs |
| t _{stg} | Storage time | | | | 3.0 | μs |
| t _f | Fall time | | | | 0.7 | μs |

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PACKAGE OUTLINE

