

Silicon NPN Power Transistors

2SC2140

DESCRIPTION

- With TO-3 package
- High voltage ,high speed

APPLICATIONS

- Switching regulator applications
- High speed DC-DC converter applications

PINNING (See Fig.2)

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

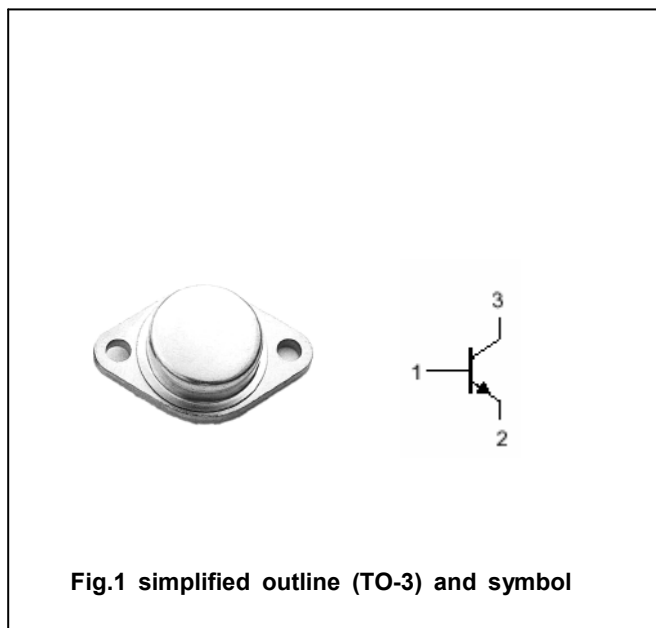


Fig.1 simplified outline (TO-3) and symbol

Absolute maximum ratings (Ta=25°C)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|------------------|-----------------------------|-----------------------|---------|------|
| V _{CBO} | Collector-base voltage | Open emitter | 500 | V |
| V _{CEO} | Collector-emitter voltage | Open base | 350 | V |
| V _{EBO} | Emitter-base voltage | Open collector | 7 | V |
| I _C | Collector current | | 10 | A |
| P _C | Collector power dissipation | T _{mb} ≤25°C | 100 | W |
| T _j | Junction temperature | | 175 | °C |
| T _{stg} | Storage temperature | | -55~175 | °C |

THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | VALUE | UNIT |
|---------------------|--|-------|------|
| R _{th j-c} | Thermal resistance from junction to case | 1.25 | °C/W |

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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 =10mA ; I _B =0 | 350 | | | V |
| V _{(BR)CBO} | Collector-base breakdown voltage | I _C =1mA ; I _E =0 | 500 | | | V |
| V _{(BR)EBO} | Emitter-base breakdown voltage | I _E =1mA ; I _C =0 | 7 | | | V |
| V _{CEsat} | Collector-emitter saturation voltage | I _C =5A ; I _B =1A | | | 1.0 | V |
| V _{BEsat} | Base-emitter saturation voltage | I _C =5A ; I _B =1A | | | 1.5 | V |
| I _{CBO} | Collector cut-off current | V _{CB} =500V ; I _E =0 | | | 0.1 | mA |
| I _{EBO} | Emitter cut-off current | V _{EB} =7V ; I _C =0 | | | 0.1 | mA |
| h _{FE} | DC current gain | I _C =5A ; V _{CE} =5V | 20 | | | |

PACKAGE OUTLINE

