

Silicon NPN Power Transistors

2SC5048

DESCRIPTION

- With TO-3P(H)IS package
- High speed
- High voltage
- Low saturation voltage
- Collector metal (fin) is fully covered with mold resin

APPLICATIONS

- Horizontal deflection output for high resolution display,colorTV
- High speed switching applications

PINNING

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

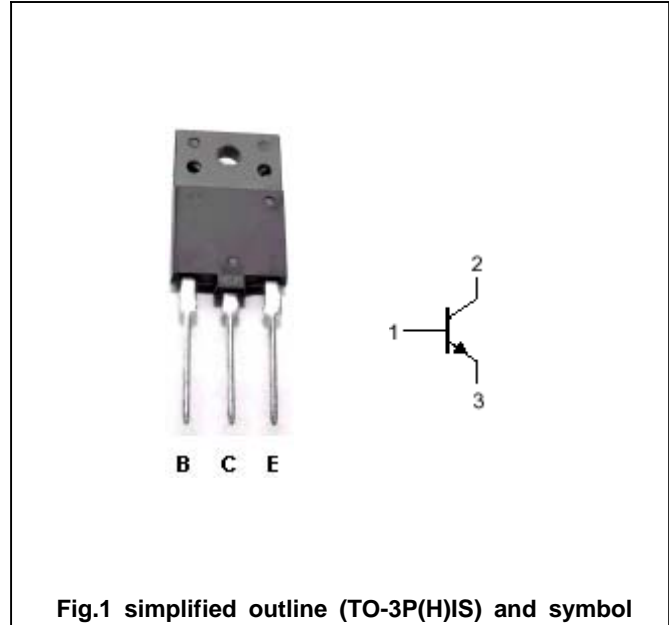


Fig.1 simplified outline (TO-3P(H)IS) and symbol

Absolute maximum ratings(Ta=25)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|------------------|---------------------------|--------------------|---------|------|
| V _{CBO} | Collector-base voltage | Open emitter | 1500 | V |
| V _{CEO} | Collector-emitter voltage | Open base | 600 | V |
| V _{EBO} | Emitter-base voltage | Open collector | 5 | V |
| I _C | Collector current | | 12 | A |
| I _{CM} | Collector current-Peak | | 24 | A |
| I _B | Base current | | 6 | A |
| P _C | Total power dissipation | T _C =25 | 50 | 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 =10mA ; I _B =0 | 600 | | | V |
| V _{CEsat} | Collector-emitter saturation voltage | I _C =8A I _B =2A | | | 3 | V |
| V _{BEsat} | Base-emitter saturation voltage | I _C =8A I _B =2A | | 1.0 | 1.4 | V |
| I _{CBO} | Collector cut-off current | V _{CB} =1500V I _E =0 | | | 1 | mA |
| I _{EBO} | Emitter cut-off current | V _{EB} =5V; I _C =0 | | | 10 | μA |
| h _{FE-1} | DC current gain | I _C =1A ; V _{CE} =5V | 10 | | 30 | |
| h _{FE-2} | DC current gain | I _C =8A ; V _{CE} =5V | 4 | | 8 | |
| C _{ob} | Collector output capacitance | I _E =0 ; V _{CB} =10V, f=1MHz | | 160 | | pF |
| f _T | Transition frequency | I _E =0.1A ; V _{CE} =10V | | 1.7 | | MHz |

Switching times (inductive load)

| | | | | | | |
|----------------|--------------|---|--|------|-----|----|
| t _s | Storage time | I _{CP} =6A; I _{B1(end)} =1.15A f _H =64kHz | | 2.5 | 4 | μs |
| t _f | Fall time | | | 0.15 | 0.3 | μs |

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PACKAGE OUTLINE

