

Silicon PNP Power Transistors

TIP34/34A/34B/34C

DESCRIPTION

- With TO-3PN package
- Complement to type TIP33/33A/33B/33C
- DC current gain $h_{FE}=40(\text{Min})@I_C=1.0\text{A}$

APPLICATIONS

- Designed for use in general purpose power amplifier and switching applications.

PINNING

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

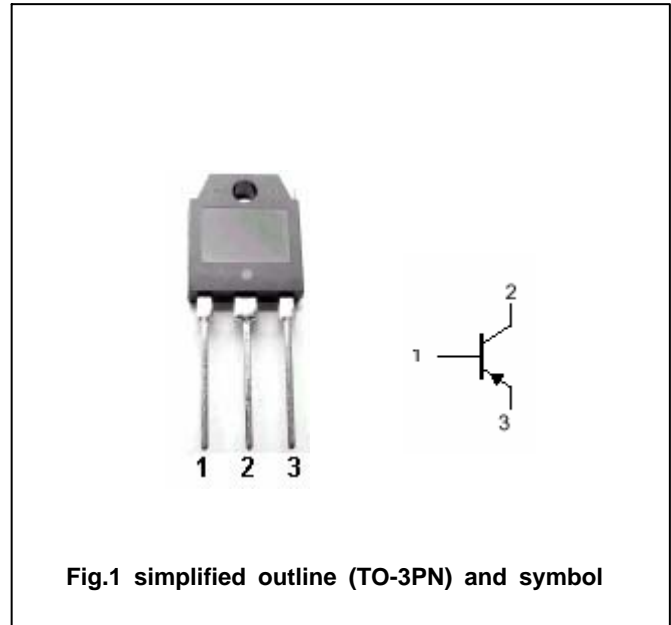


Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings(Ta=)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|------------------|-----------------------------|--------------------|---------|------|
| V _{CBO} | Collector-base voltage | TIP34 | -40 | V |
| | | TIP34A | -60 | |
| | | TIP34B | -80 | |
| | | TIP34C | -100 | |
| V _{CEO} | Collector-emitter voltage | TIP34 | -40 | V |
| | | TIP34A | -60 | |
| | | TIP34B | -80 | |
| | | TIP34C | -100 | |
| V _{EBO} | Emitter-base voltage | Open collector | -5 | V |
| I _C | Collector current | | -10 | A |
| I _{CM} | Collector current-peak | | -15 | A |
| I _B | Base current | | -3 | A |
| P _C | Collector power dissipation | T _C =25 | 80 | W |
| T _j | Junction temperature | | 150 | |
| T _{stg} | Storage temperature | | -65~150 | |

THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---------------------|-------------------------------------|------|------|
| R _{th j-c} | Thermal resistance junction to case | 1.56 | /W |

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TIP34/34A/34B/34C

CHARACTERISTICS

T_j=25 unless otherwise specified

| SYMBOL | PARAMETER | | CONDITIONS | MIN | TYP. | MAX | UNIT |
|-----------------------|--------------------------------------|------------|--|------|------|------|------|
| V _{CE0(SUS)} | Collector-emitter sustaining voltage | TIP34 | I _C =-30mA ; I _B =0 | -40 | | | V |
| | | TIP34A | | -60 | | | |
| | | TIP34B | | -80 | | | |
| | | TIP34C | | -100 | | | |
| V _{CEsat-1} | Collector-emitter saturation voltage | | I _C =-3A ; I _B =-0.3A | | | -1.0 | V |
| V _{CEsat-2} | Collector-emitter saturation voltage | | I _C =-10A ; I _B =-2.5A | | | -4.0 | V |
| V _{BE-1} | Base-emitter on voltage | | I _C =-3A ; V _{CE} =-4V | | | -1.6 | V |
| V _{BE-2} | Base-emitter on voltage | | I _C =-10A ; V _{CE} =-4V | | | -3.0 | V |
| I _{CEO} | Collector cut-off current | TIP34/34A | V _{CE} =-30V ; I _B =0 | | | -0.7 | mA |
| | | TIP34B/34C | V _{CE} =-60V ; I _B =0 | | | | |
| I _{CES} | Collector cut-off current | TIP34 | V _{CE} =-40V ; V _{EB} =0 | | | -0.4 | mA |
| | | TIP34A | V _{CE} =-60V ; V _{EB} =0 | | | | |
| | | TIP34B | V _{CE} =-80V ; V _{EB} =0 | | | | |
| | | TIP34C | V _{CE} =-100V ; V _{EB} =0 | | | | |
| I _{EBO} | Emitter cut-off current | | V _{EB} =-5V ; I _C =0 | | | -1.0 | mA |
| h _{FE-1} | DC current gain | | I _C =-1A ; V _{CE} =-4V | 40 | | | |
| h _{FE-2} | DC current gain | | I _C =-3A ; V _{CE} =-4V | 20 | | 100 | |
| f _T | Transition frequency | | I _C =-0.5A ; V _{CE} =-10V ; f=1MHz | 3.0 | | | MHz |

