

Silicon PNP Power Transistors

BD250/A/B/C

DESCRIPTION

- With TO-3PN package
- Complement to type BD249/A/B/C
- 125 W at 25°C case temperature
- 25 A continuous collector current

PINNING

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

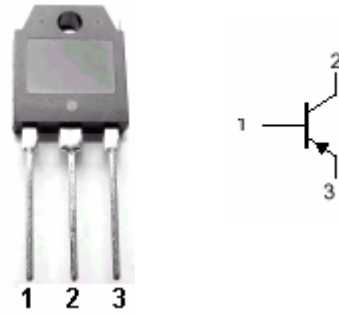


Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings(Ta=□)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|------------------|-----------------------------|---------------------|---------|------|
| V _{CBO} | Collector-base voltage | BD246 | -55 | V |
| | | BD246A | -70 | |
| | | BD246B | -90 | |
| | | BD246C | -115 | |
| V _{CEO} | Collector-emitter voltage | BD246 | -45 | V |
| | | BD246A | -60 | |
| | | BD246B | -80 | |
| | | BD246C | -100 | |
| V _{EBO} | Emitter-base voltage | Open collector | -5 | V |
| I _C | Collector current | | -25 | A |
| I _{CM} | Collector current-peak | | -40 | A |
| I _B | Base current | | -5 | A |
| P _C | Collector power dissipation | T _C =25□ | 125 | W |
| T _j | Junction temperature | | -65~150 | □ |
| T _{stg} | Storage temperature | | -65~150 | □ |

THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | VALUE | UNIT |
|---------------------|-------------------------------------|-------|------|
| R _{th j-c} | Thermal resistance junction to case | 1 | □/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 | BD250 | I _C =-30mA ; I _B =0 | -45 | | | V |
| | | BD250A | | -60 | | | |
| | | BD250B | | -80 | | | |
| | | BD250C | | -100 | | | |
| V _{CEsat-1} | Collector-emitter saturation voltage | | I _C =-15A ; I _B =-1.5A | | | -1.8 | V |
| V _{CEsat-2} | Collector-emitter saturation voltage | | I _C =-25A ; I _B =-5A | | | -4.0 | V |
| V _{BE-1} | Base-emitter on voltage | | I _C =-15A ; V _{CE} =-4V | | | -1.6 | V |
| V _{BE-2} | Base-emitter on voltage | | I _C =-25A ; V _{CE} =-4V | | | -3.0 | V |
| I _{CEO} | Collector cut-off current | BD250/250A | V _{CE} =-30V I _B =0 | | | -1.0 | mA |
| | | BD250B/250C | V _{CE} =-60V I _B =0 | | | | |
| I _{EBO} | Emitter cut-off current | | V _{EB} =-5V ; I _C =0 | | | -1.0 | mA |
| h _{FE-1} | DC current gain | | I _C =-1.5A ; V _{CE} =-4V | 25 | | | |
| h _{FE-2} | DC current gain | | I _C =-15A ; V _{CE} =-4V | 10 | | | |
| h _{FE-3} | DC current gain | | I _C =-25A ; V _{CE} =-4V | 5 | | | |
| Switching times | | | | | | | |
| t _{on} | Turn-on time | | I _C =-5A ; I _{B1} =-I _{B2} =-0.5A R _L =5Ω | | 0.2 | | μs |
| t _{off} | Turn-off time | | | | 0.4 | | μs |

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PACKAGE OUTLINE

