

Silicon PNP Power Transistors

BD250/A/B/C

DESCRIPTION

www.datasheet4u.com

- 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 |

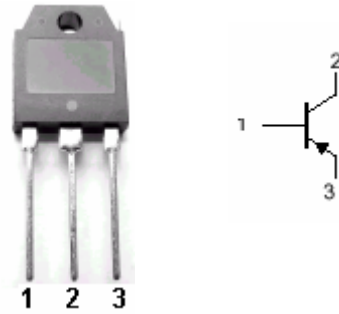


Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings($T_a = \square$)

| 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 | $T_C = 25 \square$ | 125 | W |
| T_j | Junction temperature | | -65~150 | \square |
| T_{stg} | Storage temperature | | -65~150 | \square |

THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | VALUE | UNIT |
|---------------|-------------------------------------|-------|-------------|
| $R_{th\ j-c}$ | Thermal resistance junction to case | 1 | \square/W |

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CHARACTERISTICS

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 $T_j=25^\circ\text{C}$ unless otherwise specified

| SYMBOL | PARAMETER | | CONDITIONS | MIN | TYP. | MAX | UNIT |
|-----------------|--------------------------------------|-------------|--|------|------|------|---------------|
| $V_{(BR)CEO}$ | Collector-emitter breakdown voltage | BD250 | $I_C=-30\text{mA}; I_B=0$ | -45 | | | V |
| | | BD250A | | -60 | | | |
| | | BD250B | | -80 | | | |
| | | BD250C | | -100 | | | |
| $V_{CEsat-1}$ | Collector-emitter saturation voltage | | $I_C=-15\text{A}; I_B=-1.5\text{A}$ | | | -1.8 | V |
| $V_{CEsat-2}$ | Collector-emitter saturation voltage | | $I_C=-25\text{A}; I_B=-5\text{A}$ | | | -4.0 | V |
| V_{BE-1} | Base-emitter on voltage | | $I_C=-15\text{A}; V_{CE}=-4\text{V}$ | | | -1.6 | V |
| V_{BE-2} | Base-emitter on voltage | | $I_C=-25\text{A}; V_{CE}=-4\text{V}$ | | | -3.0 | V |
| I_{CEO} | Collector cut-off current | BD250/250A | $V_{CE}=-30\text{V}; I_B=0$ | | | -1.0 | mA |
| | | BD250B/250C | $V_{CE}=-60\text{V}; I_B=0$ | | | | |
| I_{EBO} | Emitter cut-off current | | $V_{EB}=-5\text{V}; I_C=0$ | | | -1.0 | mA |
| h_{FE-1} | DC current gain | | $I_C=-1.5\text{A}; V_{CE}=-4\text{V}$ | 25 | | | |
| h_{FE-2} | DC current gain | | $I_C=-15\text{A}; V_{CE}=-4\text{V}$ | 10 | | | |
| h_{FE-3} | DC current gain | | $I_C=-25\text{A}; V_{CE}=-4\text{V}$ | 5 | | | |
| Switching times | | | | | | | |
| t_{on} | Turn-on time | | $I_C=-5\text{A}; I_{B1}=-I_{B2}=-0.5\text{A}; R_L=5\Omega$ | | 0.2 | | μs |
| t_{off} | Turn-off time | | | | 0.4 | | μs |

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PACKAGE OUTLINE

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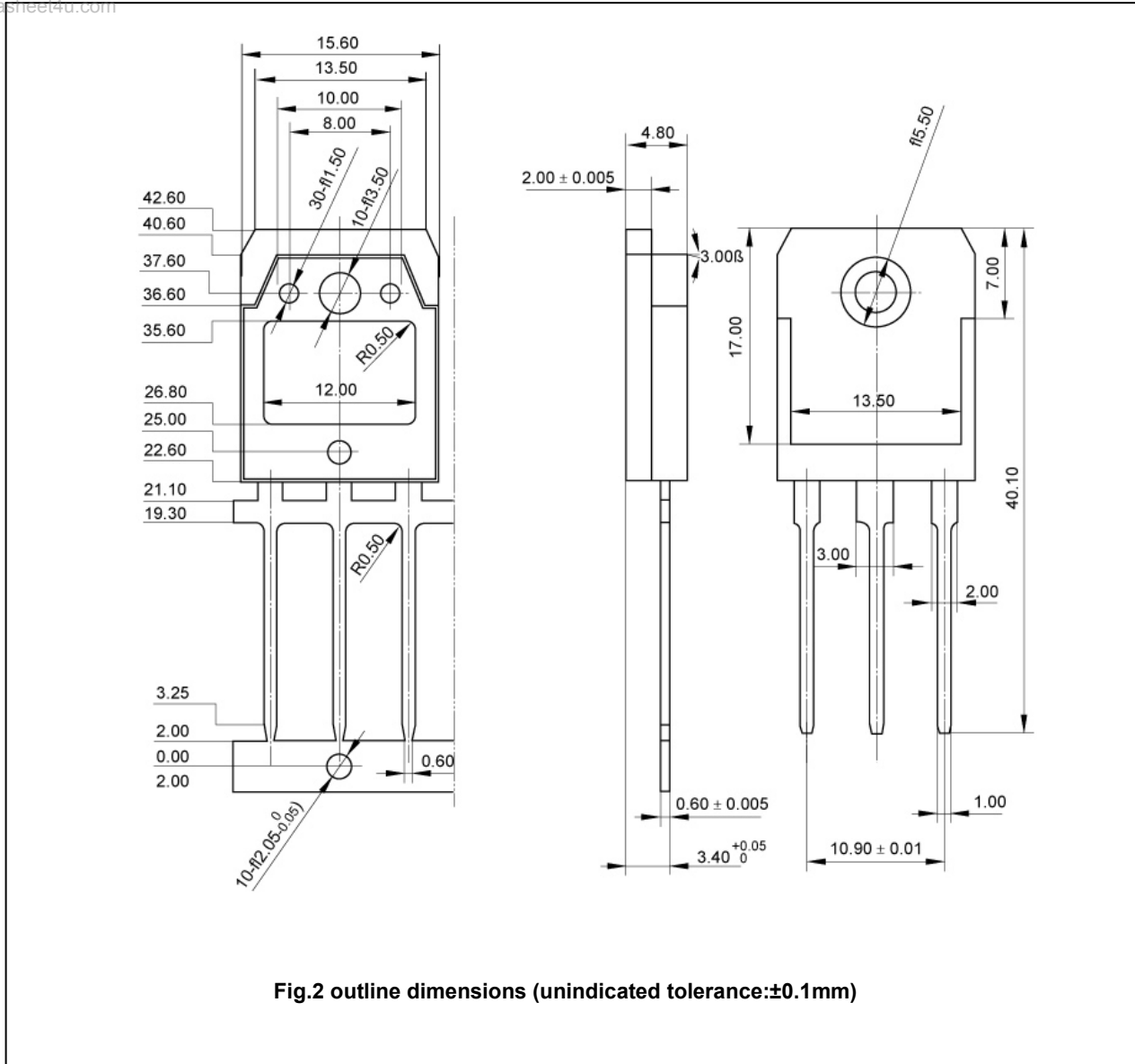


Fig.2 outline dimensions (unindicated tolerance:±0.1mm)