

Silicon NPN Power Transistors

BU2508D

DESCRIPTION

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- With TO-3PN package
- High voltage;high speed
- Built-in damper diode

APPLICATIONS

- For use in horizontal deflection circuits of colour TV receivers.

PINNING

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

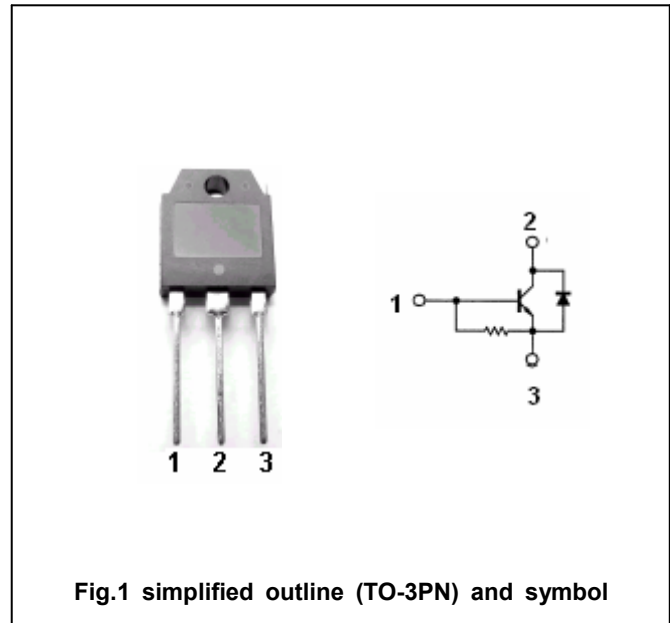


Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings (Ta=25°C)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|------------------|-----------------------------|----------------------|---------|------|
| V _{CBO} | Collector-base voltage | Open emitter | 1500 | V |
| V _{CEO} | Collector-emitter voltage | Open base | 700 | V |
| V _{EBO} | Emitter-base voltage | Open collector | 7.5 | V |
| I _C | Collector current | | 8 | A |
| I _{CM} | Collector current-peak | | 15 | A |
| I _B | Base current | | 4 | A |
| I _{BM} | Base current-peak | | 6 | A |
| P _C | Collector power dissipation | T _C =25°C | 125 | W |
| T _j | Junction temperature | | 150 | °C |
| T _{stg} | Storage temperature | | -65~150 | °C |

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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 |
|-----------------|--------------------------------------|--|-----|------|------------|------|
| $V_{CEO(SUS)}$ | Collector-emitter sustaining voltage | $I_C=0.1\text{A}; I_B=0, L=25\text{mH}$ | 700 | | | V |
| $V_{(BR)EBO}$ | Emitter-base breakdown voltage | $I_E=600\text{mA}; I_C=0$ | 7.5 | 13.5 | | V |
| $V_{CE(sat-1)}$ | Collector-emitter saturation voltage | $I_C=4.5\text{A}; I_B=1.1\text{A}$ | | | 5.0 | V |
| $V_{CE(sat-2)}$ | Collector-emitter saturation voltage | $I_C=4.5\text{A}; I_B=1.29\text{A}$ | | | 1.0 | V |
| $V_{BE(sat)}$ | Base-emitter saturation voltage | $I_C=4.5\text{A}; I_B=1.7\text{A}$ | | | 1.3 | V |
| I_{CES} | Collector cut-off current | $V_{CE}=\text{rated}; V_{BE}=0$ $T=125^\circ\text{C}$ | | | 1.0 2.0 | mA |
| I_{EBO} | Emitter cut-off current | $V_{EB}=7.5\text{V}; I_C=0$ | 140 | | 390 | mA |
| h_{FE-1} | DC current gain | $I_C=1\text{A}; V_{CE}=5\text{V}$ | 7 | 13 | 23 | |
| h_{FE-2} | DC current gain | $I_C=4.5\text{A}; V_{CE}=1\text{V}$ | 4 | 5.5 | 7.5 | |
| V_F | Diode forward voltage | $I_F=4.5\text{A}$ | | 1.6 | 2.0 | V |
| C_C | Collector capacitance | $V_{CB}=10\text{V}; f=1\text{MHz}$ | | 80 | | pF |

PACKAGE OUTLINE

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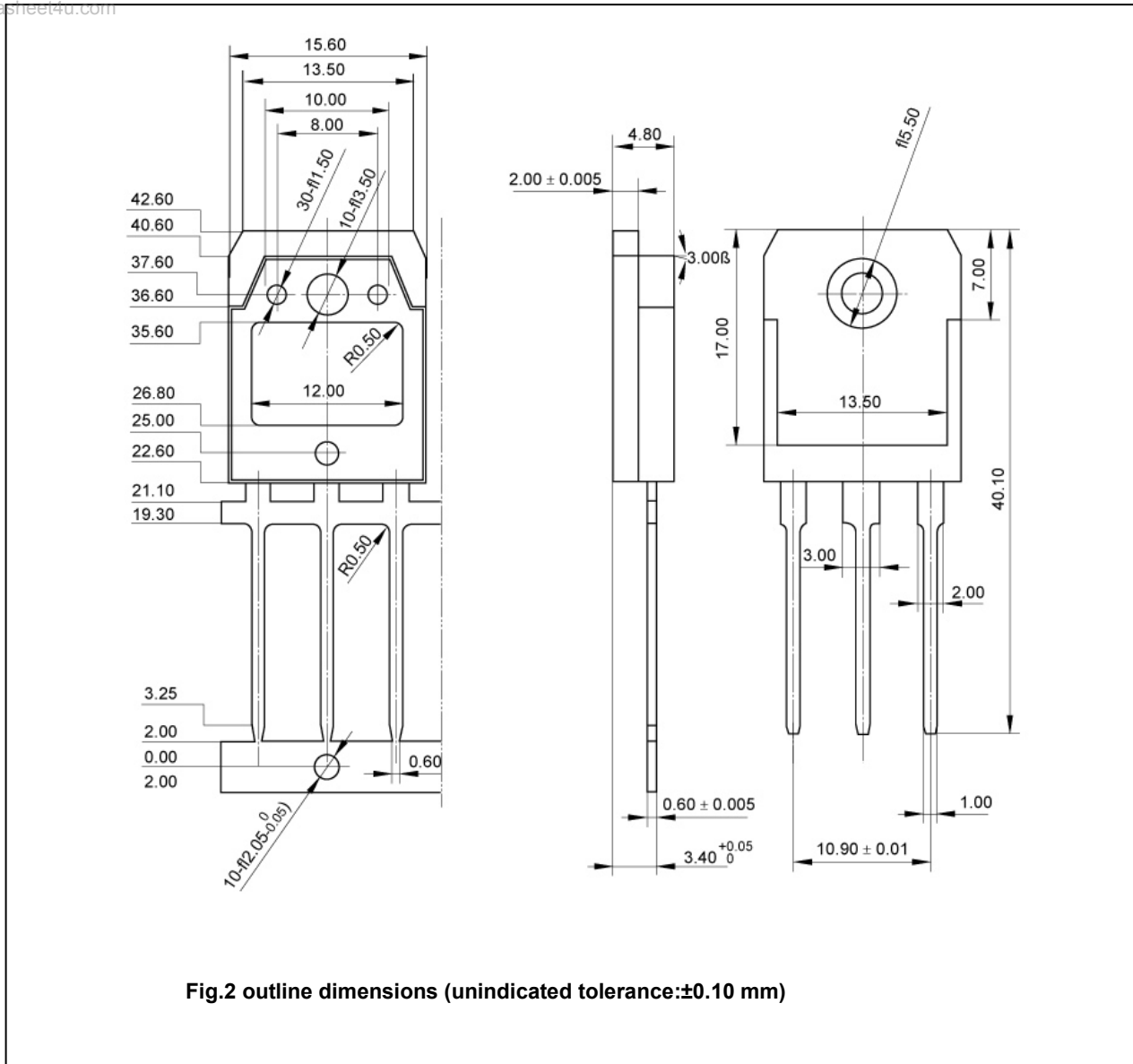


Fig.2 outline dimensions (unindicated tolerance: ± 0.10 mm)