

Silicon NPN Power Transistors

2SC2305

DESCRIPTION

- With TO-3PN package
- High breakdown voltage
- Fast switching speed
- Wide safe operating area

APPLICATIONS

- For switching regulator applications

PINNING

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

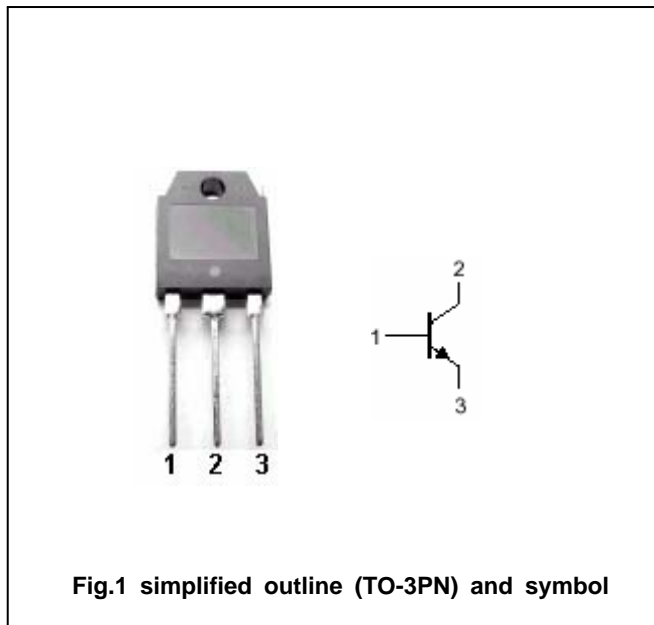


Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings (Ta=25)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|-----------|-----------------------------|----------------|---------|------|
| V_{CBO} | Collector-base voltage | Open emitter | 400 | V |
| V_{CEO} | Collector-emitter voltage | Open base | 400 | V |
| V_{EBO} | Emitter-base voltage | Open collector | 8 | V |
| I_C | Collector current (DC) | | 7 | A |
| I_{CM} | Collector current-peak | | 14 | A |
| I_B | Base current (DC) | | 3 | A |
| P_C | Collector power dissipation | $T_C=25$ | 80 | 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 ; R _{BE} = | 400 | | | V |
| V _{(BR)CBO} | Collector-base breakdown voltage | I _C =1m A; I _E =0 | 400 | | | V |
| V _{(BR)EBO} | Emitter-base breakdown voltage | I _E =1m A; I _C =0 | 7 | | | V |
| V _{CEsat} | Collector-emitter saturation voltage | I _C =4A; I _B =0.8A | | | 1.0 | V |
| V _{BEsat} | Base-emitter saturation voltage | I _C =4A; I _B =0.8A | | | 1.5 | V |
| I _{CBO} | Collector cut-off current | V _{CB} =400V; I _E =0 | | | 10 | μ A |
| I _{EBO} | Emitter cut-off current | V _{EB} =5V; I _C =0 | | | 10 | μ A |
| h _{FE-1} | DC current gain | I _C =0.8A ; V _{CE} =5V | 15 | | 50 | |
| h _{FE-2} | DC current gain | I _C =4A ; V _{CE} =5V | 10 | | | |

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PACKAGE OUTLINE

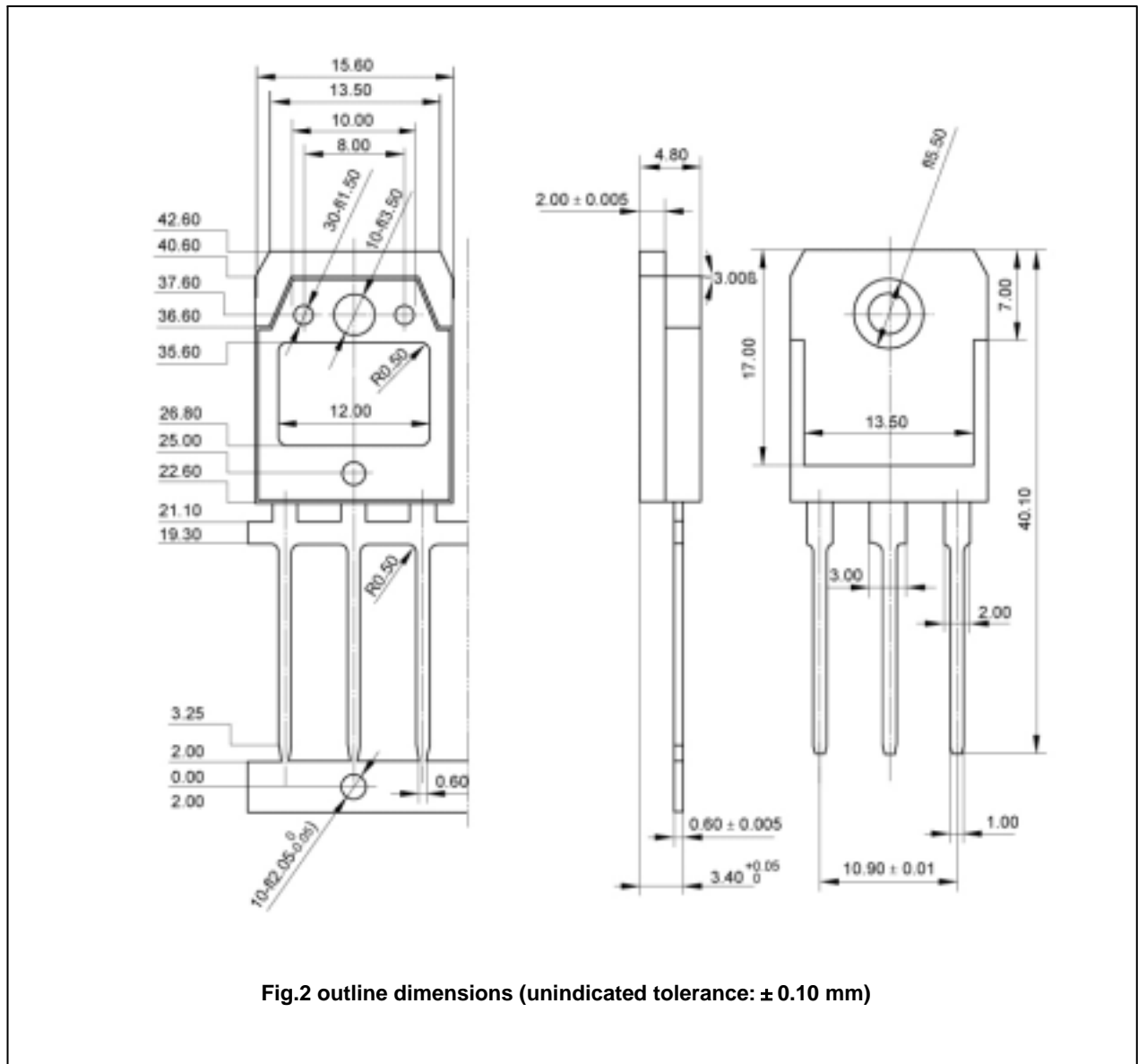


Fig.2 outline dimensions (unindicated tolerance: ± 0.10 mm)