

Silicon PNP Power Transistors

2SA1513

DESCRIPTION

- With TO-3PML package
- High current capability
- Low collector saturation voltage

APPLICATIONS

- For high speed and high power switching applications

PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1 | Base |
| 2 | Collector |
| 3 | Emitter |

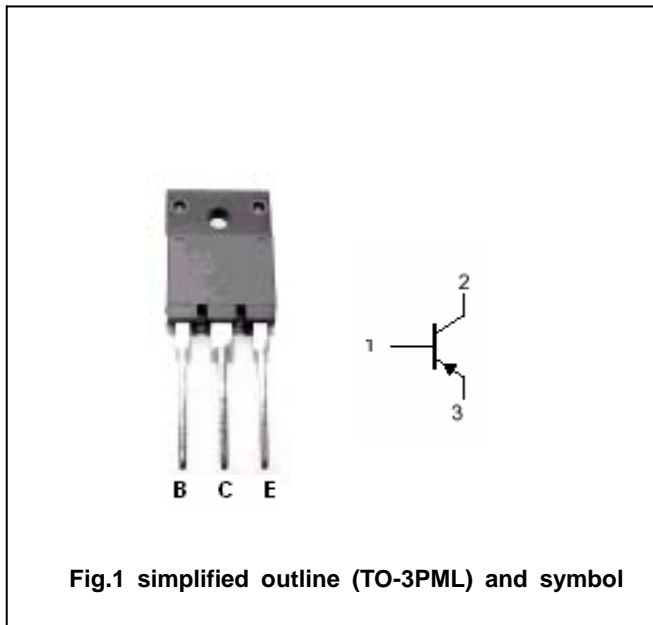


Fig.1 simplified outline (TO-3PML) and symbol

Maximum absolute ratings(Ta=25)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|-----------|-----------------------------|----------------|---------|------|
| V_{CBO} | Collector-base voltage | Open emitter | -100 | V |
| V_{CEO} | Collector-emitter voltage | Open base | -60 | V |
| V_{EBO} | Emitter-base voltage | Open collector | -6 | V |
| I_C | Collector current | | -15 | A |
| P_C | Collector power dissipation | $T_a=25$ | 3.5 | W |
| | | $T_C=25$ | 60 | |
| 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 =-25mA; I _B =0 | -60 | | | V |
| V _{(BR)EBO} | Emitter-base breakdown voltage | I _E =-1mA; I _C =0 | -6 | | | V |
| V _{CEsat} | Collector-emitter saturation voltage | I _C =-12 A; I _B =-0.6 A | | | -0.5 | V |
| V _{BEsat} | Base-emitter saturation voltage | I _C =-12 A; I _B =-0.6 A | | | -1.5 | V |
| I _{CBO} | Collector cut-off current | V _{CB} =-60V; I _E =0 | | | -10 | μ A |
| I _{EBO} | Emitter cut-off current | V _{EB} =-6V; I _C =0 | | | -10 | μ A |
| h _{FE} | DC current gain | I _C =-3A ; V _{CE} =-2V | 100 | | 400 | |
| C _{OB} | Output capacitance | I _E =0 ; V _{CB} =-10V; f=1MHz | | 300 | | pF |
| f _T | Transition frequency | I _C =-1.5A ; V _{CE} =-10V | | 80 | | MHz |

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PACKAGE OUTLINE

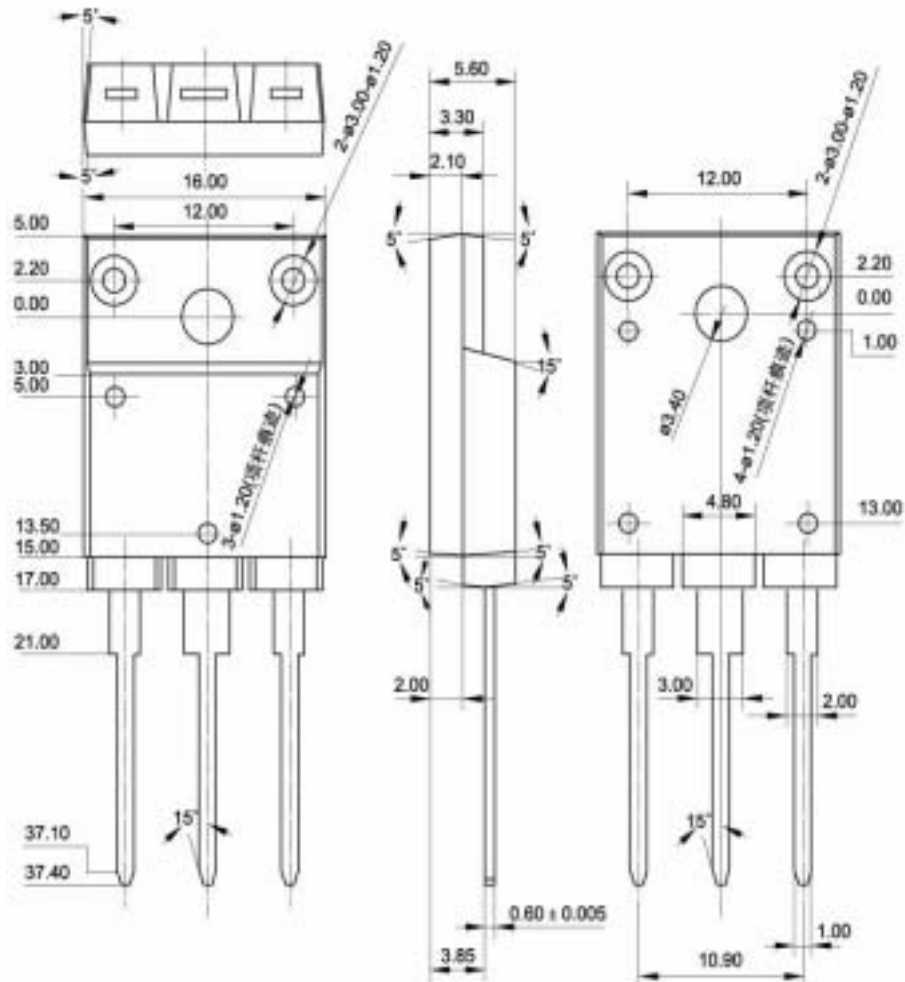


Fig.2 Outline dimensions