

Silicon PNP Darlington Power Transistors

2SB1382

DESCRIPTION

- With TO-3PML package
- Complement to type 2SD2082

APPLICATIONS

- For chopper regulator,DC motor driver and general purpose applications

PINNING

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

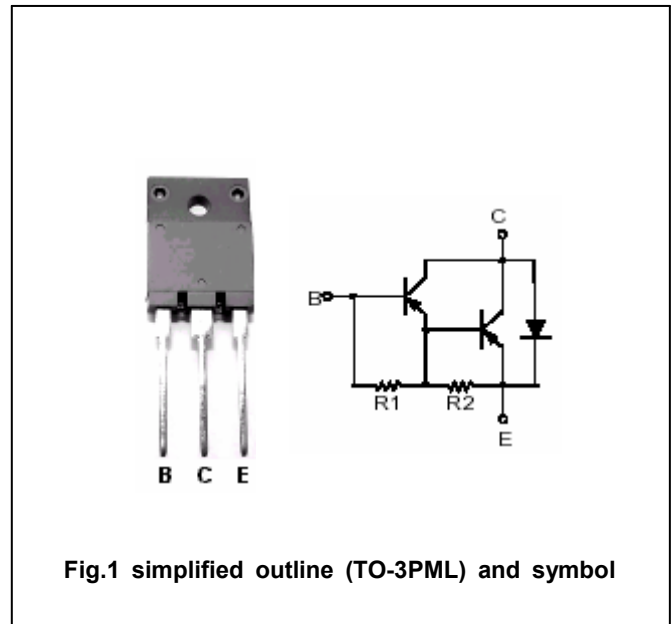


Fig.1 simplified outline (TO-3PML) and symbol

Maximum absolute ratings($T_c=25^\circ\text{C}$)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|-----------|-----------------------------|------------------------|---------|------------------|
| V_{CBO} | Collector-base voltage | Open emitter | -120 | V |
| V_{CEO} | Collector-emitter voltage | Open base | -120 | V |
| V_{EBO} | Emitter-base voltage | Open collector | -6 | V |
| I_C | Collector current | | -16 | A |
| I_{CM} | Collector current-peak | | -26 | A |
| I_B | Base current | | -1 | A |
| P_C | Collector power dissipation | $T_c=25^\circ\text{C}$ | 75 | W |
| T_j | Junction temperature | | 150 | $^\circ\text{C}$ |
| T_{stg} | Storage temperature | | -55~150 | $^\circ\text{C}$ |

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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 | I _C =-10mA; I _B =0 | -120 | | | V |
| V _{CEsat} | Collector-emitter saturation voltage | I _C =-8 A; I _B =-16m A | | | -1.5 | V |
| V _{BEsat} | Base-emitter saturation voltage | I _C =-8 A; I _B =-16m A | | | -2.5 | V |
| I _{CBO} | Collector cut-off current | V _{CB} =-120V; I _E =0 | | | -10 | μA |
| I _{EBO} | Emitter cut-off current | V _{EB} =-6V; I _C =0 | | | -10 | mA |
| h _{FE} | DC current gain | I _C =-8A ; V _{CE} =-4V | 2000 | | | |
| f _T | Transition frequency | I _E =1A ; V _{CE} =-12V | | 50 | | MHz |
| C _{OB} | Output capacitance | I _E =0; V _{CB} =-10V; f=1MHz | | 350 | | pF |

Switching times

| | | | | | | |
|-----------------|--------------|--------------------------------------------------------------------------------------------------------------|--|-----|--|----|
| t _{on} | Turn-on time | I _C =-8A; R _L =5Ω I _{B1} =-I _{B2} =-16mA V _{CC} =-40V | | 0.8 | | μs |
| t _s | Storage time | | | 1.8 | | μs |
| t _f | Fall time | | | 1.0 | | μs |

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PACKAGE OUTLINE

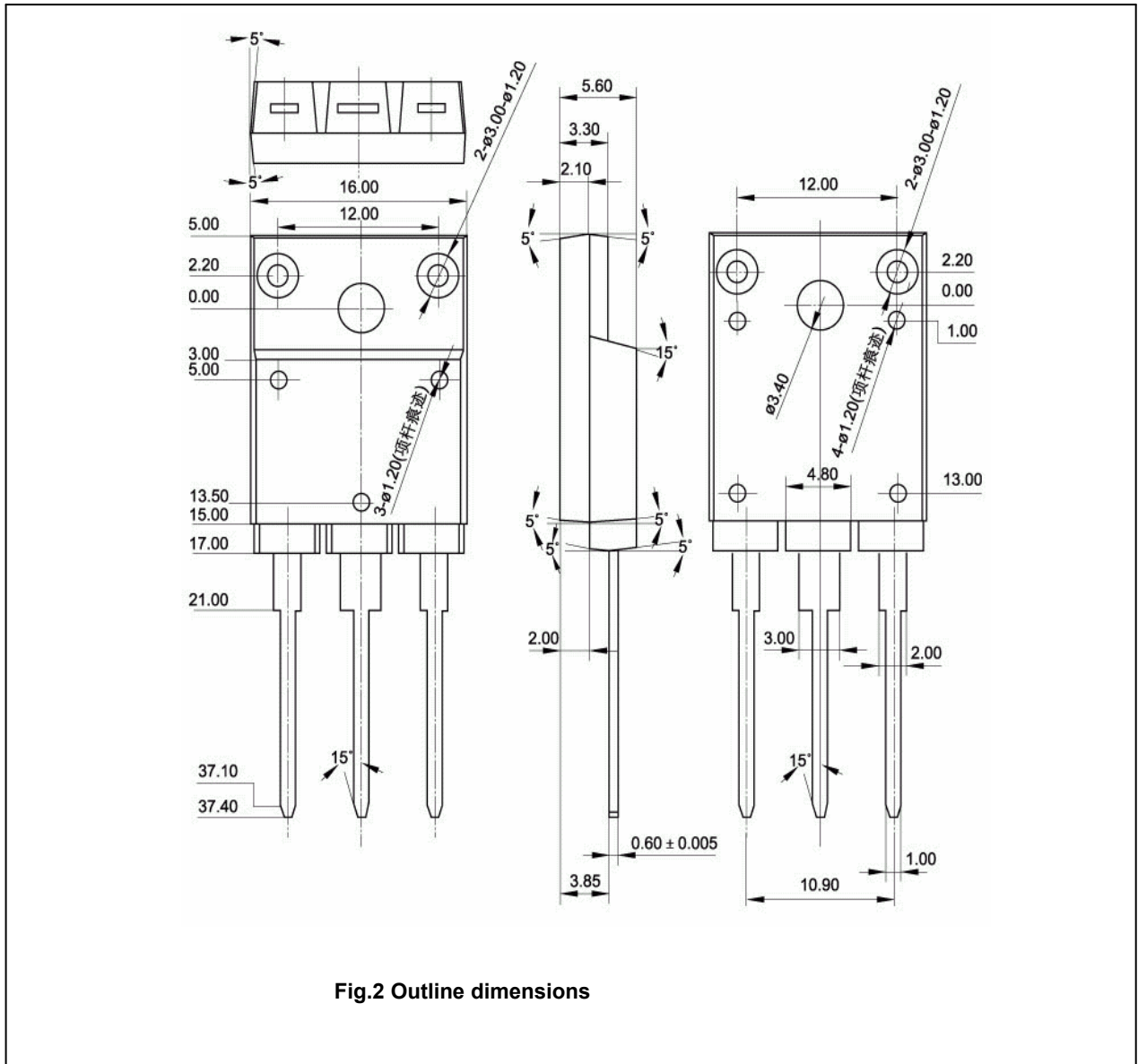


Fig.2 Outline dimensions