

Silicon NPN Darlington Power Transistors

2SD2494

DESCRIPTION

- With TO-3PML package
- Complement to type 2SB1625

APPLICATIONS

- Audio,
- Series regulator
- General Purpose

PINNING

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

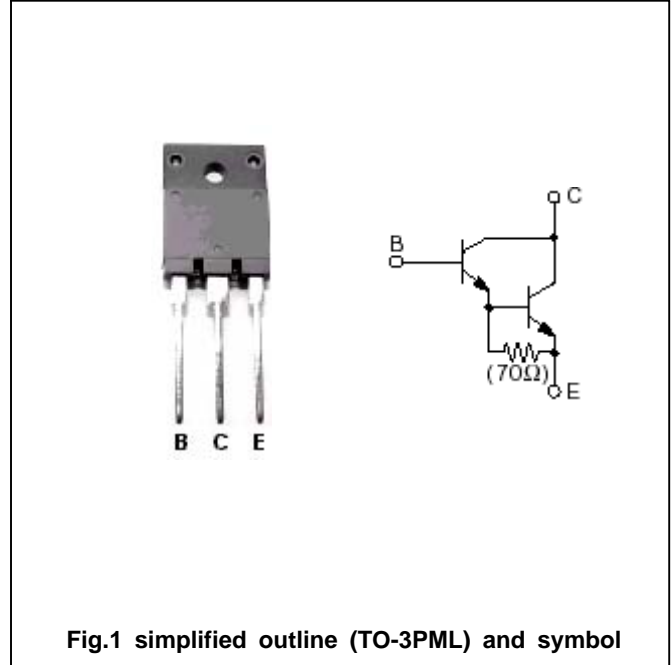


Fig.1 simplified outline (TO-3PML) and symbol

Maximum absolute ratings(Tc=25)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|------------------|-----------------------------|--------------------|---------|------|
| V _{CBO} | Collector-base voltage | Open emitter | 110 | V |
| V _{CEO} | Collector-emitter voltage | Open base | 110 | V |
| V _{EBO} | Emitter-base voltage | Open collector | 5 | V |
| I _C | Collector current | | 6 | A |
| I _B | Base current | | 1 | A |
| P _C | Collector power dissipation | T _C =25 | 60 | 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 _{CEO} | Collector-emitter breakdown voltage | I _C =50mA; I _B =0 | 110 | | | V |
| V _{CEsat} | Collector-emitter saturation voltage | I _C =5 A; I _B =5m A | | | 2.5 | V |
| V _{BEsat} | Base-emitter saturation voltage | I _C =5 A; I _B =5m A | | | 3.0 | V |
| I _{CBO} | Collector cut-off current | V _{CB} =110V I _E =0 | | | 100 | μ A |
| I _{EBO} | Emitter cut-off current | V _{EB} =5V; I _C =0 | | | 100 | μ A |
| h _{FE} | DC current gain | I _C =5A ; V _{CE} =4V | 5000 | | | |
| f _T | Transition frequency | I _C =0.5A ; V _{CE} =12V | | 60 | | MHz |
| C _{OB} | Output capacitance | I _E =0; V _{CB} =10V; f=1MHz | | 55 | | pF |

Switching times

| | | | | | | |
|-----------------|--------------|---|--|-----|--|-----|
| t _{on} | Turn-on time | I _C =5A; R _L =6 I _{B1} =-I _{B2} =5mA V _{CC} =30V | | 0.8 | | μ s |
| t _s | Storage time | | | 6.2 | | μ s |
| t _f | Fall time | | | 1.1 | | μ s |

◆ h_{FE} classifications

| O | P | Y |
|------------|------------|-------------|
| 5000-12000 | 6500-20000 | 15000-30000 |

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PACKAGE OUTLINE

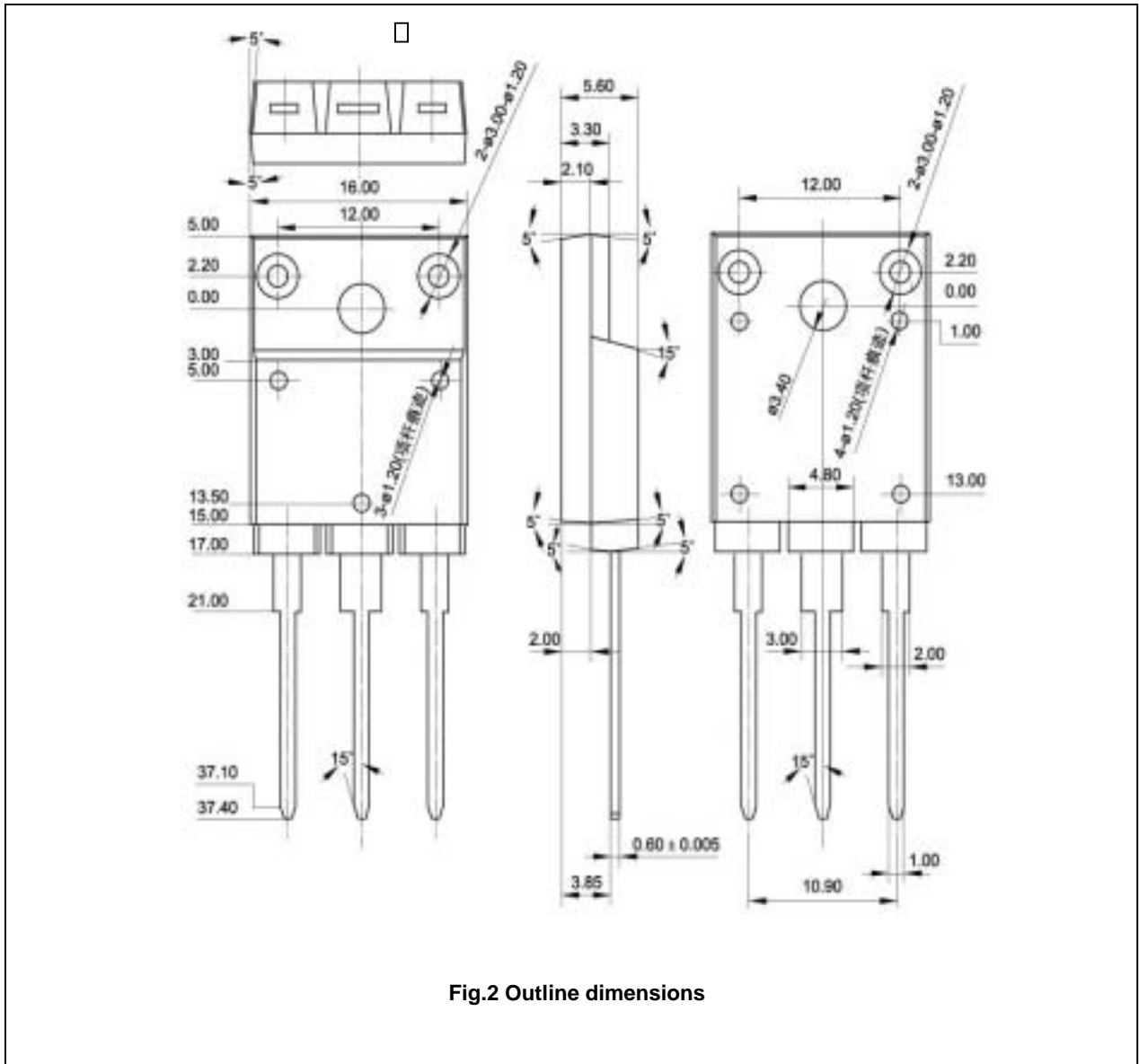


Fig.2 Outline dimensions