

## Silicon PNP Darlington Power Transistors

2SB1625

## DESCRIPTION

- With TO-3PML package
- Complement to type 2SD2494

## APPLICATIONS

- Audio ,regulator and general purpose

## PINNING

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

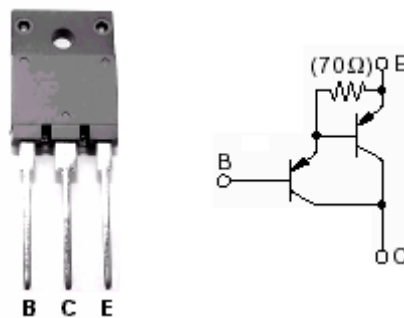


Fig.1 simplified outline (TO-3PML) and symbol

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

| SYMBOL    | PARAMETER                   | CONDITIONS             | VALUE   | UNIT             |
|-----------|-----------------------------|------------------------|---------|------------------|
| $V_{CBO}$ | Collector-base voltage      | Open emitter           | -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 | $T_c=25^\circ\text{C}$ | 60      | W                |
| $T_j$     | Junction temperature        |                        | 150     | $^\circ\text{C}$ |
| $T_{stg}$ | Storage temperature         |                        | -55~150 | $^\circ\text{C}$ |

## Silicon PNP Darlington Power Transistors

## 2SB1625

## CHARACTERISTICS

T<sub>j</sub>=25°C unless otherwise specified

| SYMBOL             | PARAMETER                            | CONDITIONS                                       | MIN  | TYP. | MAX  | UNIT |
|--------------------|--------------------------------------|--------------------------------------------------|------|------|------|------|
| V <sub>CEO</sub>   | Collector-emitter breakdown voltage  | I <sub>C</sub> =-50mA; I <sub>B</sub> =0         | -110 |      |      | V    |
| V <sub>CEsat</sub> | Collector-emitter saturation voltage | I <sub>C</sub> =-5 A; I <sub>B</sub> =-5m A      |      |      | -2.5 | V    |
| V <sub>BEsat</sub> | Base-emitter saturation voltage      | I <sub>C</sub> =-5 A; I <sub>B</sub> =-5m A      |      |      | -3.0 | V    |
| I <sub>CBO</sub>   | Collector cut-off current            | V <sub>CB</sub> =-110V; I <sub>E</sub> =0        |      |      | -100 | μA   |
| I <sub>EBO</sub>   | Emitter cut-off current              | V <sub>EB</sub> =-5V; I <sub>C</sub> =0          |      |      | -100 | μA   |
| h <sub>FE</sub>    | DC current gain                      | I <sub>C</sub> =-5A ; V <sub>CE</sub> =-4V       | 5000 |      |      |      |
| f <sub>T</sub>     | Transition frequency                 | I <sub>C</sub> =0.5A ; V <sub>CE</sub> =-12V     |      | 100  |      | MHz  |
| C <sub>OB</sub>    | Output capacitance                   | I <sub>E</sub> =0; V <sub>CB</sub> =-10V; f=1MHz |      | 110  |      | pF   |

## Switching times

|                 |              |                                                                                                             |  |     |  |    |
|-----------------|--------------|-------------------------------------------------------------------------------------------------------------|--|-----|--|----|
| t <sub>on</sub> | Turn-on time | I <sub>C</sub> =-5A; R <sub>L</sub> =6Ω<br>I <sub>B1</sub> =-I <sub>B2</sub> =-5mA<br>V <sub>CC</sub> =-30V |  | 1.1 |  | μs |
| t <sub>s</sub>  | Storage time |                                                                                                             |  | 3.2 |  | μs |
| t <sub>f</sub>  | Fall time    |                                                                                                             |  | 1.1 |  | μs |

◆ h<sub>FE</sub> classifications

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

## Silicon PNP Darlington Power Transistors

2SB1625

## PACKAGE OUTLINE

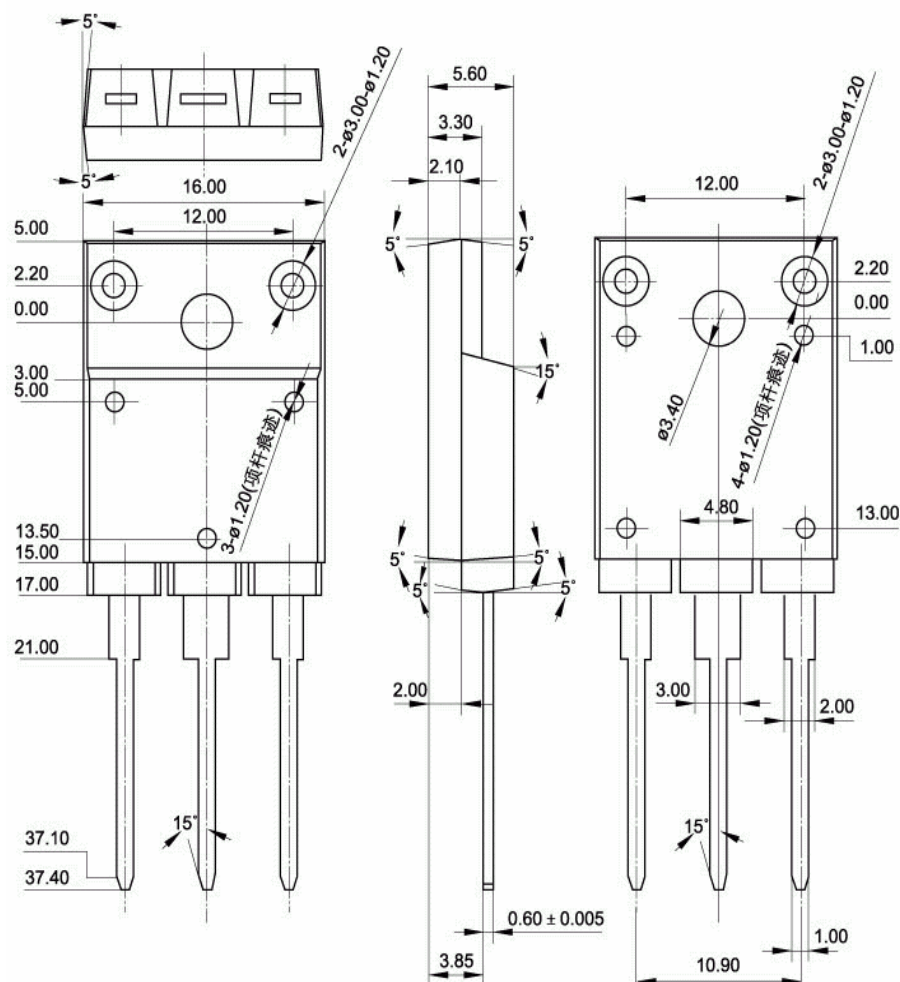


Fig.2 Outline dimensions