

Silicon NPN Darlington Power Transistors

2SD2495

DESCRIPTION

- With TO-220F package
- Complement to type 2SB1626

APPLICATIONS

- For audio,series regulator and general purpose applications

PINNING

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

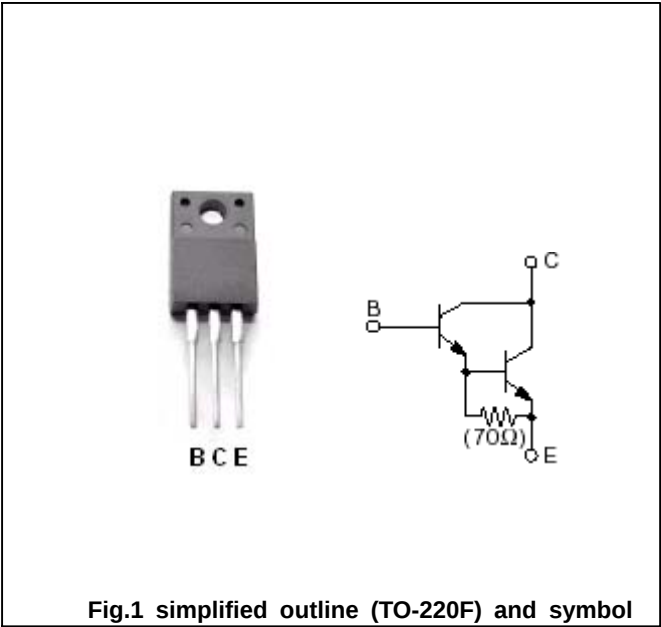


Fig.1 simplified outline (TO-220F) and symbol

Absolute maximum ratings (Ta=25 )

| SYMBOL           | PARAMETER                 | CONDITIONS         | VALUE   | UNIT |
|------------------|---------------------------|--------------------|---------|------|
| V <sub>CBO</sub> | Collector-base voltage    | Open emitter       | 110     | V    |
| V <sub>CEO</sub> | Collector-emitter voltage | Open base          | 110     | V    |
| V <sub>EBO</sub> | Emitter-base voltage      | Open collector     | 5       | V    |
| I <sub>C</sub>   | Collector current         |                    | 6       | A    |
| I <sub>B</sub>   | Base current              |                    | 1       | A    |
| P <sub>C</sub>   | Collector dissipation     | T <sub>C</sub> =25 | 30      | W    |
| T <sub>j</sub>   | Junction temperature      |                    | 150     |      |
| T <sub>stg</sub> | Storage temperature       |                    | -55~150 |      |

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## CHARACTERISTICS

T<sub>j</sub>=25 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> =5A; I <sub>B</sub> =5mA     |      |      | 2.5 | V    |
| V <sub>BEsat</sub> | Emitter-base saturation voltage      | I <sub>C</sub> =5A; I <sub>B</sub> =5mA     |      |      | 3.0 | V    |
| I <sub>CBO</sub>   | Collector cut-off current            | V <sub>CB</sub> =110V; I <sub>E</sub> =0    |      |      | 0.1 | mA   |
| I <sub>EBO</sub>   | Emitter cut-off current              | V <sub>EB</sub> =5V; I <sub>C</sub> =0      |      |      | 0.1 | mA   |
| 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 |      | 60   |     | MHz  |
| C <sub>OB</sub>    | Collector output capacitance         | f=1MHz; V <sub>CB</sub> =10V                |      | 55   |     | pF   |

## Switching times

|                 |              |                                                                                                         |  |     |  |    |
|-----------------|--------------|---------------------------------------------------------------------------------------------------------|--|-----|--|----|
| t <sub>on</sub> | Turn-on time | I <sub>C</sub> =5A; I <sub>B1</sub> =-I <sub>B2</sub> =5mA<br>V <sub>CC</sub> =30V , R <sub>L</sub> =6Ω |  | 0.8 |  | μs |
| t <sub>s</sub>  | Storage time |                                                                                                         |  | 6.2 |  | μs |
| t <sub>f</sub>  | Fall time    |                                                                                                         |  | 1.1 |  | μs |

◆ h<sub>FE</sub> Classifications

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

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## PACKAGE OUTLINE

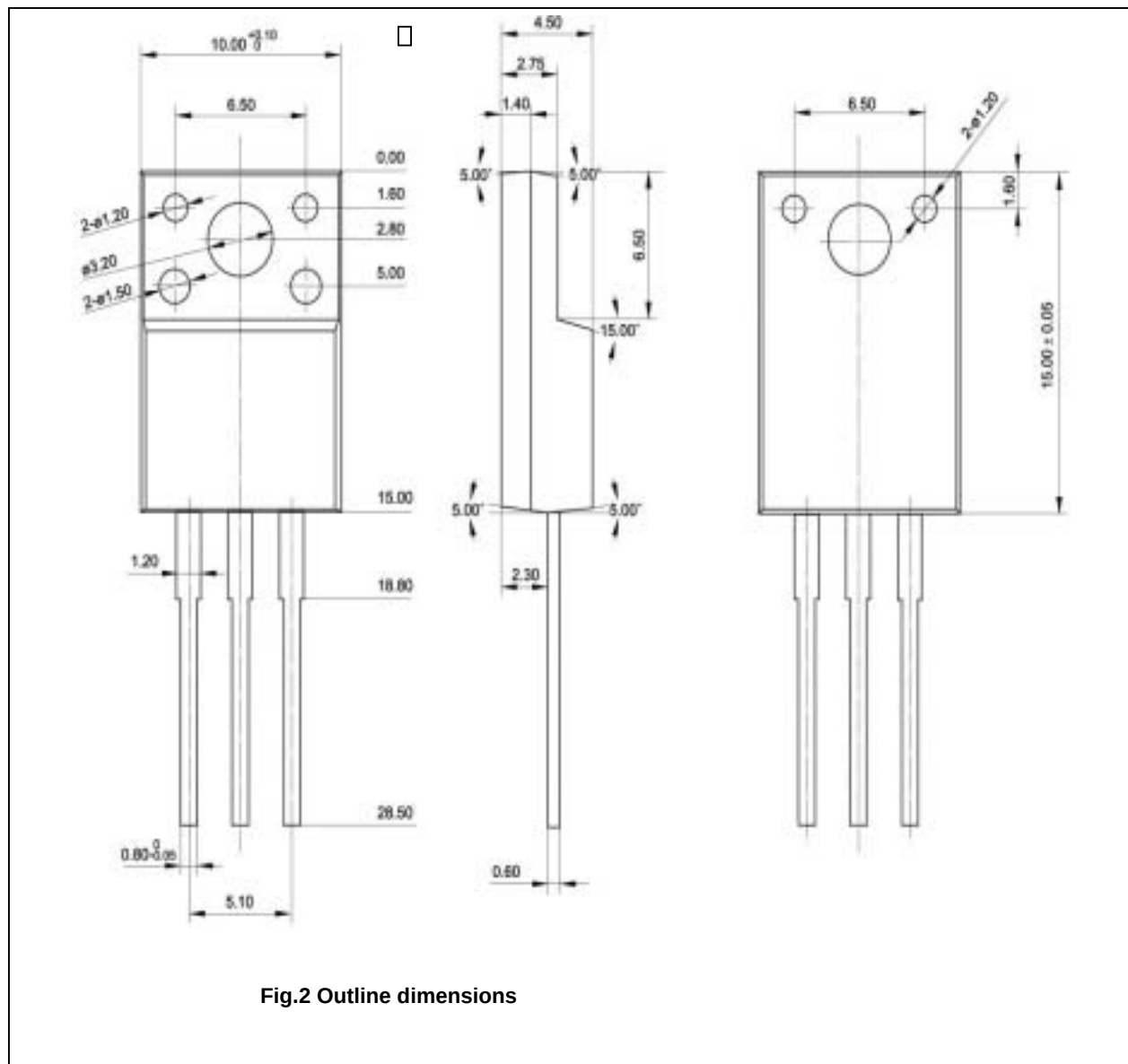


Fig.2 Outline dimensions