

Silicon NPN Power Transistors

2SD1765

DESCRIPTION

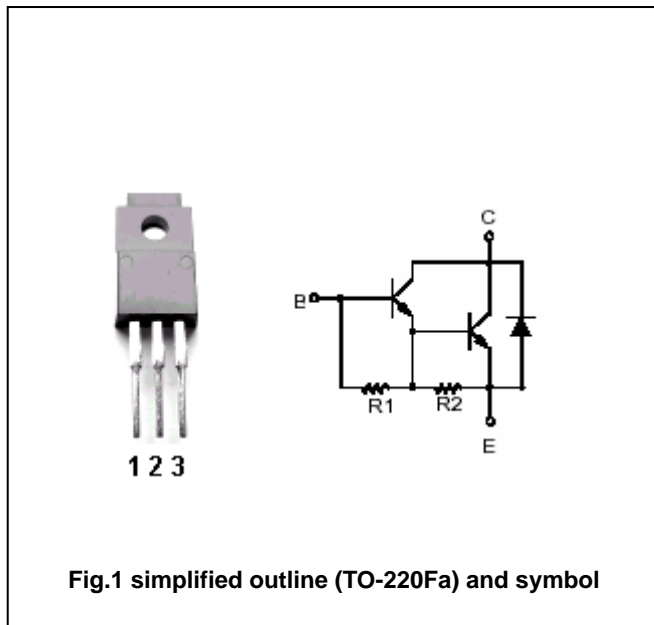
- With TO-220Fa package
- DARLINGTON
- High DC current gain

APPLICATIONS

- For low frequency power amplifier applications

PINNING

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



Absolute maximum ratings(Ta=25 )

| SYMBOL           | PARAMETER                   | CONDITIONS         | VALUE   | UNIT |
|------------------|-----------------------------|--------------------|---------|------|
| V <sub>CBO</sub> | Collector-base voltage      | Open emitter       | 100     | V    |
| V <sub>CEO</sub> | Collector -emitter voltage  | Open base          | 100     | V    |
| V <sub>EBO</sub> | Emitter-base voltage        | Open collector     | 6       | V    |
| I <sub>C</sub>   | Collector current           |                    | 2       | A    |
| I <sub>CM</sub>  | Collector current-peak      |                    | 3       | A    |
| P <sub>C</sub>   | Collector power dissipation | T <sub>C</sub> =25 | 20      | W    |
|                  |                             | T <sub>a</sub> =25 | 2       |      |
| 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>(BR)CBO</sub> | Collector-base breakdown voltage     | I <sub>C</sub> =50 μ A; I <sub>C</sub> =0        | 100  |      |       | V    |
| V <sub>(BR)CEO</sub> | Collector-emitter breakdown voltage  | I <sub>C</sub> =5mA; I <sub>B</sub> =0           | 100  |      |       | V    |
| V <sub>CEsat</sub>   | Collector-emitter saturation voltage | I <sub>C</sub> =1A ; I <sub>B</sub> =1mA         |      |      | 1.5   | V    |
| I <sub>CBO</sub>     | Collector cut-off current            | V <sub>CB</sub> =100V; I <sub>E</sub> =0         |      |      | 10    | μ A  |
| I <sub>EBO</sub>     | Emitter cut-off current              | V <sub>EB</sub> =5V; I <sub>C</sub> =0           |      |      | 3.0   | mA   |
| h <sub>FE</sub>      | DC current gain                      | I <sub>C</sub> =1A ; V <sub>CE</sub> =2V         | 1000 |      | 10000 |      |
| C <sub>OB</sub>      | Output capacitance                   | I <sub>E</sub> =0 ; V <sub>CB</sub> =10V; f=1MHz |      | 25   |       | pF   |

PACKAGE OUTLINE

