

Silicon NPN Power Transistors

2SD768

DESCRIPTION

- With TO-220C package
- Complement to type 2SB727
- DARLINGTON

APPLICATIONS

- For medium speed and power switching applications

PINNING

| PIN | DESCRIPTION |
|-----|--------------------------------------|
| 1 | Base |
| 2 | Collector;connected to mounting base |
| 3 | Emitter |

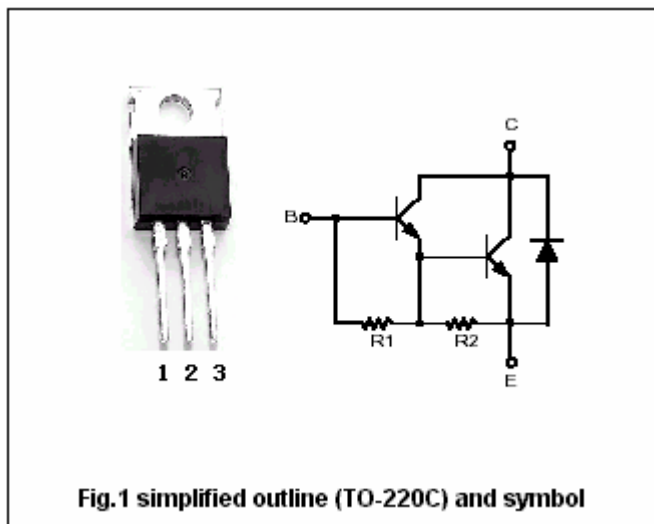


Fig.1 simplified outline (TO-220C) and symbol

Absolute maximum ratings(Ta=25°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 | 7 | V |
| I _C | Collector current | | 6 | A |
| I _{CM} | Collector current-Peak | | 10 | A |
| P _C | Collector dissipation | T _C =25°C | 40 | W |
| T _j | Junction temperature | | 150 | °C |
| T _{stg} | Storage temperature | | -50~150 | °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 =25mA; R _{BE} =∞ | 120 | | | V |
| V _{(BR)EBO} | Emitter-base breakdown voltage | I _E =50mA; I _C =0 | 7 | | | V |
| V _{CEsat-1} | Collector-emitter saturation voltage | I _C =3A; I _B =6mA | | | 1.5 | V |
| V _{CEsat-2} | Collector-emitter saturation voltage | I _C =6A; I _B =60mA | | | 3.0 | V |
| V _{BEsat-1} | Base-emitter saturation voltage | I _C =3A; I _B =6mA | | | 2.0 | V |
| V _{BEsat-2} | Base-emitter saturation voltage | I _C =6A; I _B =60mA | | | 3.5 | V |
| I _{CBO} | Collector cut-off current | V _{CB} =120V; I _E =0 | | | 100 | μA |
| I _{CEO} | Collector cut-off current | V _{CE} =100V; R _{BE} =∞ | | | 10 | μA |
| h _{FE} | DC current gain | I _C =3A; V _{CE} =3V | 1000 | | 20000 | |

Switching times

| | | | | | | |
|------------------|---------------|--|--|-----|--|----|
| t _{on} | Turn-on time | I _C =3A; I _{B1} =-I _{B2} =6mA | | 1.0 | | μs |
| t _{off} | Turn-off time | | | 3.0 | | μs |

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PACKAGE OUTLINE

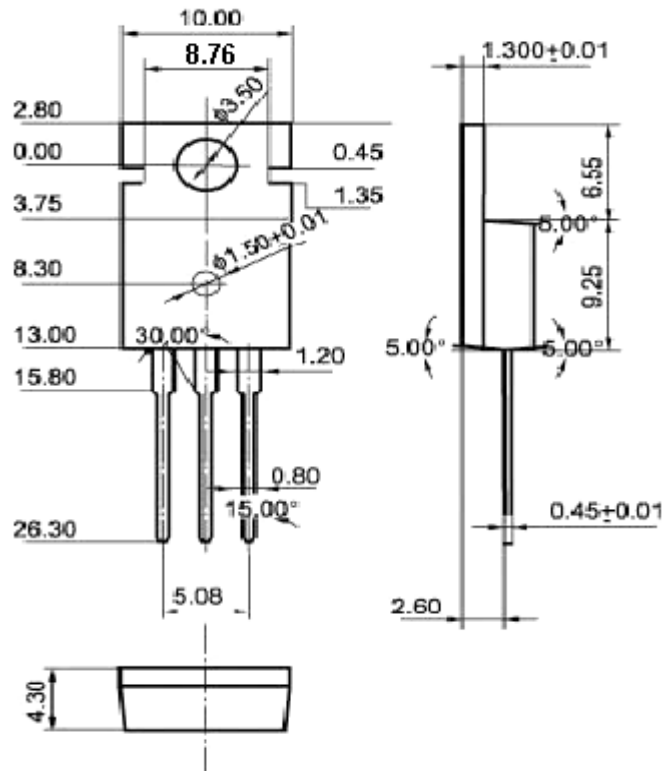


Fig.2 Outline dimensions (unindicated tolerance: ± 0.10 mm)