

Silicon NPN Power Transistors

2SD2101

DESCRIPTION

- With TO-220F package
- DARLINGTON

APPLICATIONS

- Low frequency power amplifier

PINNING

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

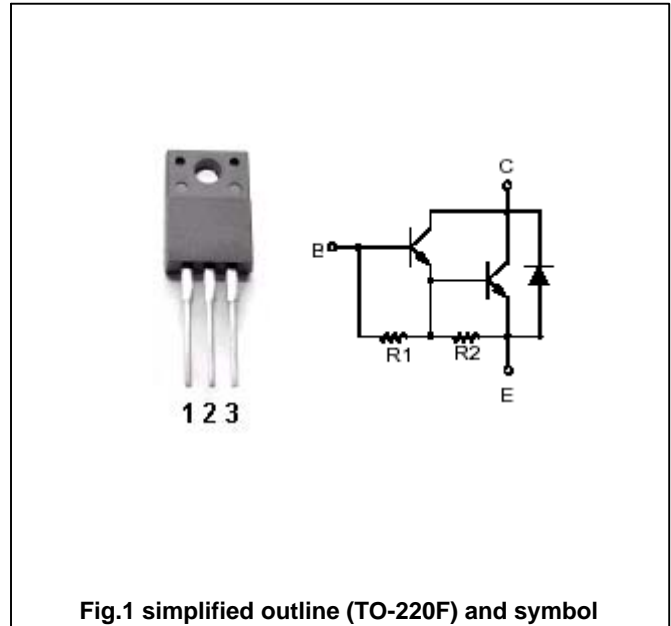


Fig.1 simplified outline (TO-220F) and symbol

Absolute maximum ratings(Ta=25)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|------------------|-----------------------------|--------------------|---------|------|
| V _{CBO} | Collector-base voltage | Open emitter | 200 | V |
| V _{CEO} | Collector -emitter voltage | Open base | 200 | V |
| V _{EBO} | Emitter-base voltage | Open collector | 7 | V |
| I _C | Collector current | | 10 | A |
| I _{CP} | Collector current peak | | 15 | A |
| P _C | Collector power dissipation | T _C =25 | 30 | W |
| | | T _a =25 | 2 | 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 _{EBO} | Base-emitter voltage | I _E =50mA; I _C =0 | 7 | | | V |
| V _{CBO} | Collector-base voltage | I _C =0.1mA; I _C =0 | 200 | | | V |
| V _{CEO} | Collector-emitter voltage | I _C =25mA; R _{BE} = | 200 | | | V |
| V _{CEO(sus)} | Base-emitter voltage | I _C =5A; L=5mH | 170 | | | V |
| V _{CE(sat)1} | Collector-emitter saturation voltage | I _C =5A ; I _B =10mA | | | 1.5 | V |
| V _{CE(sat)2} | Collector-emitter saturation voltage | I _C =10A ; I _B =100mA | | | 3.0 | V |
| V _{BE(sat)1} | Base-emitter saturation voltage | I _C =5A ; I _B =10mA | | | 2.0 | V |
| V _{BE(sat)2} | Base-emitter saturation voltage | I _C =10A ; I _B =100mA | | | 3.5 | V |
| I _{CBO} | Collector cut-off current | V _{CB} =180V; I _E =0 | | | 10 | μ A |
| I _{CEO} | Collector cut-off current | V _{CE} =180V; R _{BE} = | | | 50 | μ A |
| h _{FE} | DC current gain | I _C =5A ; V _{CE} =3V | 1500 | | | |

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PACKAGE OUTLINE

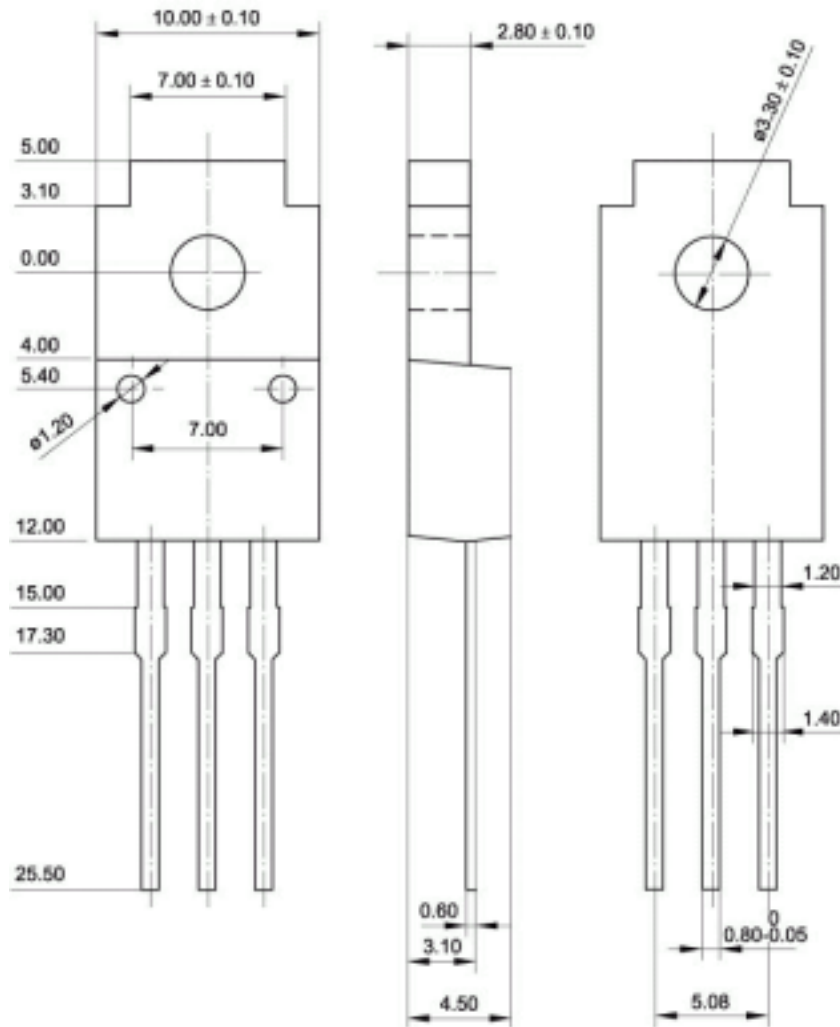


Fig.2 Outline dimensions (unindicated tolerance: ± 0.15 mm)