

Silicon NPN Power Transistors

2SC3571

DESCRIPTION

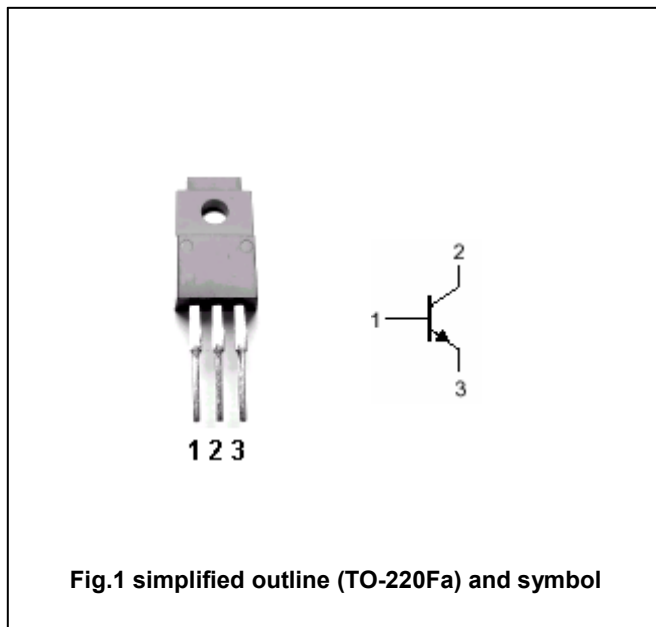
- With TO-220Fa package
- Low collector saturation voltage
- High switching speed

APPLICATIONS

- Switching regulator
- DC-DC converter
- High frequency power amplifier

PINNING

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



Absolute maximum ratings (Ta=25°C)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|------------------|---------------------------|----------------------|---------|------|
| V _{CBO} | Collector-base voltage | Open emitter | 500 | V |
| V _{CEO} | Collector-emitter voltage | Open base | 400 | V |
| V _{EBO} | Emitter-base voltage | Open collector | 7 | V |
| I _C | Collector current (DC) | | 7 | A |
| I _{CM} | Collector current-Peak | | 15 | A |
| I _B | Base current | | 3.5 | A |
| P _T | Total power dissipation | T _C =25°C | 30 | W |
| T _j | Junction temperature | | 150 | °C |
| T _{stg} | Storage temperature | | -55~150 | °C |

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CHARACTERISTICS

T_j=25°C unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|-----------------------|--------------------------------------|--|-----|------|-----------|----------|
| V _{CE0(SUS)} | Collector-emitter sustaining voltage | I _C =3.0A, I _B =0.6A, L=1mH | 400 | | | V |
| V _{CEsat} | Collector-emitter saturation voltage | I _C =3A; I _B =0.6A | | | 1.0 | V |
| V _{BEsat} | Base-emitter saturation voltage | I _C =3A; I _B =0.6A | | | 1.2 | V |
| I _{CBO} | Collector cut-off current | V _{CB} =400V; I _E =0 | | | 10 | μA |
| I _{CEX} | Collector cut-off current | V _{CE} =400V; V _{BE} =-1.5V T _a =125°C | | | 10 1.0 | μA mA |
| I _{EBO} | Emitter cut-off current | V _{EB} =5V; I _C =0 | | | 10 | μA |
| h _{FE-1} | DC current gain | I _C =0.1A; V _{CE} =5V | 20 | | 80 | |
| h _{FE-2} | DC current gain | I _C =1A; V _{CE} =5V | 20 | | 80 | |
| h _{FE-3} | DC current gain | I _C =3A; V _{CE} =5V | 10 | | | |

Switching times

| | | | | | | |
|-----------------|--------------|---|--|--|-----|----|
| t _{on} | Turn-on time | I _C =3.0A; I _{B1} =-I _{B2} =0.6A V _{CC} ≈150V; R _L =50Ω | | | 1.0 | μs |
| t _s | Storage time | | | | 2.5 | μs |
| t _f | Fall time | | | | 1.0 | μs |

◆ h_{FE-2} classifications

| M | L | K |
|-------|-------|-------|
| 20-40 | 30-60 | 40-80 |

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PACKAGE OUTLINE

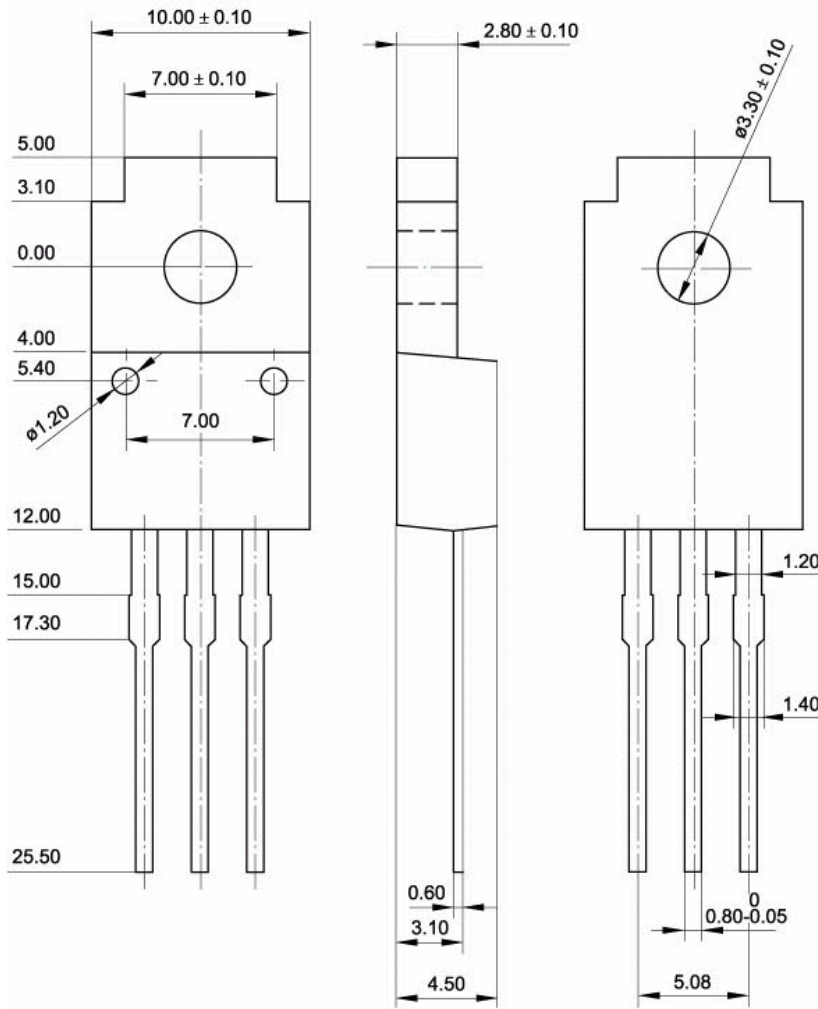


Fig.2 Outline dimensions (unindicated tolerance: ± 0.15 mm)