

Inchange Semiconductor

Product Specification

Silicon NPN Power Transistors

2SC3569

DESCRIPTION

- With TO-220F package
- Low collector saturation voltage

APPLICATIONS

- High speed switching applications

PINNING

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

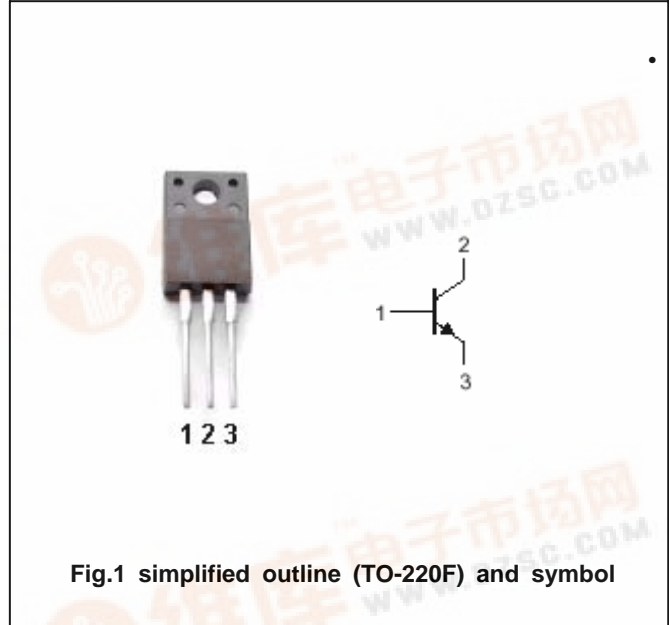


Fig.1 simplified outline (TO-220F) and symbol

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 | | 2 | A |
| I_{CM} | Collector current-peak | | 4 | A |
| I_B | Base current | | 1 | A |
| P_C | Collector power dissipation | $T_C=25^\circ C$ | 15 | W |
| T_j | Junction temperature | | 150 | $^\circ C$ |
| T_{stg} | Storage temperature | | -55~150 | $^\circ C$ |

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CHARACTERISTICS

T_j=25°C unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|-----------------------|--------------------------------------|---|-----|------|-----|------|
| V _{CEO(SUS)} | Collector-emitter sustaining voltage | I _C =0.5A; I _B =0.1A; L=1mH | 400 | | | V |
| V _{CEsat} | Collector-emitter saturation voltage | I _C =0.5 A; I _B =0.1A | | | 1.0 | V |
| V _{BEsat} | Base-emitter saturation voltage | I _C =0.5 A; I _B =0.1A | | | 1.2 | V |
| I _{CBO} | Collector cut-off current | V _{CB} =400V; I _E =0 | | | 10 | μ A |
| I _{EBO} | Emitter cut-off current | V _{EB} =5V; I _C =0 | | | 10 | μ A |
| h _{FE-1} | DC current gain | I _C =0.1A ; V _{CE} =5V | 20 | | 80 | |
| h _{FE-2} | DC current gain | I _C =0.5A ; V _{CE} =5V | 10 | | | |

Switching times

| | | | | | | |
|-----------------|--------------|--|--|--|-----|-----|
| t _{on} | Turn-on time | I _C =0.5A; R _L =300 Ω I _{B1} =- I _{B2} =0.1A V _{CC} =150V | | | 1.0 | μ s |
| t _s | Storage time | | | | 2.5 | μ s |
| t _f | Fall time | | | | 1.0 | μ s |

◆ h_{FE-1} classifications

| | | |
|-------|-------|-------|
| R | O | Y |
| 20-40 | 30-60 | 40-80 |

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PACKAGE OUTLINE

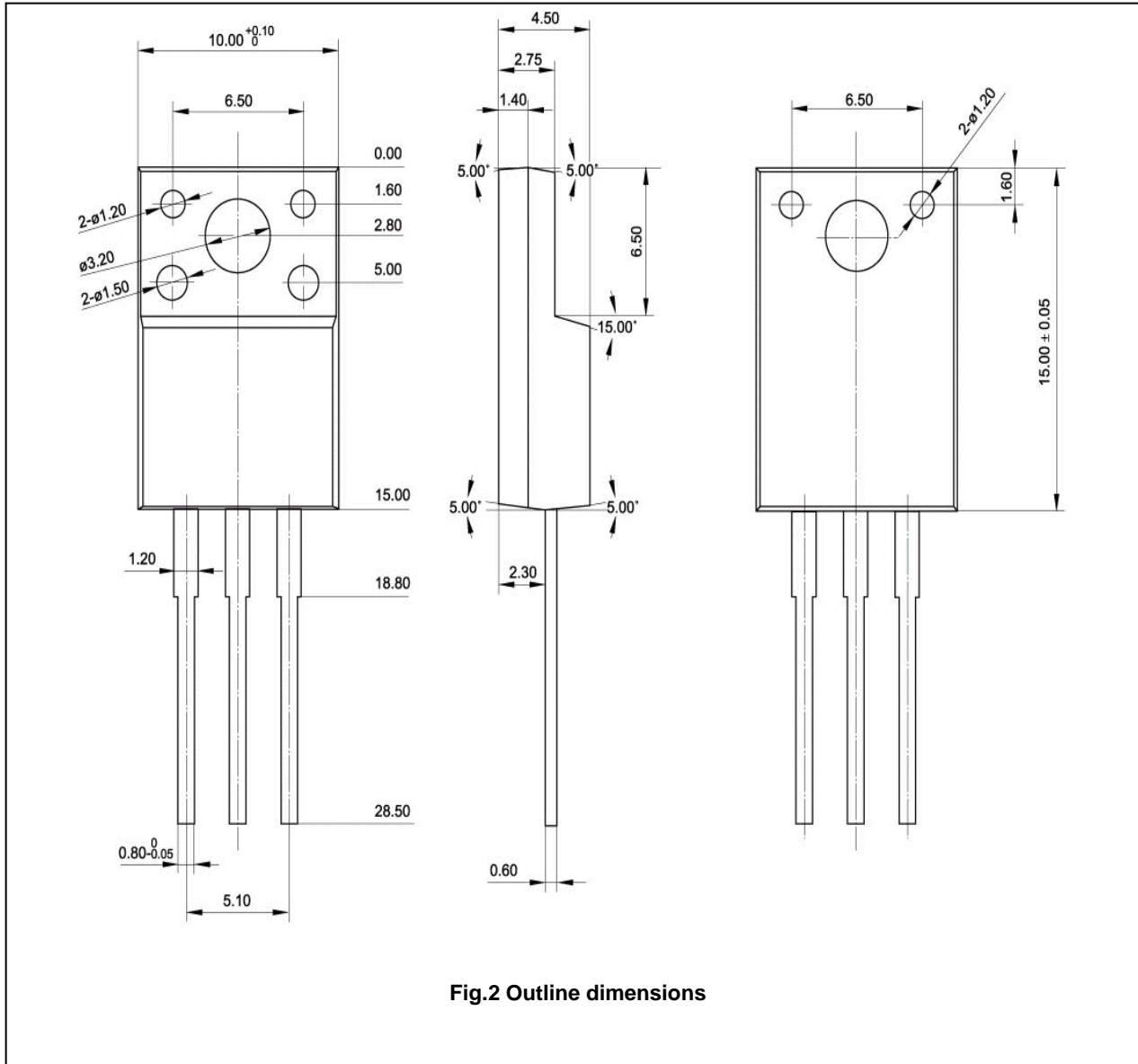


Fig.2 Outline dimensions