

Silicon NPN Power Transistors

2SC3168

DESCRIPTION

- With TO-3 package
- High voltage ,high speed

APPLICATIONS

- For power switching applications

PINNING (See Fig.2)

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

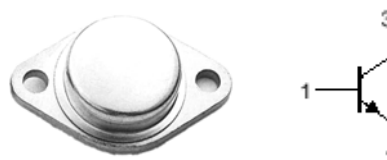


Fig.1 simplified outline (TO-3) and symbol

Absolute maximum ratings($T_a=25^\circ\text{C}$)

| SYMBOL | PARAMETER | CONDITIONS | MAX | 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 | | 20 | A |
| I_{CM} | Collector current-Peak | | 40 | A |
| I_B | Base current | | 7 | A |
| I_{BM} | Base current-Peak | | 14 | A |
| P_T | Total power dissipation | $T_{mb}=25^\circ\text{C}$ | 200 | W |
| T_j | Junction temperature | | 200 | $^\circ\text{C}$ |
| T_{stg} | Storage temperature | | -65~200 | $^\circ\text{C}$ |

THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | VALUE | UNIT |
|----------------|---|-------|---------------------------|
| $R_{th\ j-mb}$ | Thermal resistance from junction to mounting base | 0.63 | $^\circ\text{C}/\text{W}$ |

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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 =0.2A ; I _B =0 | 400 | | | V |
| V _{CE(sat)} | Collector-emitter saturation voltage | I _C =10A; I _B =2A | | | 1.0 | V |
| V _{BE(sat)} | Base-emitter saturation voltage | I _C =10A; I _B =2A | | | 1.5 | V |
| I _{CBO} | Collector cut-off current | At rated voltage | | | 0.1 | mA |
| I _{CEO} | Collector cut-off current | At rated voltage | | | 0.1 | mA |
| I _{EBO} | Emitter cut-off current | At rated voltage | | | 0.1 | mA |
| h _{FE} | DC current gain | I _C =10A ; V _{CE} =2V | 10 | | 40 | |
| f _T | Transition frequency | I _C =2A ; V _{CE} =10V | | 20 | | MHz |

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PACKAGE OUTLINE

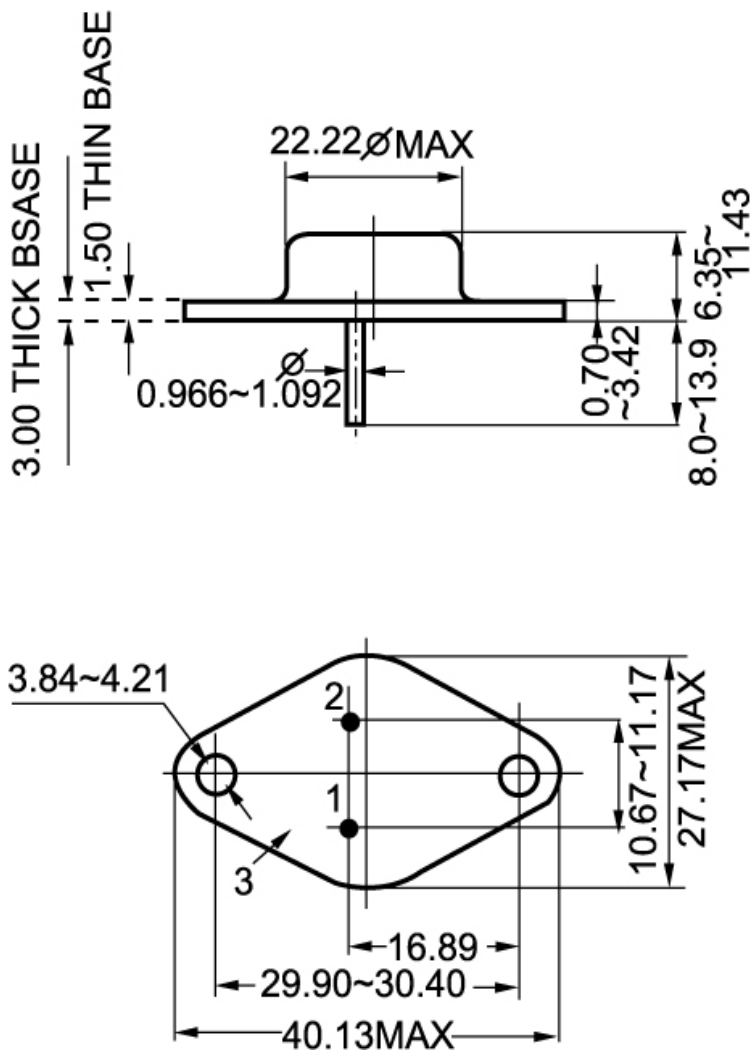


Fig.2 Outline dimensions