

Silicon NPN Power Transistors

2SC3058

DESCRIPTION

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

APPLICATIONS

- For switching regulator and DC/DC converter applications

PINNING (See Fig.2)

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

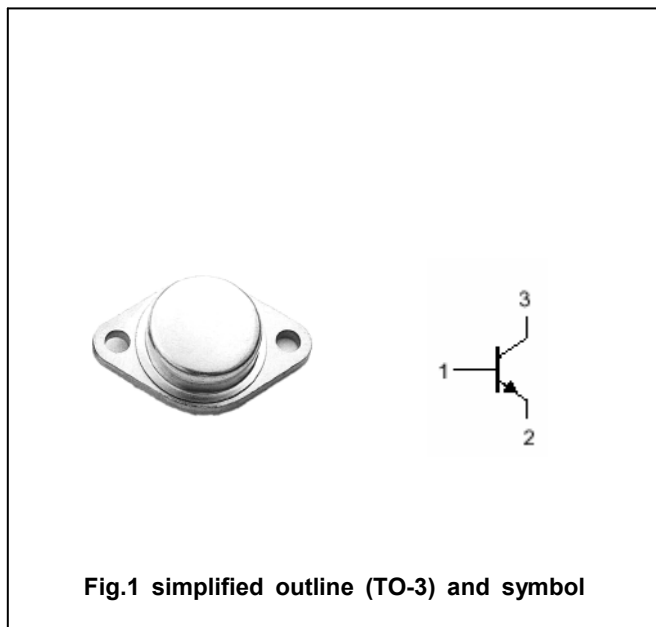


Fig.1 simplified outline (TO-3) and symbol

Absolute maximum ratings(Ta=25°C)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|------------------|---------------------------|----------------------|---------|------|
| V _{CBO} | Collector-base voltage | Open emitter | 600 | V |
| V _{CEO} | Collector-emitter voltage | Open base | 400 | V |
| V _{EBO} | Emitter-base voltage | Open collector | 7 | V |
| I _C | Collector current | | 30 | A |
| P _T | Total power dissipation | T _C =25°C | 200 | W |
| T _j | Junction temperature | | 200 | °C |
| T _{stg} | Storage temperature | | -65~200 | °C |

THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | VALUE | UNIT |
|----------------------|---|-------|------|
| R _{th j-mb} | Thermal resistance from junction to mounting base | 1.0 | °C/W |

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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 =10mA ; I _B =0 | 400 | | | V |
| V _{(BR)CBO} | Collector-base breakdown voltage | I _C =1mA; I _E =0 | 600 | | | V |
| V _{(BR)EBO} | Emitter-base breakdown voltage | I _E =1mA; I _C =0 | 7 | | | V |
| V _{CEsat} | Collector-emitter saturation voltage | I _C =20A; I _B =4A | | | 1.0 | V |
| V _{BEsat} | Base-emitter saturation voltage | I _C =20A; I _B =4A | | | 1.5 | V |
| I _{CBO} | Collector cut-off current | V _{CB} =500V; I _E =0 | | | 10 | μA |
| I _{EBO} | Emitter cut-off current | V _{EB} =5V; I _C =0 | | | 10 | μA |
| h _{FE-1} | DC current gain | I _C =1A ; V _{CE} =5V | 15 | | 50 | |
| h _{FE-2} | DC current gain | I _C =20A ; V _{CE} =5V | 10 | | 40 | |
| f _T | Transition frequency | I _C =4A ; V _{CE} =10V | | 30 | | MHz |
| C _{OB} | Collector output capacitance | I _E =0 ; V _{CB} =10V;f=1MHz | | 420 | | pF |

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PACKAGE OUTLINE

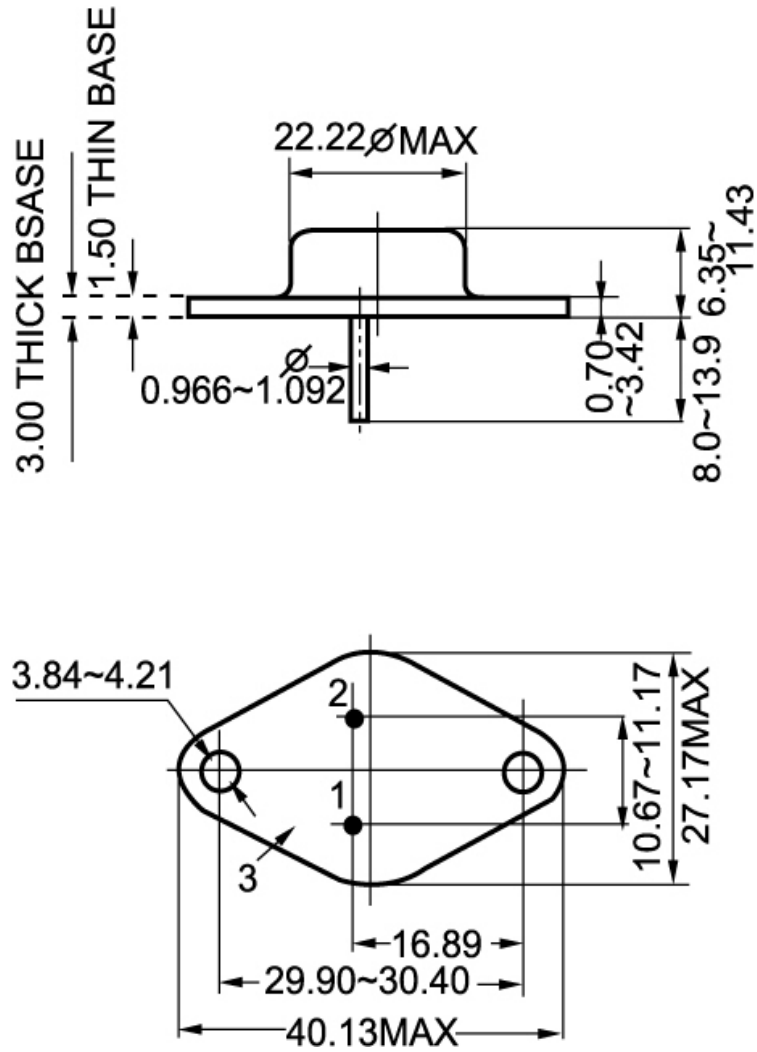


Fig.2 Outline dimensions