

Silicon NPN Power Transistors

2SD665

DESCRIPTION

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- With TO-3 package
- Complement to type 2SB645
- High power dissipation

APPLICATIONS

- Power amplifier applications
- Power switching applications
- DC-DC converters

PINNING(see Fig.2)

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

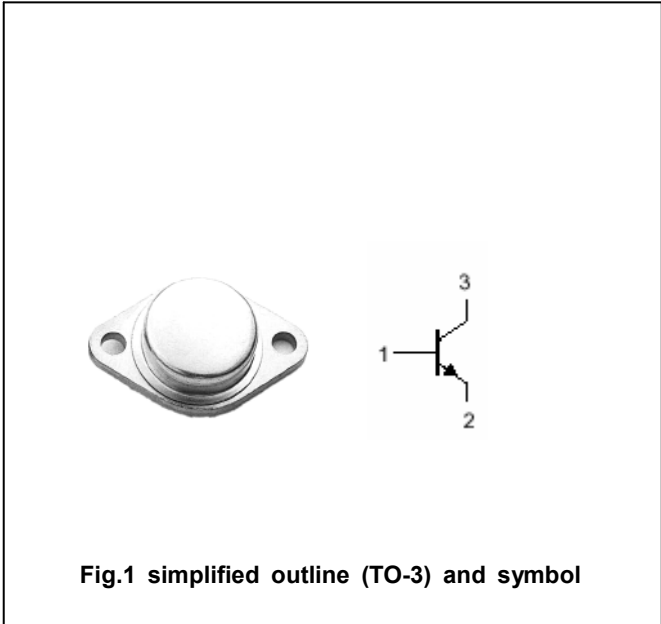


Fig.1 simplified outline (TO-3) and symbol

Absolute maximum ratings(Ta=□)

| 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 | 5 | V |
| I _C | Collector current | | 15 | A |
| I _B | Base current | | 4 | A |
| P _C | Collector power dissipation | T _C =25□ | 150 | W |
| T _j | Junction temperature | | 150 | □ |
| T _{stg} | Storage temperature | | -55~150 | □ |

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CHARACTERISTICS

T_j=25°C unless otherwise specified

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| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|----------------------|--------------------------------------|--|-----|------|-----|------|
| V _{(BR)CEO} | Collector-emitter breakdown voltage | I _C =25mA ; I _B =0 | 200 | | | V |
| V _{CEsat} | Collector-emitter saturation voltage | I _C =10A; I _B =1A | | | 2.0 | V |
| V _{BEsat} | Base-emitter saturation voltage | I _C =10A; I _B =1A | | | 2.5 | V |
| I _{CBO} | Collector cut-off current | V _{CB} =200V; I _E =0 | | | 0.1 | mA |
| I _{EBO} | Emitter cut-off current | V _{EB} =5V; I _C =0 | | | 0.1 | mA |
| h _{FE} | DC current gain | I _C =1A ; V _{CE} =5V | 40 | | 140 | |
| C _{OB} | Output capacitance | I _E =0 ; V _{CB} =10V; f=1.0MHz | | 300 | | pF |
| f _T | Transition frequency | I _C =1A ; V _{CE} =5V | | 15 | | MHz |

◆ h_{FE} Classifications

| O | R |
|-------|--------|
| 40-80 | 70-140 |

PACKAGE OUTLINE

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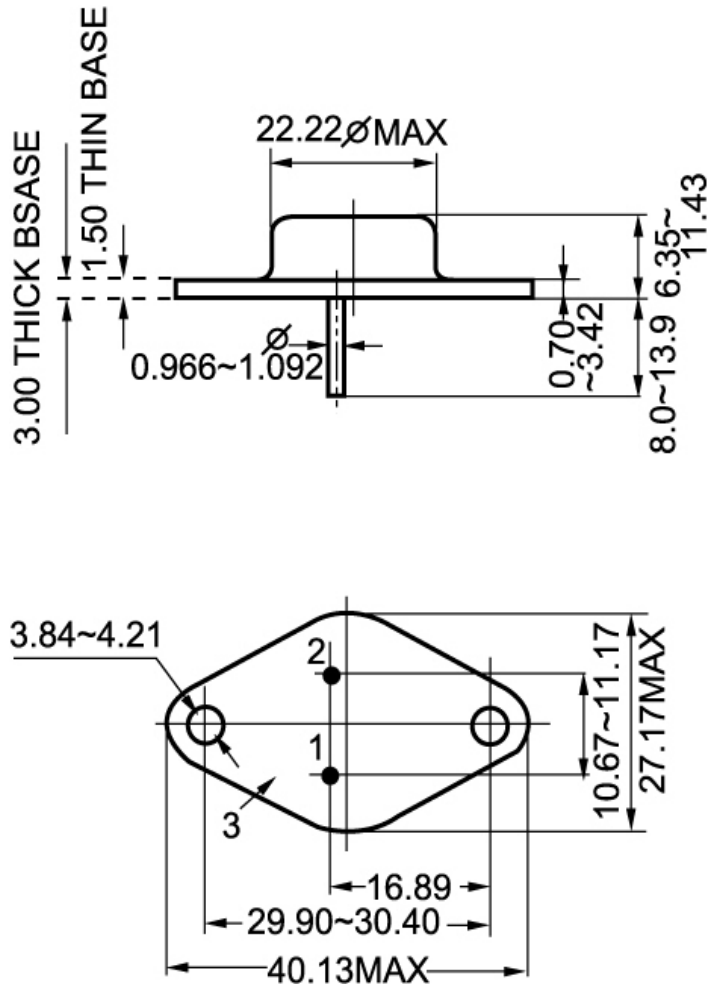


Fig.2 outline dimensions (unindicated tolerance:±0.1mm)