

Silicon NPN Power Transistors

2N6470 2N6471 2N6472

DESCRIPTION

- With TO-3 package
- Low collector saturation voltage
- Excellent safe operating area
- High gain at high current

APPLICATIONS

- General-purpose types of switching and linear-amplifier applications

PINNING

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

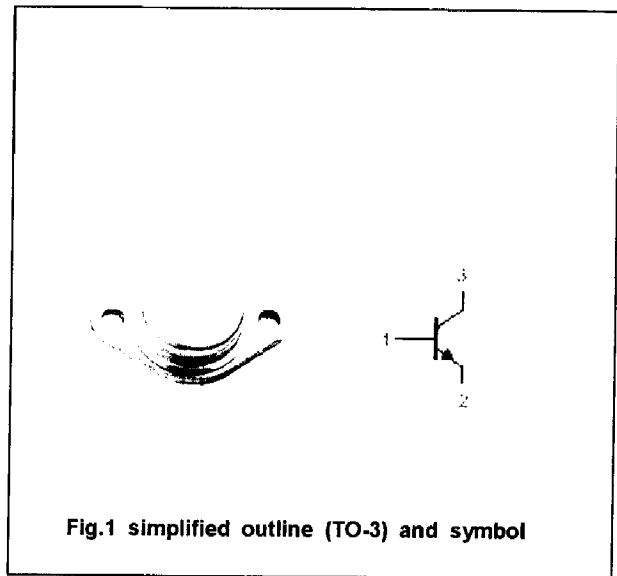


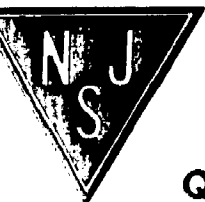
Fig.1 simplified outline (TO-3) and symbol

Absolute maximum ratings (Ta=□)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|------------------|---------------------------|---------------------------------|---------|------|
| V _{CBO} | Collector-base voltage | 2N6470 | 50 | V |
| | | 2N6471 | 70 | |
| | | 2N6472 | 90 | |
| V _{CEO} | Collector-emitter voltage | 2N6470 | 40 | V |
| | | 2N6471 | 60 | |
| | | 2N6472 | 80 | |
| V _{EBO} | Emitter-base voltage | Open collector | 5 | V |
| I _C | Collector current | | 15 | A |
| I _B | Base current | | 5 | A |
| P _T | Total power dissipation | T _C =25 _L | 125 | W |
| T _J | Junction temperature | | 150 | °C |
| T _{stg} | Storage temperature | | -65~200 | °C |

THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | VALUE | UNIT |
|---------------------|-------------------------------------|-------|------|
| R _{th-j-c} | Thermal resistance junction to case | 1.4 | °C/W |



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CHARACTERISTICS

Tj=25°C unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|-----------------------|--------------------------------------|--|-----|------|------------|------|
| V _{CE0(SUS)} | Collector-emitter sustaining voltage | I _C =0.2A ; I _B =0 | 40 | | | V |
| | | | 60 | | | |
| | | | 80 | | | |
| V _{CEsat-1} | Collector-emitter saturation voltage | I _C =5A ; I _B =0.5A | | | 1.3 | V |
| V _{CEsat-2} | Collector-emitter saturation voltage | I _C =15A ; I _B =3A | | | 3.5 | V |
| V _{BE} | Base-emitter on voltage | I _C =15A ; V _{CE} =4V | | | 3.5 | V |
| I _{CEO} | Collector cut-off current | V _{CE} =1/2Rated V _{CE0} ; I _B =0 | | | 1.0 | mA |
| I _{CEX} | Collector cut-off current | V _{CE} = Rated V _{CE0} ; V _{BE} =-1.5V T _C =150°C | | | 0.2 5.0 | mA |
| I _{EBO} | Emitter cut-off current | V _{EB} =5V ; I _C =0 | | | 1.0 | mA |
| h _{FE-1} | DC current gain | I _C =5A ; V _{CE} =4V | 20 | | 150 | |
| h _{FE-2} | DC current gain | I _C =15A ; V _{CE} =4V | 5 | | | |
| f _T | Transition frequency | I _C =0.5A ; V _{CE} =10V | 4 | | | |

