

Silicon NPN Power Transistors

2N3773

DESCRIPTION

- With TO-3 package
- Complement to type 2N6609
- High DC current gain
- Low saturation voltage
- High safe operating area

APPLICATIONS

- Designed for high power audio, disk head positioners and other linear applications. These devices can also be used in power switching circuits such as relay or solenoid drivers, dc to dc converters or inverters.

PINNING

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

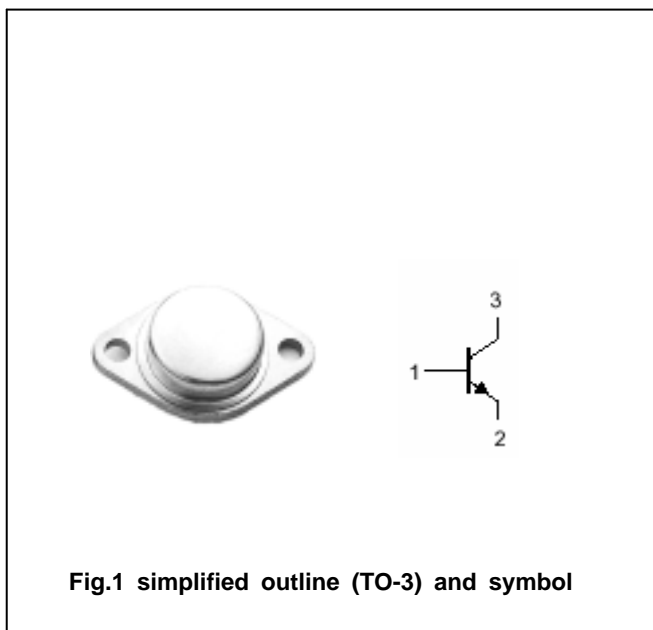


Fig.1 simplified outline (TO-3) and symbol

Absolute maximum ratings(Ta=)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|------------------|--|--------------------|--------------|---------|
| V _{CBO} | Collector-base voltage | Open emitter | 160 | V |
| V _{CEO} | Collector-emitter voltage | Open base | 140 | V |
| V _{EBO} | Emitter-base voltage | Open collector | 7 | V |
| I _C | Collector current | | 16 | A |
| I _{CM} | Collector current-peak | | 30 | A |
| I _B | Base current | | 4 | A |
| I _{BM} | Base current-peak | | 15 | A |
| P _D | Total Power Dissipation Derate above 25 | T _C =25 | 150 0.855 | W W/ |
| T _j | Junction temperature | | 150 | |
| T _{stg} | Storage temperature | | -65~200 | |

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CHARACTERISTICS

T_j=25 unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|-----------------------|--|--|-----|------|-------------|------|
| V _{CEO(SUS)} | Collector-emitter sustaining voltage | I _C =0.2A ; I _B =0 | 140 | | | V |
| V _{CEsat-1} | Collector-emitter saturation voltage | I _C =8A; I _B =0.8A | | | 1.4 | V |
| V _{CEsat-2} | Collector-emitter saturation voltage | I _C =16A ; I _B =3.2A | | | 4.0 | V |
| V _{BE} | Base-emitter on voltage | I _C =8A ; V _{CE} =4V | | | 2.2 | V |
| I _{CEO} | Collector cut-off current | V _{CE} =140V; I _B =0 | | | 2.0 | mA |
| I _{CEx} | Collector cut-off current | V _{CE} =140V; V _{BE(off)} =1.5V T _C =150 | | | 2.0 10.0 | mA |
| I _{EBO} | Emitter cut-off current | V _{EB} =7V; I _C =0 | | | 5.0 | mA |
| h _{FE-1} | DC current gain | I _C =8A ; V _{CE} =4V | 15 | | 60 | |
| h _{FE-2} | DC current gain | I _C =16A ; V _{CE} =4V | 5 | | | |
| I _{s/b} | Second breakdown collector current With base forward biased | V _{CE} =100Vdc, t=1.0s, Nonrepetitive | 1.5 | | | A |

THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | VALUE | UNIT |
|---------------------|-------------------------------------|-------|------|
| R _{th j-c} | Thermal resistance junction to case | 1.17 | /W |

PACKAGE OUTLINE

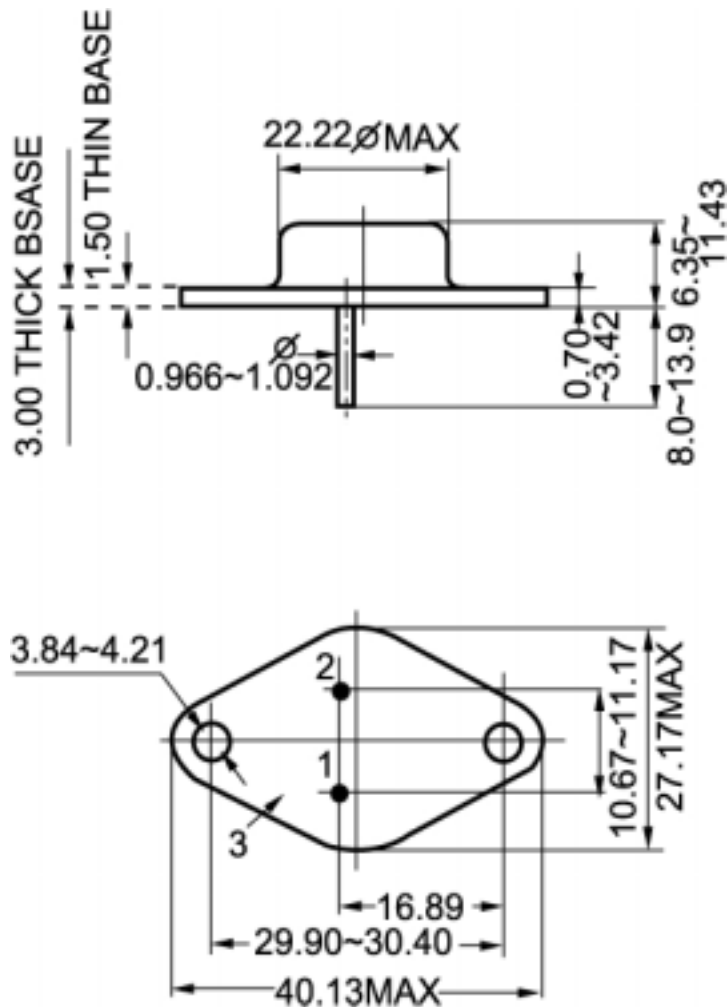


Fig.2 outline dimensions (unindicated tolerance: $\pm 0.10\text{mm}$)