

Silicon PNP Power Transistors

2N6107 2N6109 2N6111

DESCRIPTION

- With TO-220 package
- Complement to NPN type:
2N6288; 2N6290 ;2N6292

APPLICATIONS

- Power amplifier and switching circuits applications

PINNING

| PIN | DESCRIPTION |
|-----|--------------------------------------|
| 1 | Emitter |
| 2 | Collector;connected to mounting base |
| 3 | Base |

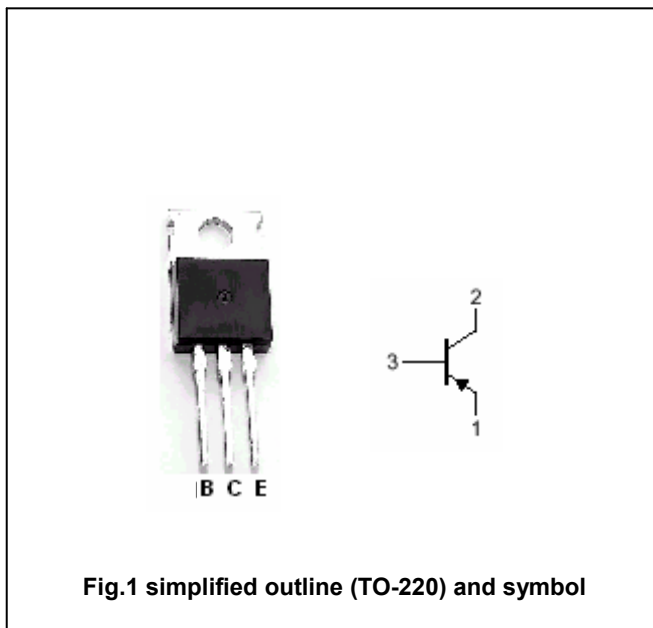


Fig.1 simplified outline (TO-220) and symbol

Absolute maximum ratings(Ta=25°C)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|------------------|---------------------------|----------------------|---------|------|
| V _{CBO} | Collector-base voltage | 2N6107 | -40 | V |
| | | 2N6109 | -60 | |
| | | 2N6111 | -80 | |
| V _{CEO} | Collector-emitter voltage | 2N6107 | -30 | V |
| | | 2N6109 | -50 | |
| | | 2N6111 | -70 | |
| V _{EBO} | Emitter-base voltage | Open collector | -5 | V |
| I _C | Collector current | | -7 | A |
| I _{CM} | Collector current-peak | | -10 | A |
| I _B | Base current | | -3 | A |
| P _T | Total power dissipation | T _C =25°C | 40 | W |
| T _j | Junction temperature | | 150 | °C |
| T _{stg} | Storage temperature | | -65~150 | °C |

THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---------------------|--|-------|------|
| R _{th j-c} | Thermal resistance from junction to case | 3.125 | °C/W |

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CHARACTERISTICS

T_j=25 °C unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT | | |
|-----------------------|--------------------------------------|--|---|------|------|--------------|----|--|
| V _{CE0(SUS)} | Collector-emitter sustaining voltage | 2N6107 | I _C =-0.1A ; I _B =0 | -30 | | | V | |
| | | 2N6109 | | -50 | | | | |
| | | 2N6111 | | -70 | | | | |
| V _{CEsat} | Collector-emitter saturation voltage | I _C =-7A; I _B =-3A | | | -3.5 | V | | |
| V _{BE} | Base-emitter on voltage | I _C =-7A ; V _{CE} =-4V | | | -3.0 | V | | |
| I _{CEO} | Collector cut-off current | 2N6107 | | | | -1.0 | mA | |
| | | 2N6109 | | | | | | V _{CE} =-40V; I _B =0 |
| | | 2N6111 | | | | | | V _{CE} =-60V; I _B =0 |
| I _{CEX} | Collector cut-off current | 2N6107 | | | | -0.1 -2.0 | mA | |
| | | 2N6109 | | | | | | V _{CE} =-60V; V _{BE} =-1.5V V _{CE} =-50V; V _{BE} =-1.5V, T _C =125 °C |
| | | 2N6111 | | | | | | V _{CE} =-80V; V _{BE} =-1.5V V _{CE} =-70V; V _{BE} =-1.5V, T _C =125 °C |
| I _{EBO} | Emitter cut-off current | V _{EB} =-5V; I _C =0 | | | -1.0 | mA | | |
| h _{FE-1} | DC current gain | 2N6107 | | 30 | | 150 | | |
| | | 2N6109 | | | | | | I _C =-2.5A ; V _{CE} =-4V |
| | | 2N6111 | | | | | | I _C =-3A ; V _{CE} =-4V |
| h _{FE-2} | DC current gain | I _C =-7A ; V _{CE} =-4V | 2.3 | | | | | |
| f _T | Transition frequency | I _C =-0.5A ; V _{CE} =-4V; f=1MHz | 10 | | | MHz | | |

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PACKAGE OUTLINE

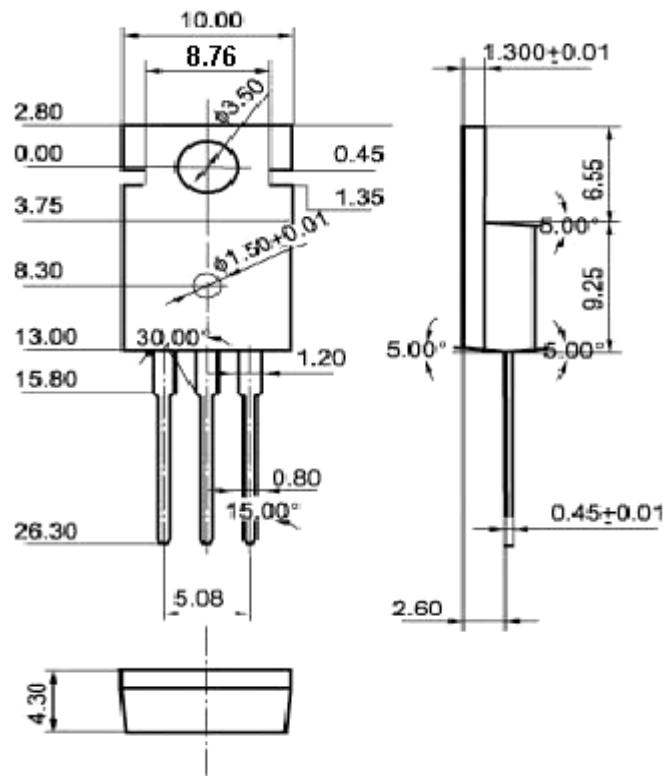


Fig.2 Outline dimensions(unindicated tolerance:±0.10 mm)