

Silicon NPN Power Transistors

2N5190 2N5191 2N5192

DESCRIPTION

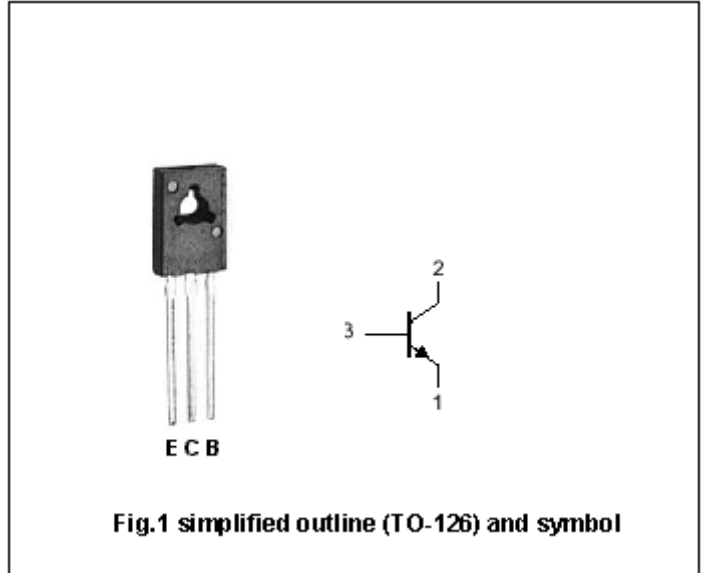
- With TO-126 package
- Complement to type 2N5193,2N5194,2N5195
- Excellent safe operating area

APPLICATIONS

- For use in medium power linear and switching applications

PINNING

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



Absolute maximum ratings(Ta=25)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|------------------|---------------------------|--------------------|---------|------|
| V _{CB0} | Collector-base voltage | 2N5190 | 40 | V |
| | | 2N5191 | 60 | |
| | | 2N5192 | 80 | |
| V _{CEO} | Collector-emitter voltage | 2N5190 | 40 | V |
| | | 2N5191 | 60 | |
| | | 2N5192 | 80 | |
| V _{EBO} | Emitter-base voltage | Open collector | 5 | V |
| I _C | Collector current | | 4 | A |
| I _{CM} | Collector current-Peak | | 7 | A |
| I _B | Base current | | 1 | A |
| P _D | Total power dissipation | T _C =25 | 40 | W |
| T _j | Junction temperature | | 150 | |
| T _{stg} | Storage temperature | | -65~150 | |

THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | VALUE | UNIT |
|---------------------|-------------------------------------|-------|------|
| R _{th j-c} | Thermal resistance junction to case | 3.12 | /W |

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CHARACTERISTICS

T_j=25 unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|----------------------|--------------------------------------|--|---|------|-----|------|
| V _{CEO} | Collector-emitter sustaining voltage | 2N5190 | I _C =0.1A; I _B =0 | | | V |
| | | 2N5191 | | | | |
| | | 2N5192 | | | | |
| V _{CEsat-1} | Collector-emitter saturation voltage | I _C =1.5A; I _B =0.15A | | | 0.6 | V |
| V _{CEsat-2} | Collector-emitter saturation voltage | I _C =4A; I _B =1A | | | 1.4 | V |
| V _{BE} | Emitter-base on voltage | I _C =1.5A; V _{CE} =2V | | | 1.2 | V |
| I _{CEO} | Collector cut-off current | 2N5190 | | | 1.0 | mA |
| | | 2N5191 | | | | |
| | | 2N5192 | | | | |
| I _{CBO} | Collector cut-off current | 2N5190 | | | 0.1 | mA |
| | | 2N5191 | | | | |
| | | 2N5192 | | | | |
| I _{CEX} | Collector cut-off current | 2N5190 | | | 0.1 | mA |
| | | 2N5191 | | | 2.0 | |
| | | 2N5192 | | | 0.1 | |
| | | | | | 2.0 | |
| I _{EBO} | Emitter cut-off current | V _{EB} =5V; I _C =0 | | | 1.0 | mA |
| h _{FE-1} | DC current gain | 2N5190 | I _C =1.5A; V _{CE} =2V | | 25 | 100 |
| | | 2N5191 | | | | |
| | | 2N5192 | | | | |
| h _{FE-2} | DC current gain | 2N5190 | I _C =4A; V _{CE} =2V | | 10 | |
| | | 2N5191 | | | | |
| | | 2N5192 | | | | |
| f _T | Transition frequency | I _C =1A; V _{CE} =10V; f=1MHz | 2 | | | MHz |

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PACKAGE OUTLINE

