

Silicon NPN Power Transistors

2SC1501

DESCRIPTION

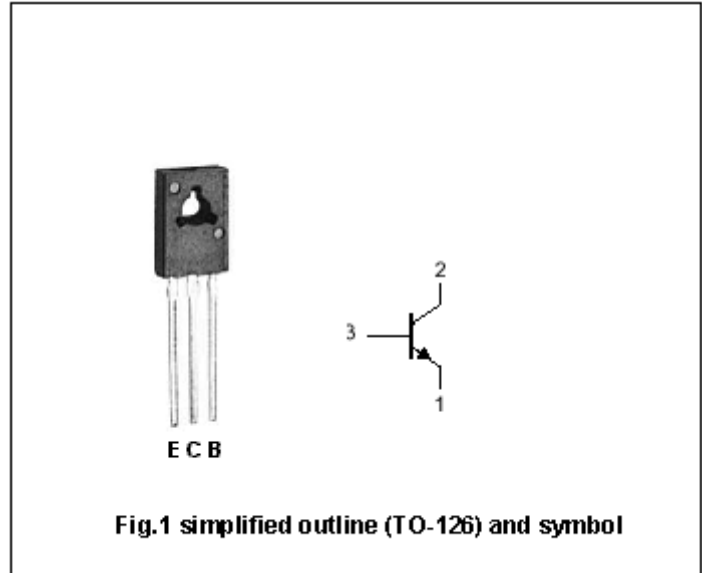
- With TO-126 package
- High breakdown voltage
- Large power dissipation

APPLICATIONS

- For medium power amplifier applications

PINNING

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



Absolute maximum ratings (Ta=25°C)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|-----------|-----------------------------|------------------------|---------|------------------|
| V_{CBO} | Collector-base voltage | Open emitter | 300 | V |
| V_{CEO} | Collector-emitter voltage | Open base | 300 | V |
| V_{EBO} | Emitter-base voltage | Open collector | 5 | V |
| I_C | Collector current | | 0.1 | A |
| I_{CM} | Collector current-peak | | 0.15 | A |
| P_C | Collector power dissipation | $T_C=25^\circ\text{C}$ | 10 | W |
| T_j | Junction temperature | | 150 | $^\circ\text{C}$ |
| T_{stg} | Storage temperature | | -55~150 | $^\circ\text{C}$ |

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CHARACTERISTICS

T_j=25°C unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|----------------------|--------------------------------------|--|-----|------|-----|------|
| V _{(BR)CBO} | Collector-base breakdown voltage | I _C =100 μ A; I _E =0 | 300 | | | V |
| V _{(BR)CEO} | Collector-emitter breakdown voltage | I _C =1mA; I _B =0 | 300 | | | V |
| V _{(BR)EBO} | Emitter-base breakdown voltage | I _E =100 μ A; I _C =0 | 5 | | | V |
| V _{CEsat} | Collector-emitter saturation voltage | I _C =100mA I _B =10m A | | | 5.0 | V |
| V _{BE} | Base-emitter on voltage | I _C =50mA ; V _{CE} =10V | | | 1.2 | V |
| h _{FE-1} | DC current gain | I _C =10mA ; V _{CE} =10V | 30 | | | |
| h _{FE-2} | DC current gain | I _C =50mA ; V _{CE} =10V | 30 | | 200 | |
| I _{CBO} | Collector cut-off current | V _{CB} =300V ; I _E =0 | | | 100 | μ A |
| C _{OB} | Output capacitance | I _E =0; V _{CB} =30V;f=1MHz | | 8 | | pF |
| f _T | Transition frequency | I _E =20mA ; V _{CB} =30V | | 55 | | MHz |

◆ h_{FE-2} classifications

| P | Q | R | S |
|-------|--------|--------|---------|
| 30-60 | 50-100 | 80-150 | 100-200 |

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PACKAGE OUTLINE

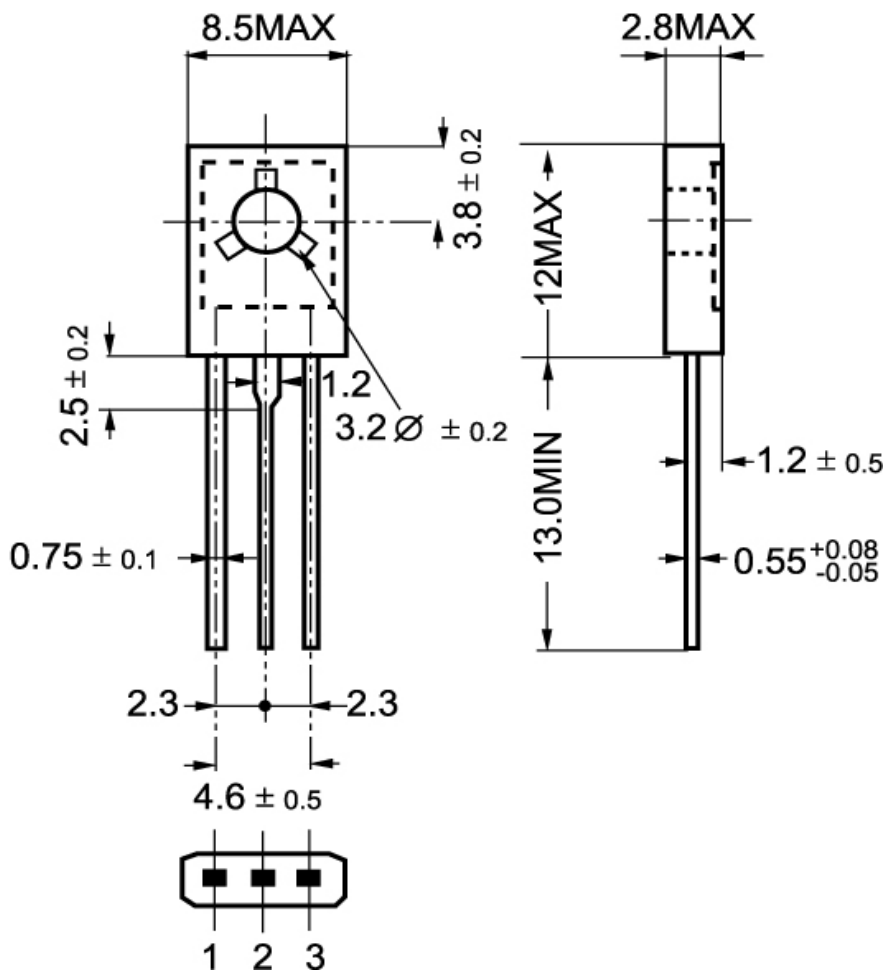


Fig.2 outline dimensions