

Silicon NPN Power Transistors

2SC1096

DESCRIPTION

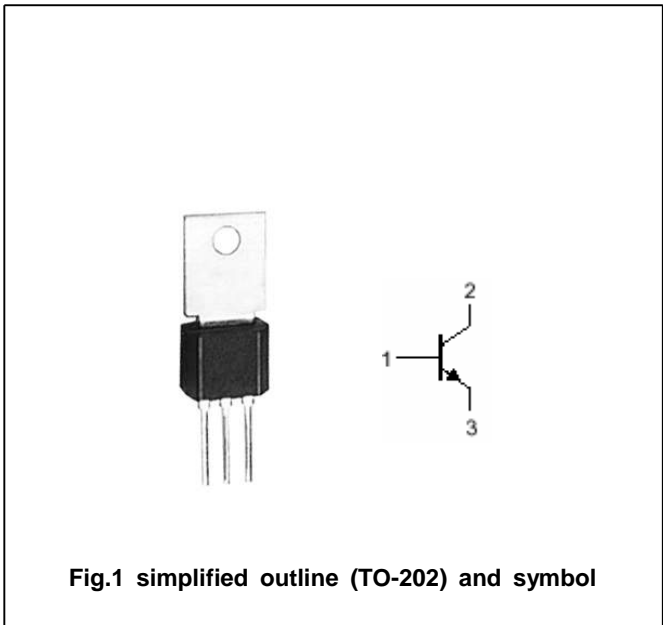
- With TO-202 package
- Low breakdown voltage
- High current
- High f_T

APPLICATIONS

- For audio frequency power amplifier and low speed switching applications
- Suitable for output stages of 3 to 5 watts car radio sets and car stereo

PINNING(see Fig.2)

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



Absolute maximum ratings (Ta=25?)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|-----------|-----------------------------|----------------|---------|------|
| V_{CBO} | Collector-base voltage | Open emitter | 40 | V |
| V_{CEO} | Collector-emitter voltage | Open base | 30 | V |
| V_{EBO} | Emitter-base voltage | Open collector | 5 | V |
| I_C | Collector current | | 3 | A |
| I_{CM} | Collector current-peak | | 6 | A |
| I_B | Base current | | 0.6 | A |
| P_C | Collector power dissipation | $T_a=25?$ | 1.2 | W |
| | | $T_C=25?$ | 10 | |
| T_j | Junction temperature | | 150 | ? |
| T_{stg} | Storage temperature | | -55~150 | ? |

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CHARACTERISTICS

T_j=25? unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|----------------------|--------------------------------------|---|-----|------|-----|------|
| V _{CEsat} | Collector-emitter saturation voltage | I _C =3A ; I _B =0.3A | | | 2.0 | V |
| V _{BEsat} | Base-emitter saturation voltage | I _C =3A ; I _B =0.3A | | | 2.0 | V |
| V _{(BR)CEO} | Collector-emitter breakdown voltage | I _C =10mA ; I _B =0 | 30 | | | V |
| I _{CBO} | Collector cut-off current | V _{CB} =30V ; I _E =0 | | | 1.0 | μA |
| I _{EBO} | Emitter cut-off current | V _{EB} =3V ; I _C =0 | | | 1.0 | μA |
| h _{FE-1} | DC current gain | I _C =20mA ; V _{CE} =5V | 20 | | | |
| h _{FE-2} | DC current gain | I _C =1.0A ; V _{CE} =5V | 40 | | 250 | |
| C _{OB} | Output capacitance | I _E =0 ; V _{CB} =10V ; f=1.0MHz | | 55 | | pF |
| f _T | Transition frequency | I _C =0.1A ; V _{CE} =5V | | 65 | | MHz |

U h_{FE-1} classifications

| N | M | L | K |
|-------|--------|--------|---------|
| 40-60 | 50-100 | 80-160 | 120-250 |

PACKAGE OUTLINE

