

Silicon NPN Power Transistors

2SD1563A

DESCRIPTION

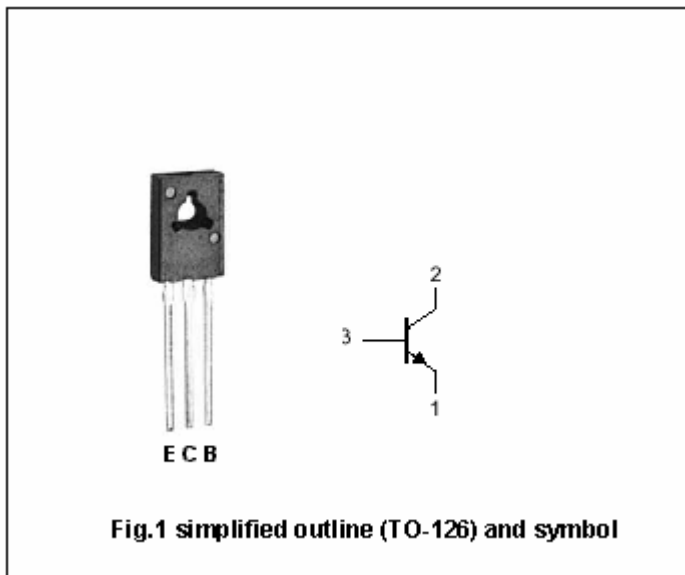
- With TO-126 package
- Complement to type 2SB1086A
- Wide area of safe operation
- High breakdown voltage : $BV_{CEO}=160V(\text{min})$

APPLICATIONS

- For low frequency power amplifier applications

PINNING

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



Absolute maximum ratings($T_a=25^\circ\text{C}$)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|-----------|-----------------------------|------------------------|---------|------------------|
| V_{CBO} | Collector-base voltage | Open emitter | 160 | V |
| V_{CEO} | Collector-emitter voltage | Open base | 160 | V |
| V_{EBO} | Emitter-base voltage | Open collector | 5 | V |
| I_C | Collector current | | 1.5 | A |
| I_{CM} | Collector current-peak | | 3.0 | A |
| P_C | Collector power dissipation | $T_C=25^\circ\text{C}$ | 10 | W |
| | | $T_a=25^\circ\text{C}$ | 1.2 | |
| 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)CEO} | Collector-emitter breakdown voltage | I _C =1mA ; I _B =0 | 160 | | | V |
| V _{(BR)EBO} | Emitter-base breakdown voltage | I _E =50μA ; I _C =0 | 5 | | | V |
| V _{(BR)CBO} | Collector-base breakdown voltage | I _C =50μA ; I _E =0 | 160 | | | V |
| V _{CEsat} | Collector-emitter saturation voltage | I _C =1.0A ; I _B =0.1A | | | 2.0 | V |
| V _{BEsat} | Base-emitter saturation voltage | I _C =1.0A ; I _B =0.1A | | | 1.5 | V |
| I _{CBO} | Collector cut-off current | V _{CB} =120V ; I _E =0 | | | 1.0 | μA |
| I _{EBO} | Emitter cut-off current | V _{EB} =4V ; I _C =0 | | | 1.0 | μA |
| h _{FE} | DC current gain | I _C =0.1A ; V _{CE} =5V | 56 | | 270 | |
| f _T | Transition frequency | I _C =0.1A ; V _{CE} =5V | | 80 | | MHz |
| C _{OB} | Output capacitance | I _E =0 ; V _{CB} =10V ; f=1MHz | | 20 | | pF |

◆ h_{FE} Classifications

| N | P | Q |
|--------|--------|---------|
| 56-120 | 82-180 | 120-270 |

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PACKAGE OUTLINE

