

Silicon NPN Darlington Power Transistors

2SD2386

DESCRIPTION

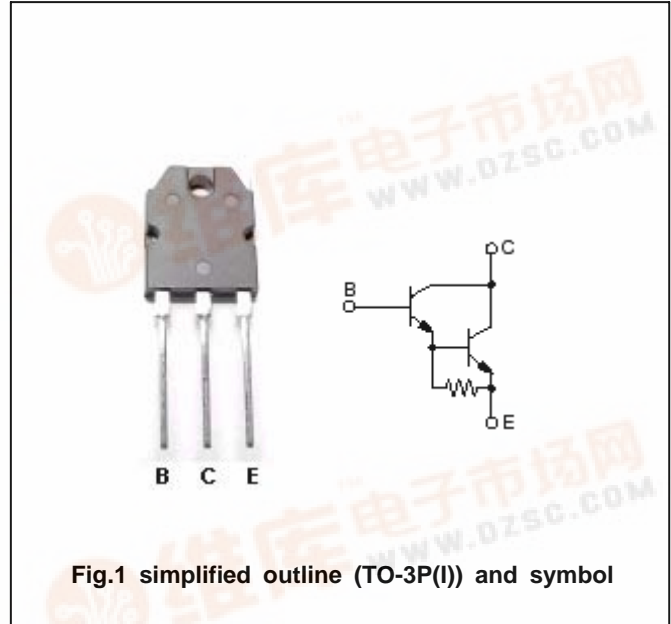
- With TO-3P(I) package
- Complement to type 2SB1557
- High breakdown voltage: $V_{CE0}=140V(\text{Min})$

APPLICATIONS

- Power amplifier applications

PINNING

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



Absolute maximum ratings($T_a=\text{°C}$)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|-----------|-----------------------------|-------------------|---------|------|
| V_{CBO} | Collector-base voltage | Open emitter | 140 | V |
| V_{CEO} | Collector-emitter voltage | Open base | 140 | V |
| V_{EBO} | Emitter-base voltage | Open collector | 5 | V |
| I_C | Collector current | | 7 | A |
| I_B | Base current | | 0.1 | A |
| P_C | Collector power dissipation | $T_c=25\text{°C}$ | 70 | W |
| T_j | Junction temperature | | 150 | °C |
| T_{stg} | Storage temperature | | -55~150 | °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 =50mA ; I _B =0 | 140 | | | V |
| V _{CEsat} | Collector-emitter saturation voltage | I _C =6A ; I _B =6mA | | | 2.5 | V |
| V _{BE} | Base-emitter voltage | I _C =6A ; V _{CE} =5V | | | 3.0 | V |
| I _{CBO} | Collector cut-off current | V _{CB} =140V I _E =0 | | | 5.0 | μ A |
| I _{EBO} | Emitter cut-off current | V _{EB} =5V ; I _C =0 | | | 5.0 | μ A |
| h _{FE-1} | DC current gain | I _C =6A ; V _{CE} =5V | 5000 | | 30000 | |
| h _{FE-2} | DC current gain | I _C =10A ; V _{CE} =5V | 2000 | | | |
| C _{ob} | Collector output capacitance | I _E =0 ; V _{CB} =10V ; f=1MHz | | 90 | | pF |
| f _T | Transition frequency | I _C =1A ; V _{CE} =5V | | 30 | | MHz |

◆ h_{FE-1} Classifications

| A | B | C |
|------------|------------|-------------|
| 5000-12000 | 9000-18000 | 15000-30000 |

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PACKAGE OUTLINE

