

Silicon PNP Power Transistors

2SB1470

DESCRIPTION

- With TO-3PL package
- Complement to type 2SD2222
- High DC current gain
- Low collector saturation voltage
- DARLINGTON

APPLICATIONS

- For power amplification

PINNING

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

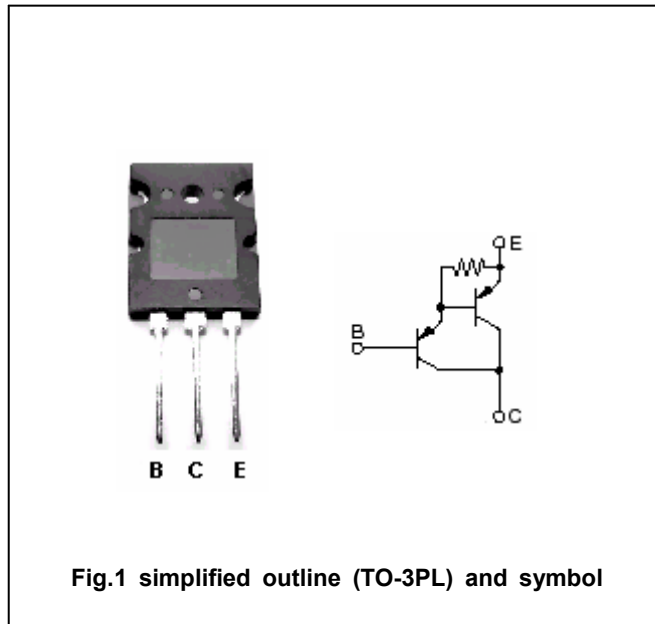


Fig.1 simplified outline (TO-3PL) and symbol

Absolute maximum ratings(Ta=25°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 | | -8 | A |
| I _{CM} | Collector current-peak | | -15 | A |
| P _C | Collector power dissipation | T _C =25°C | 120 | W |
| | | T _a =25°C | 3.5 | |
| 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 =-30mA ; I _B =0 | -160 | | | V |
| V _{CEsat} | Collector-emitter saturation voltage | I _C =-7A ; I _B =-7mA | | | -3.0 | V |
| V _{BEsat} | Base-emitter saturation voltage | I _C =-7A ; I _B =-7mA | | | -3.0 | V |
| I _{CBO} | Collector cut-off current | V _{CB} =-160V ; I _E =0 | | | -100 | μA |
| I _{CEO} | Collector cut-off current | V _{CE} =-160V ; I _B =0 | | | -100 | μA |
| I _{EBO} | Emitter cut-off current | V _{EB} =-5V ; I _C =0 | | | -100 | μA |
| h _{FE-1} | DC current gain | I _C =-1A ; V _{CE} =-5V | 1000 | | | |
| h _{FE-2} | DC current gain | I _C =-7A ; V _{CE} =-5V | 3500 | | 20000 | |
| f _T | Transition frequency | I _C =-0.5A ; V _{CE} =-10V ; f=1MHz | | 20 | | MHz |

Switching times

| | | | | | | |
|-----------------|--------------|--|--|-----|--|----|
| t _{on} | Turn-on time | I _C =-7A ; I _{B1} =-I _{B2} =-7mA V _{CC} =-50V | | 1.0 | | μs |
| t _s | Storage time | | | 1.5 | | μs |
| t _f | Fall time | | | 1.2 | | μs |

◆ h_{FE-2} classifications

| Q | S |
|------------|------------|
| 3500-10000 | 7000-20000 |

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PACKAGE OUTLINE

