

Silicon PNP Power Transistors

2SB868

DESCRIPTION

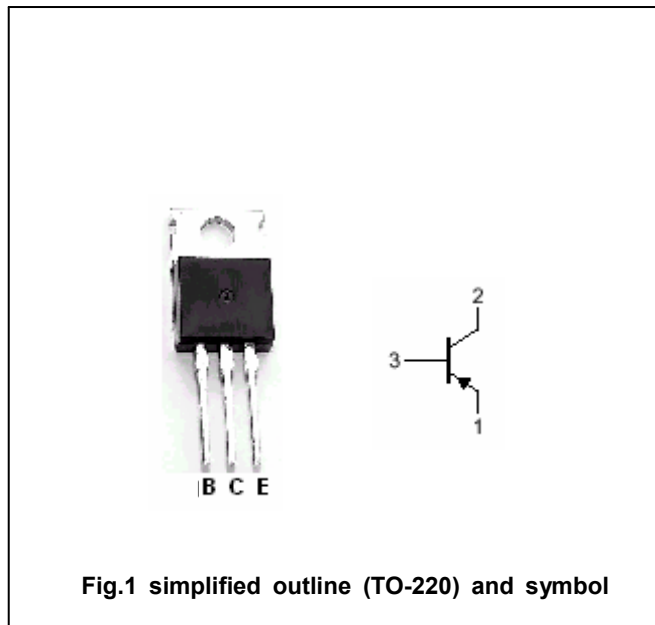
- With TO-220C package
- Complement to type 2SD960
- Low collector saturation voltage
- High collector current capability

APPLICATIONS

- For power switching 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 | -130 | V |
| V_{CEO} | Collector-emitter voltage | Open base | -80 | V |
| V_{EBO} | Emitter-base voltage | Open collector | -7 | V |
| I_C | Collector current (DC) | | -4 | A |
| I_{CM} | Collector current-Peak | | -8 | A |
| P_C | Collector dissipation | $T_C=25^\circ\text{C}$ | 35 | W |
| T_j | Junction temperature | | 150 | $^\circ\text{C}$ |
| T_{stg} | Storage temperature | | -50~150 | $^\circ\text{C}$ |

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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 =-10mA; I _B =0 | -80 | | | V |
| V _{CEsat} | Collector-emitter saturation voltage | I _C =-3A; I _B =-0.15A | | | -0.5 | V |
| V _{BEsat} | Base-emitter saturation voltage | I _C =-3A; I _B =-0.15A | | | -1.5 | V |
| I _{CBO} | Collector cut-off current | V _{CB} =-100V; I _E =0 | | | -10 | μA |
| I _{EBO} | Emitter cut-off current | V _{EB} =-5V; I _C =0 | | | -50 | μA |
| h _{FE-1} | DC current gain | I _C =-0.1A; V _{CE} =-2V | 45 | | | |
| h _{FE-2} | DC current gain | I _C =-1A; V _{CE} =-2V | 60 | | 260 | |
| f _T | Transition frequency | I _C =-0.5A; V _{CE} =-10V | | 30 | | MHz |

Switching times

| | | | | | | |
|------------------|--------------|---|--|------|--|----|
| t _{on} | Turn-on time | I _C =-1A; I _{B1} =-I _{B2} =-0.1A | | 0.15 | | μs |
| t _{stg} | Storage time | | | 0.8 | | μs |
| t _f | Fall time | | | 0.15 | | μs |

◆ h_{FE-2} Classifications

| R | Q | P |
|--------|--------|---------|
| 60-120 | 90-180 | 130-260 |

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PACKAGE OUTLINE



Fig.2 Outline dimensions (unindicated tolerance:±0.10mm)