

Silicon PNP Power Transistors

2SB1021

DESCRIPTION

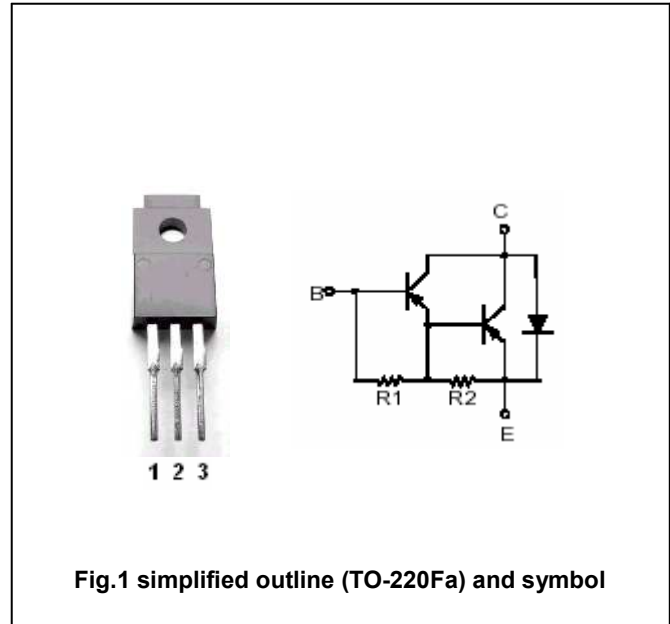
- With TO-220Fa package
- High DC current gain
- Low saturation voltage
- Complement to type 2SD1416

APPLICATIONS

- High power switching applications
- Hammer drive,pulse motor drive applications

PINNING

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

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

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|-----------|-----------------------------|------------------------|---------|------------------|
| V_{CBO} | Collector-base voltage | Open emitter | -80 | V |
| V_{CEO} | Collector -emitter voltage | Open base | -80 | V |
| V_{EBO} | Emitter-base voltage | Open collector | -5 | V |
| I_C | Collector current | | -7 | A |
| I_B | Base current | | -0.2 | A |
| P_C | Collector power dissipation | $T_a=25^\circ\text{C}$ | 2.0 | W |
| | | $T_C=25^\circ\text{C}$ | 30 | |
| 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 =-50mA; I _B =0 | -80 | | | V |
| V _{CEsat-1} | Collector-emitter saturation voltage | I _C =-3A; I _B =-6mA | | | -1.5 | V |
| V _{CEsat-2} | Collector-emitter saturation voltage | I _C =-7A; I _B =-14mA | | | -2.0 | V |
| V _{BEsat} | Base-emitter saturation voltage | I _C =-3A; I _B =-6mA | | | -2.5 | V |
| I _{CBO} | Collector cut-off current | V _{CB} =-80V; I _E =0 | | | -100 | μA |
| I _{EBO} | Emitter cut-off current | V _{EB} =-5V; I _C =0 | | | -4.0 | mA |
| h _{FE-1} | DC current gain | I _C =-3A; V _{CE} =-3V | 2000 | | 15000 | |
| h _{FE-2} | DC current gain | I _C =-7A; V _{CE} =-3V | 1000 | | | |

Switching times

| | | | | | | |
|------------------|--------------|---|--|-----|--|----|
| t _{on} | Turn-on time | I _{B1} =-I _{B2} =-6mA; V _{CC} ≈-45V R _L =15Ω | | 0.8 | | μs |
| t _{stg} | Storage time | | | 2.0 | | μs |
| t _f | Fall time | | | 2.5 | | μs |

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PACKAGE OUTLINE

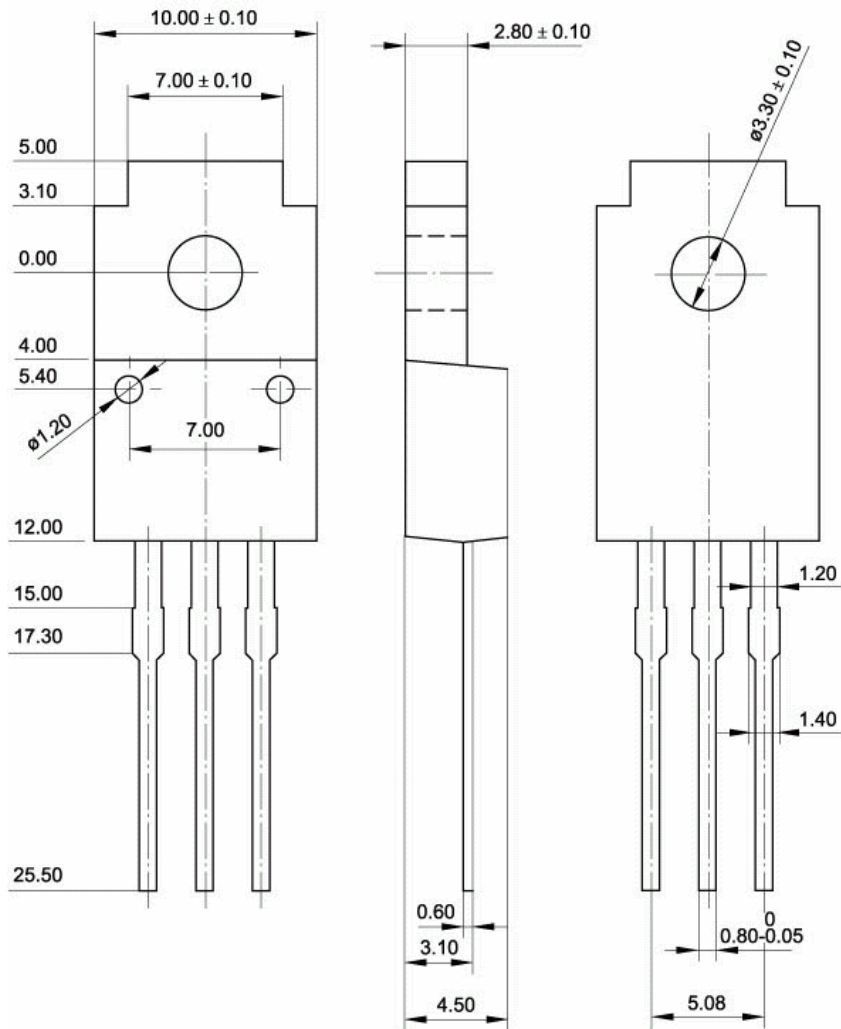


Fig.2 Outline dimensions (unindicated tolerance: ± 0.15 mm)