

Silicon NPN Power Transistors

2SC3528

DESCRIPTION

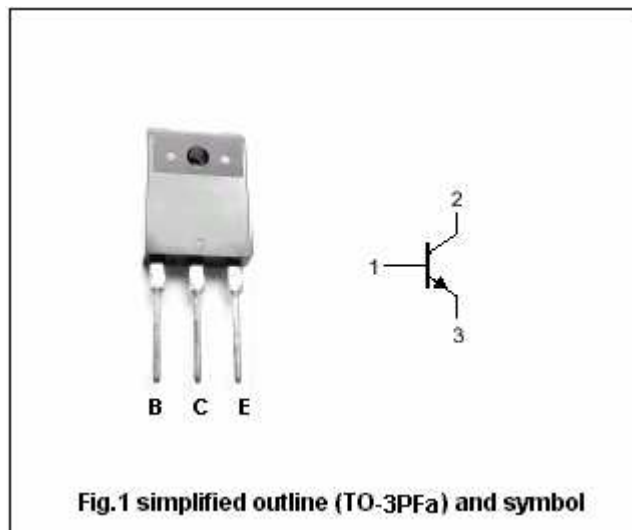
- With TO-3PFa package
- High collector current
- Low saturation voltage

APPLICATIONS

- For high voltage ,high speed power switching applications

PINNING(see Fig.2)

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

ABSOLUTE MAXIMUM RATINGS($T_C=25^\circ\text{C}$)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|-----------|-----------------------------|------------------------|---------|------------------|
| V_{CBO} | Collector-base voltage | Open emitter | 500 | V |
| V_{CEO} | Collector-emitter voltage | Open base | 400 | V |
| V_{EBO} | Emitter-base voltage | Open collector | 7 | V |
| I_C | Collector current | | 20 | A |
| I_{CP} | Collector current-peak | | 30 | A |
| I_B | Base current | | 6 | A |
| P_C | Collector power dissipation | $T_C=25^\circ\text{C}$ | 125 | W |
| | | $T_a=25^\circ\text{C}$ | 3 | |
| 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 _{CEO(SUS)} | Collector-emitter sustaining voltage | I _C =0.5A ; L=25mH | 400 | | | V |
| V _{CE(sat)} | Collector-emitter saturation voltage | I _C =10A; I _B =2A | | | 1.0 | V |
| V _{BE(sat)} | Base-emitter saturation voltage | I _C =10A; I _B =2A | | | 1.5 | V |
| I _{CBO} | Collector cut-off current | V _{CB} =500V; I _E =0 | | | 0.1 | mA |
| I _{EBO} | Emitter cut-off current | V _{EB} =7V; I _C =0 | | | 0.1 | mA |
| h _{FE-1} | DC current gain | I _C =2A ; V _{CE} =5V | 15 | | | |
| h _{FE-2} | DC current gain | I _C =10A ; V _{CE} =5V | 10 | | | |
| f _T | Transition frequency | I _C =1A ; V _{CE} =10V; f=1.0MHz | | 15 | | MHz |

Switching times

| | | | | | | |
|-----------------|--------------|---|--|--|-----|----|
| t _{on} | Turn-on time | I _C =10A; I _{B1} =-I _{B2} =2.0A V _{CC} =125V | | | 1.0 | μs |
| t _s | Storage time | | | | 2.5 | μs |
| t _f | Fall time | | | | 1.0 | μs |

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PACKAGE OUTLINE



Fig.2 outline dimensions (unindicated tolerance:±0.3mm)