

Silicon NPN Power Transistors

BUH517

DESCRIPTION

- With TO-3PML package
- High voltage,high speed
- Low collector saturation voltage

APPLICATIONS

- Horizontal deflection stage in standard and high resolution displays for TV's and monitors.
- Switching power supplies for TV's and monitors.

PINNING

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

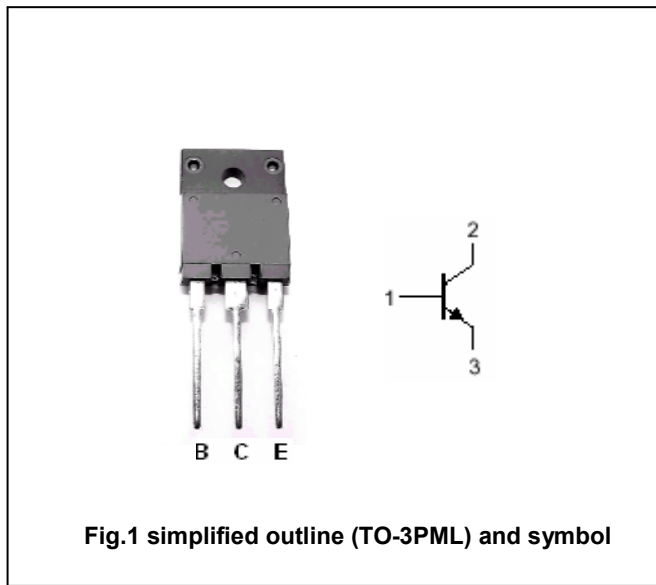


Fig.1 simplified outline (TO-3PML) and symbol

Absolute maximum ratings(Ta=25°C)

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|------------------|--------------------------------|----------------------|---------|------|
| V _{CBO} | Collector-base voltage | Open emitter | 1700 | V |
| V _{CEO} | Collector-emitter voltage | Open base | 700 | V |
| V _{EBO} | Emitter-base voltage | Open collector | 10 | V |
| I _C | Collector current (DC) | | 8 | A |
| I _{CM} | Collector current (Pulse) | | 15 | A |
| I _B | Base current (DC) | | 5 | A |
| I _{BM} | Base current (Pulse) | | 8 | A |
| P _{tot} | Total power dissipation | T _C =25°C | 60 | W |
| T _j | Operating junction temperature | | 150 | °C |
| T _{stg} | Storage temperature | | -65~150 | °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 =100mA; I _B =0 | 700 | | | V |
| V _{(BR)EBO} | Emitter-base breakdown voltage | I _E =10mA; I _C =0 | 10 | | | V |
| V _{CEsat} | Collector-emitter saturation voltage | I _C =5A; I _B =1.25A | | | 1.5 | V |
| V _{BEsat} | Base-emitter saturation voltage | I _C =5A; I _B =1.25A | | | 1.3 | V |
| I _{CES} | Collector cut-off current | V _{CE} =1700V; V _{BE} =0 T _j =125°C | | | 1.0 2.0 | mA |
| I _{EBO} | Emitter cut-off current | V _{EB} =5V; I _C =0 | | | 100 | μA |
| h _{FE} | DC current gain | I _C =5A; V _{CE} =5V | 6 | | | |

Switching times

| | | | | | | |
|----------------|--------------|---|--|-----|-----|----|
| t _s | Storage time | I _C =5A; I _{B1} =1.25A; I _{B2} =2.5A; V _{CC} =400V | | 2.7 | 3.9 | μs |
| t _f | Fall time | | | 190 | 280 | ns |

THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---------------------|--|------|------|
| R _{th j-c} | Thermal resistance from junction to case | 2.08 | °C/W |

