

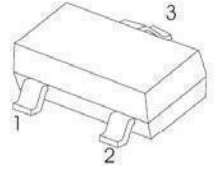


MMBT3906 TRANSISTOR (PNP)

SOT - 23

FEATURES

- As complementary type, the NPN transistor MMBT3904 is Recommended
- Epitaxial planar die construction



1. BASE
2. EMITTER
3. COLLECTOR

MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

| Symbol | Parameter | Value | Units |
|------------------|--|----------|-------|
| V _{CBO} | Collector-Base Voltage | -40 | V |
| V _{CEO} | Collector-Emitter Voltage | -40 | V |
| V _{EBO} | Emitter-Base Voltage | -5 | V |
| I _C | Collector Current -Continuous | -0.2 | A |
| P _C | Collector Dissipation | 0.2 | W |
| R _{θJA} | Thermal resistance junction to ambient | 625 | °C/W |
| T _J | Junction Temperature | 150 | °C |
| T _{stg} | Storage Temperature | -55~+150 | °C |

ELECTRICAL CHARACTERISTICS (T_{amb}=25°C unless otherwise specified)

| Parameter | Symbol | Test conditions | MIN | MAX | UNIT |
|--------------------------------------|-----------------------|---|-----|-------|------|
| Collector-base breakdown voltage | V _{(BR)CBO} | I _C =-10μA, I _E =0 | -40 | | V |
| Collector-emitter breakdown voltage | V _{(BR)CEO} | I _C =-1mA, I _B =0 | -40 | | V |
| Emitter-base breakdown voltage | V _{(BR)EBO} | I _E =-10μA, I _C =0 | -5 | | V |
| Collector cut-off current | I _{CBO} | V _{CB} =-40V, I _E =0 | | -100 | nA |
| Collector cut-off current | I _{CEX} | V _{CE} =-30V, V _{BE(off)} =-3V | | -50 | nA |
| Emitter cut-off current | I _{EBO} | V _{EB} =-5V, I _C =0 | | -100 | nA |
| DC current gain | h _{FE1} | V _{CE} =-1V, I _C =-10mA | 100 | 300 | |
| | h _{FE2} | V _{CE} =-1V, I _C =-50mA | 60 | | |
| | h _{FE3} | V _{CE} =-1V, I _C =-100mA | 30 | | |
| Collector-emitter saturation voltage | V _{CE(sat)1} | I _C =-50mA, I _B =-5mA | | -0.3 | V |
| Base-emitter saturation voltage | V _{BE(sat)} | I _C =-50mA, I _B =-5mA | | -0.95 | V |
| Transition frequency | f _T | V _{CE} =-20V, I _C =-10mA, f=100MHz | 300 | | MHz |
| Delay Time | td | V _{CC} =-3V, V _{BE} =-0.5V I _C =-10mA, I _{B1} =I _{B2} =-1mA | | 35 | nS |
| Rise Time | tr | | | 35 | nS |
| Storage Time | ts | V _{CC} =-3V, I _C =-10mA I _{B1} =I _{B2} =-1mA | | 225 | nS |
| Fall Time | tf | | | 75 | nS |

CLASSIFICATION OF h_{FE(1)}

| HFE | 100-300 | |
|-------|-----------|-----------|
| RANK | L | H |
| RANGE | 100 - 200 | 200 - 300 |

Typical Characteristics

