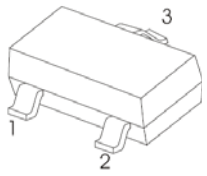
**MMBT3906-2A**

# SOT-23 Plastic-Encapsulate Transistors

## MMBT3906Z TRANSISTOR (PNP)

**SOT－23**




**1. BASE**
**2. EMITTER**
**3. COLLECTOR**

### FEATURES

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

## MARKING: 2A

### MAXIMUM RATINGS ($T_A$=25℃ unless otherwise noted)

| Symbol | Parameter | Value | Units |
|---|---|---|---|
| $V_{CBO}$ | Collector-Base Voltage | -50 | 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 |
| $R_{\theta JA}$ | Thermal resistance junction to ambient | 625 | ℃/W |
| $T_J$ | Junction Temperature | 150 | ℃ |
| $T_{stg}$ | Storage Temperature | -55~+150 | ℃ |

### ELECTRICAL CHARACTERISTICS (Tamb=25℃ unless otherwise specified)

| Parameter | Symbol | Test conditions | MIN | MAX | UNIT |
|---|---|---|---|---|---|
| Collector-base breakdown voltage | $V_{(BR)CBO}$ | $I_C$ =-100uA | -50 | | V |
| Collector-emitter breakdown voltage | $V_{(BR)CEO}$ | $I_C$= -1mA, $I_B$=0 | -40 | | V |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | $I_E$=-100uA | -5 | | V |
| Collector cut-off current | $I_{CBO}$ | $V_{CB}$= -40 V, $I_E$=0 | | -100 | nA |
| Collector cut-off current | $I_{CEO}$ | $V_{CE}$ =-35V | | -1.0 | uA |
| 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 | 400 | |
| | $h_{FE2}$ | $V_{CE}$= -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 | | -1.0 | V |
| Transition frequency | $f_T$ | $V_{CE}$=-20V,$I_C$=-10mA,f=100MHz | 300 | | MHz |

### CLASSIFICATION OF $h_{FE(1)}$

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