

## SOT-23 Plastic-Encapsulate Transistors

## MMBT3904 TRANSISTOR (NPN)

## FEATURES

Complimentary to MMBT3906

MARKING:1AM

## MAXIMUM RATINGS (TA=25°C unless otherwise noted)

| Symbol<br>(符号) | Parameter<br>(参数名称)                   | Value<br>(额定值) | Units<br>(单位) |
|----------------|---------------------------------------|----------------|---------------|
| VCBO           | Collector-Base Voltage (集电极-基极电压)     | 60             | V             |
| VCEO           | Collector-Emitter Voltage (集电极-发射极电压) | 40             | V             |
| VEBO           | Emitter-Base Voltage (发射极-基极电压)       | 6              | V             |
| IC             | Collector Current -Continuous (集电极电流) | 0.2            | A             |
| PC             | Collector Power Dissipation (耗散功率)    | 0.2            | W             |
| Tj             | Junction Temperature (结温)             | 150            | °C            |
| Tstg           | Storage Temperature (储存温度)            | -55-150        | °C            |

## SOT-23

1. BASE  
2. EMITTER  
3. COLLECTOR



## ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)

| Parameter<br>(参数名称)                                 | Symbol<br>(符号) | Test conditions<br>(测试条件)   | MIN<br>(最小值) | TYP<br>(典型值) | MAX<br>(最大值) | UNIT<br>(单位) |
|-----------------------------------------------------|----------------|-----------------------------|--------------|--------------|--------------|--------------|
| Collector-base breakdown voltage<br>集电极-基极击穿电压      | V(BR)CBO       | IC= 100μA, IE=0             | 60           |              |              | V            |
| Collector-emitter breakdown voltage<br>集电极-发射极击穿电压  | V(BR)CEO       | IC= 1mA, IB=0               | 40           |              |              | V            |
| Emitter-base breakdown voltage<br>发射极-基极击穿电压        | V(BR)EBO       | IE=100μA, IC=0              | 6            |              |              | V            |
| Collector cut-off current<br>集电极-基极截止电流             | ICBO           | VCB=40 V, IE=0              |              |              | 1            | μA           |
| Collector cut-off current<br>集电极-发射极截止电流            | ICEO           | VCE=35V, IB=0               |              |              | 10           | μA           |
| Emitter cut-off current<br>发射极-基极截止电流               | IEBO           | VEB=5V, IC=0                |              |              | 1            | μA           |
| DC current gain<br>直流电流增益                           | hFE            | VCE=1V, IC= 10mA            | 100          |              | 400          |              |
| Collector-emitter saturation voltage<br>集电极-发射极饱和压降 | VCE(sat)       | IC=50mA, IB= 5mA            |              |              | 0.3          | V            |
| Base-emitter saturation voltage<br>发射极-基极饱和压降       | VBE(sat)       | IC=50mA, IB= 5mA            |              |              | 1            | V            |
| Transition frequency<br>特征频率                        | fr             | VCE=20V IC=10mA<br>f=100MHz | 300          |              |              | MHz          |

## CLASSIFICATION OF hFE

| Range | 100-200 | 200-400 | 400-600 |  |
|-------|---------|---------|---------|--|
|-------|---------|---------|---------|--|

# Typical Characteristics

MMBT3904

