

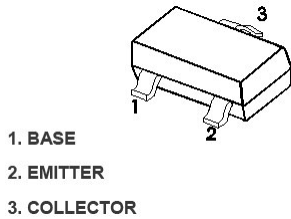
MMBT5551 TRANSISTOR(NPN)

Rev.2.0

SOT-23

SOT-23 贴片塑封三极管

SOT-23 Plastic-Encapsulate Transistors



Marking: G1

特征 Features

- I 与 MMBT5401 配对; Complementary to MMBT5401
- I 最大功率耗散 300mW; Power Dissipation of 300mW
- I 高稳定性和可靠性。High Stability and High Reliability

机械数据 Mechanical Data

- I 封装: SOT-23 封装 SOT-23 Small Outline Plastic Package
- I 环氧树脂UL 易燃等级Epoxy UL: 94V-0安装位置: 任意 Mounting Position: Any

极限值和温度特性(TA = 25°C 除非另有规定)

Maximum Ratings & Thermal Characteristics (Ratings at 25°C ambient temperature unless otherwise specified.)

| 参数 Parameters | 符号 Symbol | 数值 Value | 单位 Unit |
|---|------------------|----------|---------|
| Collector-Base Voltage | V _{CBO} | 180 | V |
| Collector-Emitter Voltage | V _{CEO} | 160 | V |
| Emitter -Base Voltage | V _{EBO} | 6 | V |
| Collector Current-Continuous | I _C | 600 | mA |
| Collector Power Dissipation | P _C | 300 | mW |
| Junction Temperature | T _j | 150 | °C |
| Storage Temperature | T _{stg} | -55+150 | °C |
| Thermal resistance From junction to ambient | R _{θJA} | 416 | °C/W |

电特性 (TA = 25°C 除非另有规定)

Electrical Characteristics (Ratings at 25°C ambient temperature unless otherwise specified.)

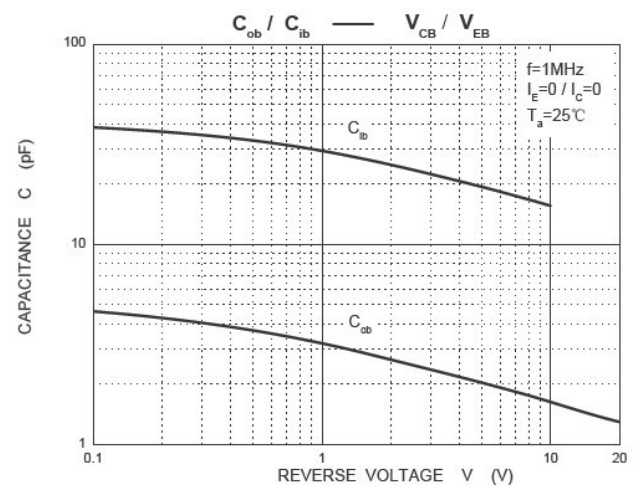
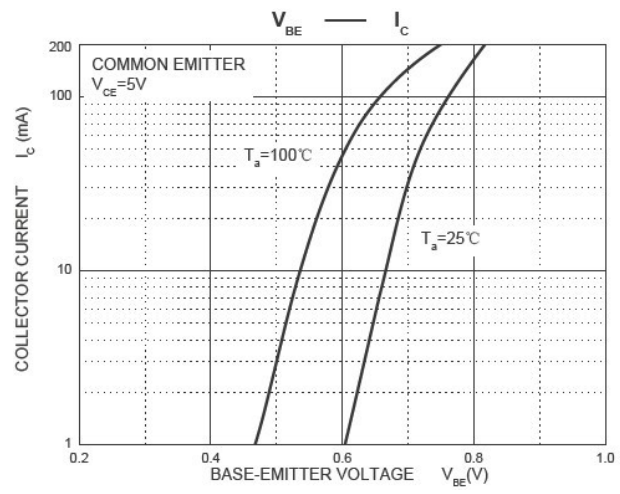
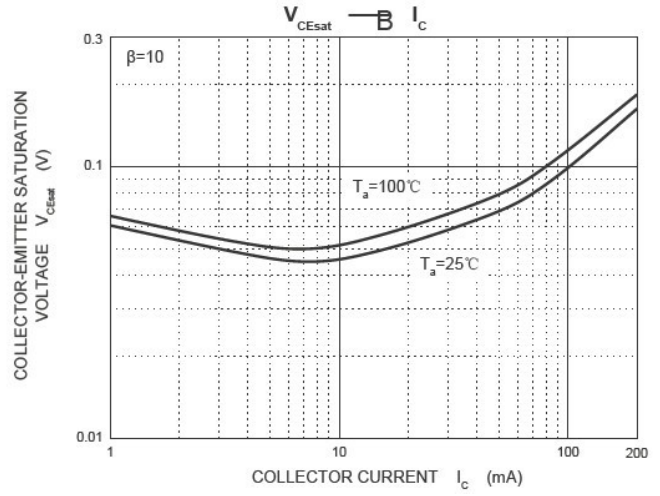
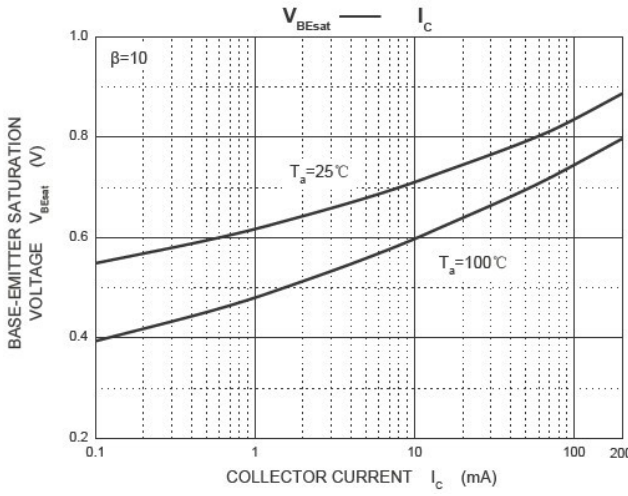
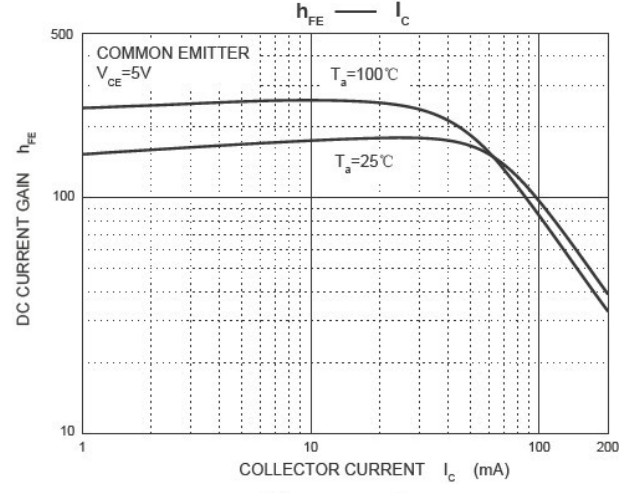
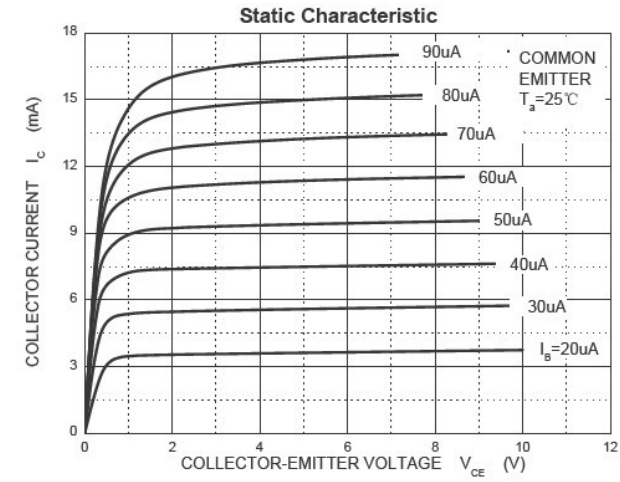
| 参数 Parameter | 符号 Symbols | 测试条件 Test Condition | 界限 Limits | | 单位 Unit |
|--------------------------------------|-------------------------|--|-----------|------|------------|
| | | | Min | Max | |
| Collector-base breakdown voltage | V(BR)CBO | I _C =100uA, I _E =0 | 180 | | V |
| Collector-emitter breakdown voltage | V(BR)CEO * | I _C =1mA, I _B =0 | 160 | | V |
| Emitter-base breakdown voltage | V(BR)EBO | I _E =10uA, I _C =0 | 6 | | V |
| Collector cut-off current | I _{CBO} | V _{CB} =120V, I _E =0 | | 50 | nA |
| Emitter cut-off current | I _{EBO} | V _{EB} =4V, I _C =0 | | 50 | nA |
| DC current gain | hFE(1) * | V _{CE} =5V, I _C =1mA | 80 | | |
| | hFE(2) * | V _{CE} =5V, I _C =10mA | 100 | 300 | |
| | hFE(3) * | V _{CE} =5V, I _C =50mA | 30 | | |
| Collector-emitter saturation voltage | V _{CE(sat)1} * | I _C =10mA, I _B =1mA | | 0.15 | V |
| | V _{CE(sat)2} * | I _C =50mA, I _B =5mA | | 0.20 | V |
| Base -emitter saturation voltage | V _{BE(sat)1} * | I _C =10mA, I _B =1mA | | 1.00 | V |
| | V _{BE(sat)2} * | I _C =50mA, I _B =5mA | | 1.00 | V |
| Transition frequency | f _T | V _{CE} =10V, I _C =10mA, f=100MHz | 100 | 300 | MHz |
| Collector output capacitance | C _{ob} | V _{CB} =10V, I _E =0, f=1MHz | | 6 | pF |

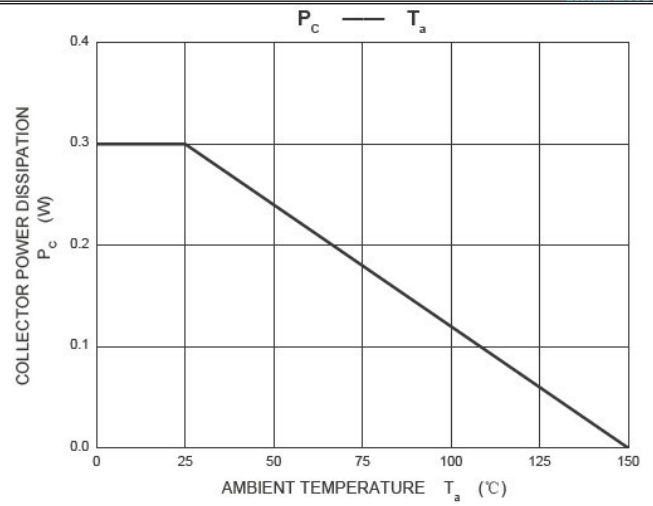
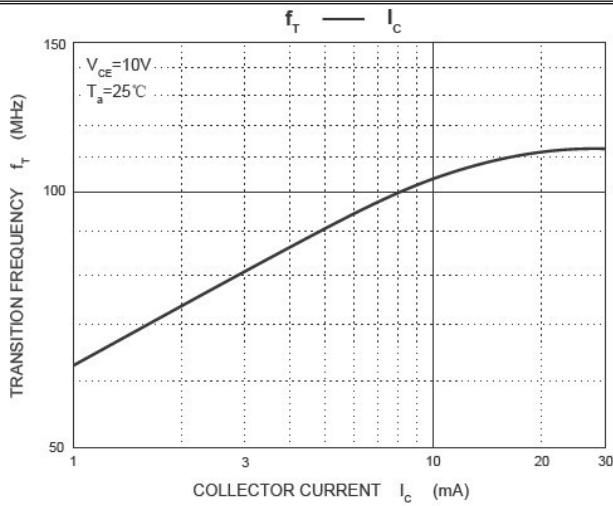
*Pulse test: pulse width ≤ 300us, duty cycle ≤ 2.0%

CLASSIFICATION OF hFE(2)

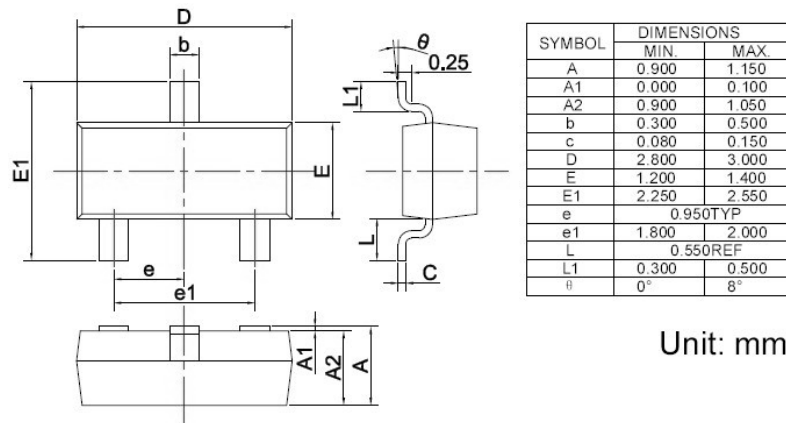
| HFE | 100-300 | |
|-------|---------|---------|
| RANK | L | H |
| RANGE | 100-200 | 200-300 |

Typical characteristics



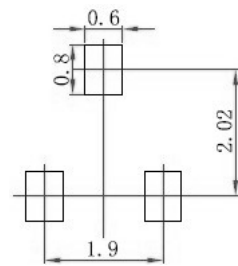


SOT-23 PACKAGE OUTLINE Plastic surface mounted package



焊盘设计参考 Precautions: PCB Design

Recommended land dimensions for SOT-23 diode. Electrode patterns for PCBs



- Note:
1. Controlling dimension; In millimeters.
 2. General tolerance: ± 0.05 mm.
 3. The pad layout is for reference purposes only.

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