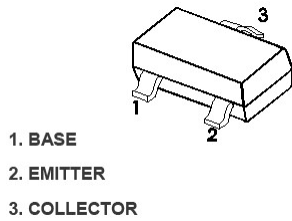


SOT-23**SOT-23 贴片塑封三极管**
SOT-23 Plastic-Encapsulate Transistors**Marking: 1H****特征 Features**

- 驱动三极管 Driver transistor
- 最大功率耗散 300mW; Power Dissipation of 300mW
- 高稳定性和可靠性。High Stability and High Reliability

机械数据 Mechanical Data

- 封装: SOT-23 封装 SOT-23 Small Outline Plastic Package
- 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} | 60 | V |
| Collector-Emitter Voltage | V _{CEO} | 60 | V |
| Emitter -Base Voltage | V _{EBO} | 4 | V |
| Collector Current-Continuous | I _C | 500 | 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} | 417 | °C/W |

电特性 (TA = 25°C 除非另有规定)

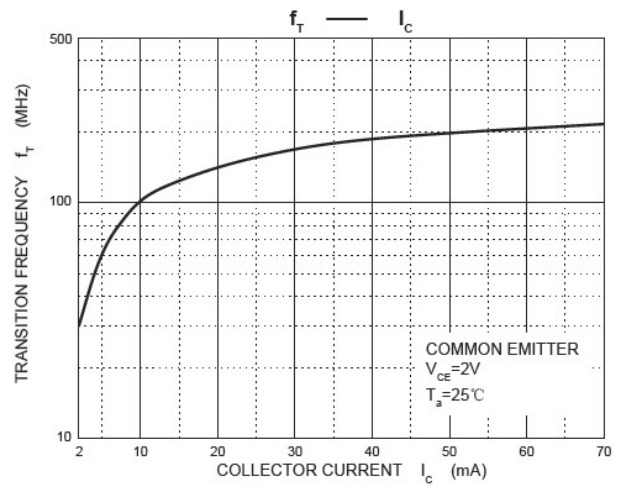
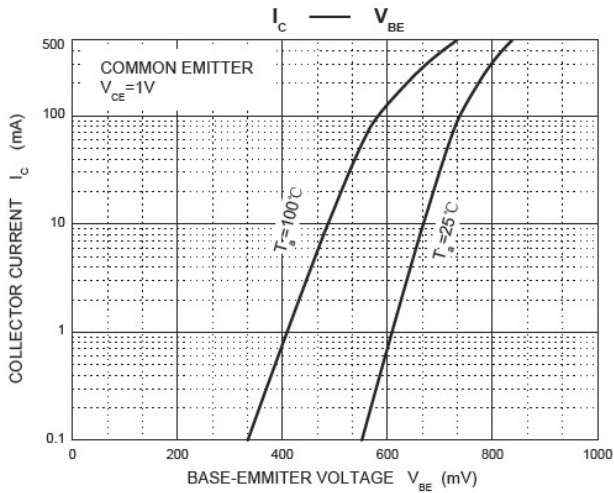
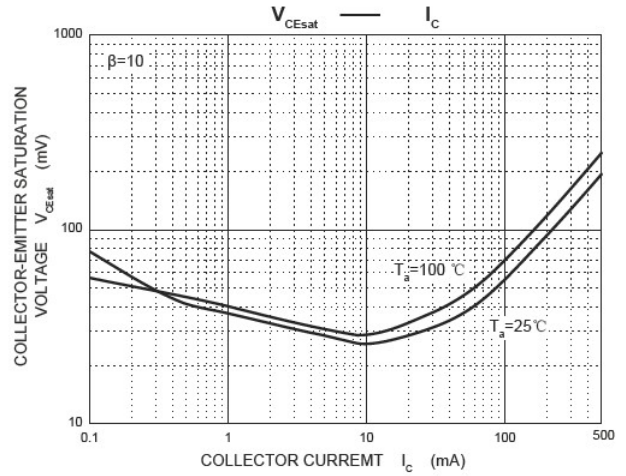
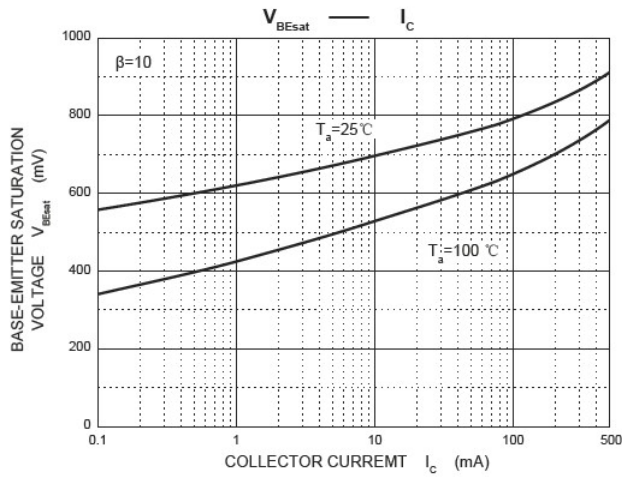
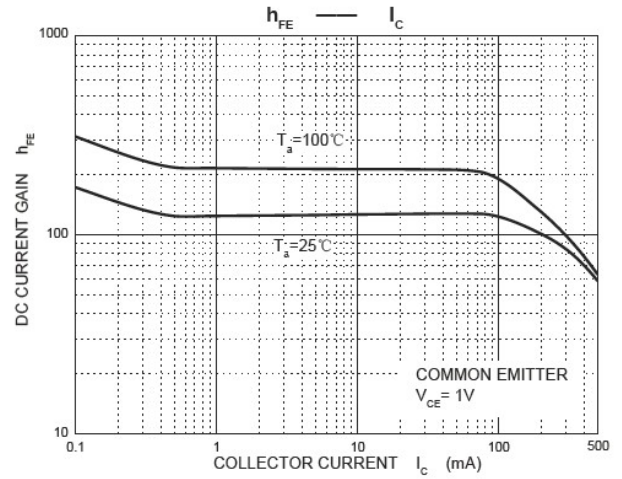
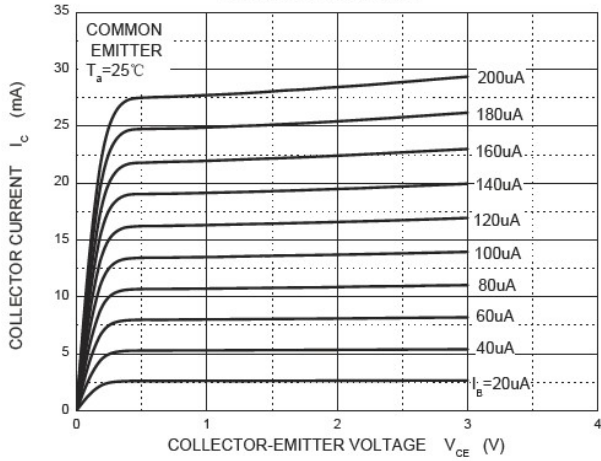
Electrical Characteristics (Ratings at 25°C ambient temperature unless otherwise specified.)

| 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 | 60 | | V |
| Collector-emitter breakdown voltage | V(BR)CEO | I _C =1mA, I _B =0 | 60 | | V |
| Emitter-base breakdown voltage | V(BR)EBO | I _E =100uA, I _C =0 | 4 | | V |
| Collector cut-off current | I _{CBO} | V _{CB} =60V, I _E =0 | | 100 | nA |
| Collector cut-off current | I _{CEO} | V _{CE} =60V, I _B =0 | | 100 | nA |
| Emitter cut-off current | I _{EBO} | V _{EB} =3V, I _C =0 | | 100 | nA |
| DC current gain | hFE(1)* | V _{CE} =1V, I _C =10mA | 100 | 400 | |
| | hFE(2)* | V _{CE} =1V, I _C =100mA | 100 | | |
| Collector-emitter saturation voltage | V _{CE(sat)} * | I _C =100mA, I _B =10mA | | 0.25 | V |
| Base -emitter voltage | V _{BE} | V _{CE} =1V, I _C =100mA | | 1.20 | V |
| Transition frequency | f _T | V _{CE} =2V, I _C =10mA, f=100MHz | 100 | | MHz |

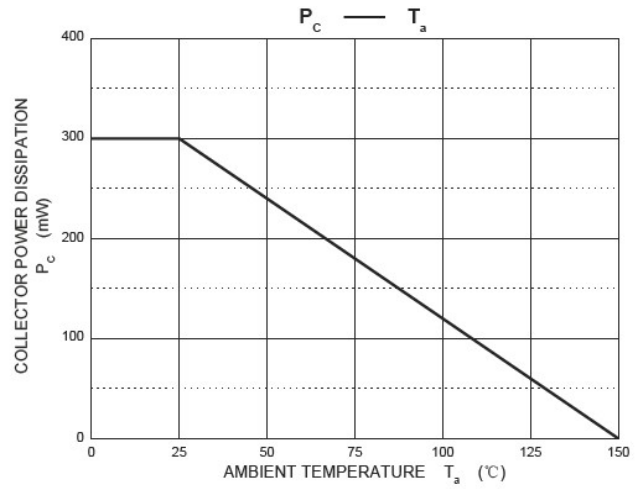
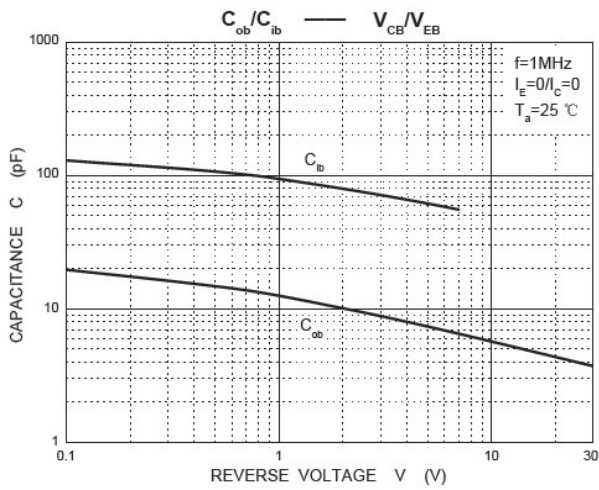
*Pulse test: pulse width ≤ 300us, duty cycle ≤ 2.0%.

Typical characteristics

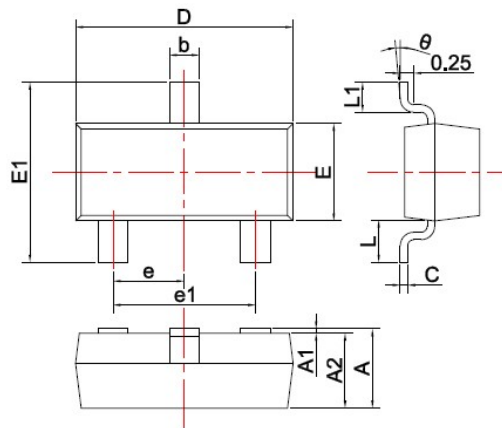
Static Characteristic



MMBTA05



SOT-23 PACKAGE OUTLINE Plastic surface mounted package

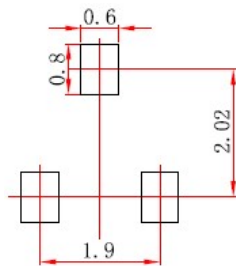


| SYMBOL | DIMENSIONS | |
|----------|------------|------------|
| | MIN. | MAX. |
| A | 0.900 | 1.150 |
| A1 | 0.000 | 0.100 |
| A2 | 0.900 | 1.050 |
| b | 0.300 | 0.500 |
| c | 0.080 | 0.150 |
| D | 2.800 | 3.000 |
| E | 1.200 | 1.400 |
| E1 | 2.250 | 2.550 |
| e | 0.950TYP | |
| e1 | 1.800 | 2.000 |
| L | 0.550REF | |
| L1 | 0.300 | 0.500 |
| θ | 0 $^\circ$ | 8 $^\circ$ |

Unit: mm

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: $\pm 0.05\text{mm}$.
 3. The pad layout is for reference purposes only.