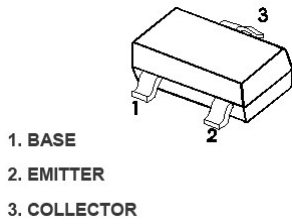


SOT-23**SOT-23 贴片塑封三极管**
SOT-23 Plastic-Encapsulate Transistors**Marking: 4D****特征 Features**

- 与 MMBTA44 配对; Complementary to MMBTA44
- 最大功率耗散 350mW; Power Dissipation of 350mW
- 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} | -400 | V |
| Collector-Emitter Voltage | V _{CEO} | -400 | V |
| Emitter -Base Voltage | V _{EBO} | -5 | V |
| Collector Current-Continuous | I _C | -200 | mA |
| Collector Power Dissipation | P _C | 350 | mW |
| Junction Temperature | T _j | 150 | °C |
| Storage Temperature | T _{stg} | -55-+150 | °C |
| Thermal resistance From junction to ambient | R _{θJA} | 357 | °C/W |

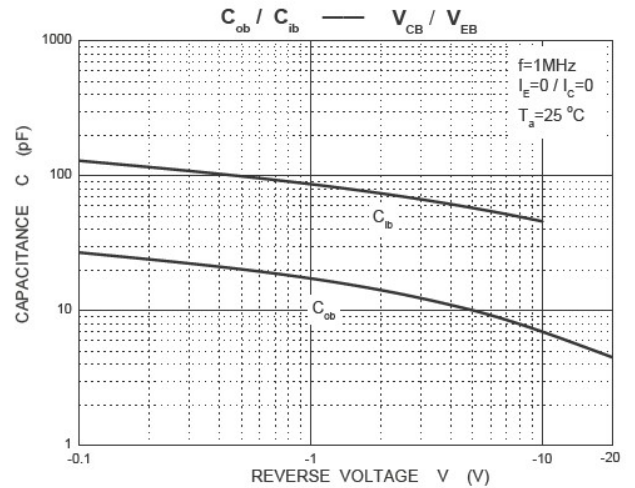
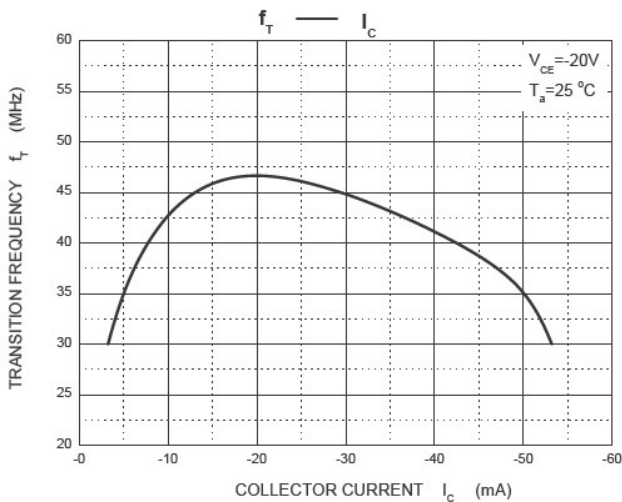
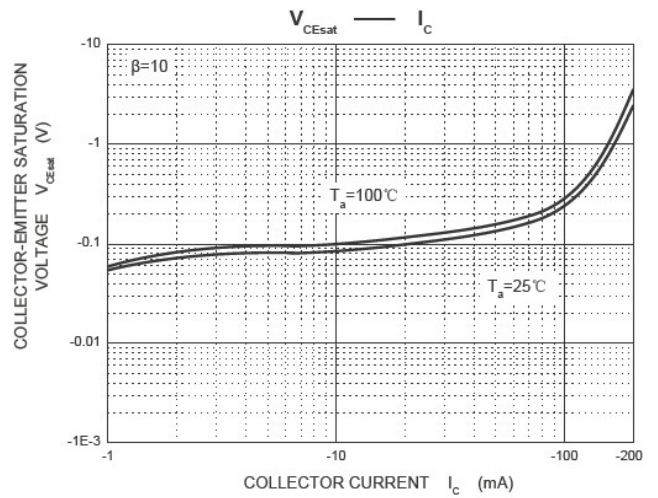
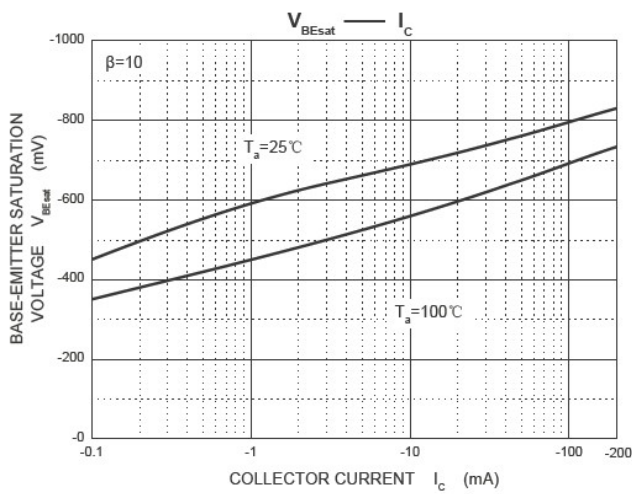
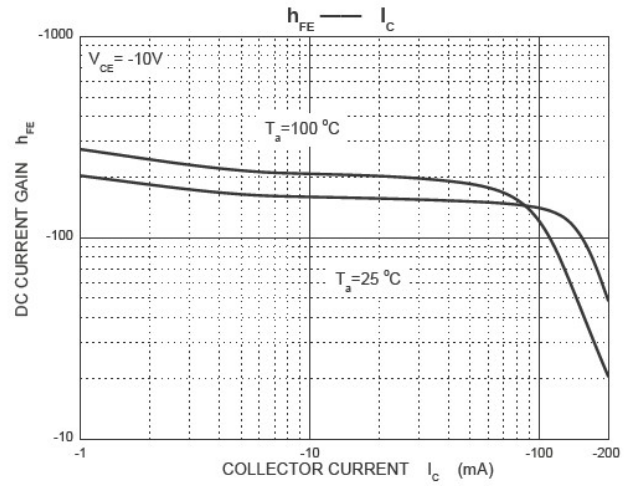
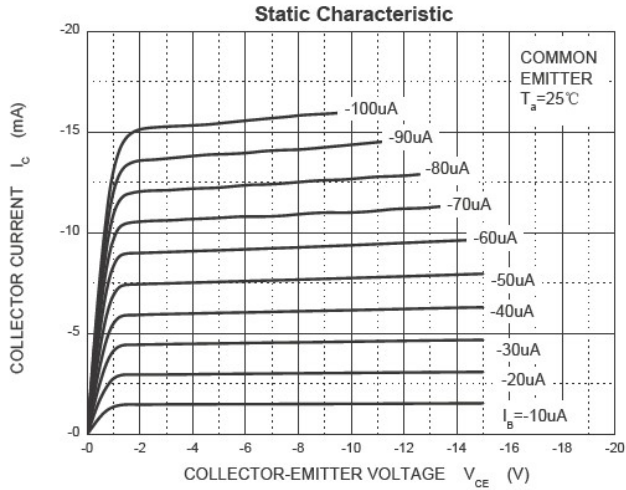
电特性 (TA = 25°C 除非另有规定)

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

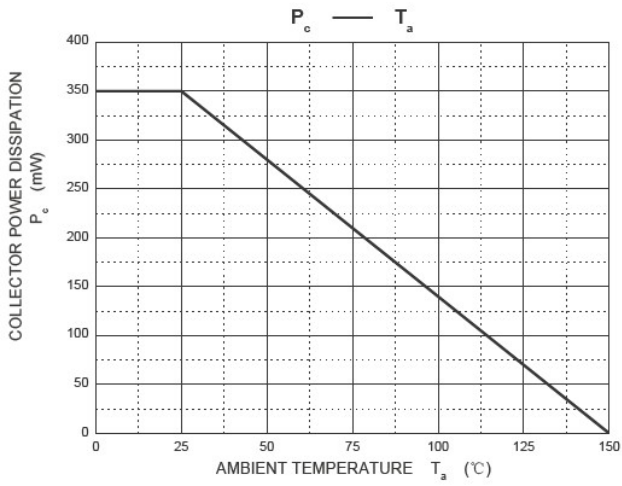
| 参数 Parameter | 符号 Symbols | 测试条件 Test Condition | 界限 Limits | | 单位 Unit |
|--------------------------------------|------------------------|--|-----------|-------|------------|
| | | | Min | Max | |
| Collector-base breakdown voltage | V(BR)CBO | I _C =-100uA, I _E =0 | -400 | | V |
| Collector-emitter breakdown voltage | V(BR)CEO * | I _C =-1mA, I _B =0 | -400 | | V |
| Emitter-base breakdown voltage | V(BR)EBO | I _E =-100uA, I _C =0 | -5 | | V |
| Collector cut-off current | I _{CBO} | V _{CB} =-400V, I _E =0 | | -100 | nA |
| Collector cut-off current | I _{CEO} | V _{CE} =-400V, I _E =0 | | -5 | uA |
| Emitter cut-off current | I _{EBO} | V _{EB} =-4V, I _C =0 | | -100 | nA |
| DC current gain | hFE(1) * | V _{CE} =-10V, I _C =-10mA | 80 | 300 | |
| | hFE(2) * | V _{CE} =-10V, I _C =-1mA | 70 | | |
| | hFE(3) * | V _{CE} =-10V, I _C =-50mA | 40 | | |
| | hFE(4) * | V _{CE} =-10V, I _C =-100mA | 40 | | |
| Collector-emitter saturation voltage | V _{CE(sat)} * | I _C =-10mA, I _B =-1mA | | -0.20 | V |
| | V _{CE(sat)} * | I _C =-50mA, I _B =-5mA | | -0.30 | V |
| Base -emitter saturation voltage | V _{BE(sat)} * | I _C =-10mA, I _B =-1mA | | -0.75 | V |
| Transition frequency | f _T | V _{CE} =-20V, I _C =10mA, f=30MHz | 50 | | MHz |

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

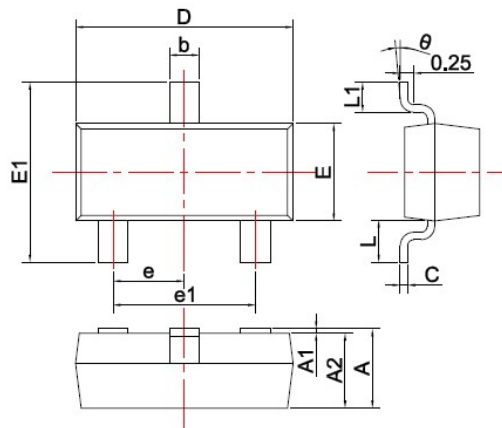
Typical characteristics



MMBTA94



SOT-23 PACKAGE OUTLINE Plastic surface mounted package

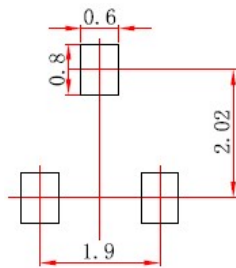


| SYMBOL | DIMENSIONS | |
|----------|------------|-------|
| | MIN. | MAX. |
| A | 0.900 | 1.150 |
| A1 | 0.000 | 0.100 |
| A2 | 0.900 | 1.050 |
| b | 0.300 | 0.500 |
| c | 0.080 | 0.150 |
| D | 2.800 | 3.000 |
| E | 1.200 | 1.400 |
| E1 | 2.250 | 2.550 |
| e | 0.950TYP | |
| e1 | 1.800 | 2.000 |
|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

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: ± 0.05 mm.
 3. The pad layout is for reference purposes only.

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