

Marking: 2A

特征 Features

- Complementary to MMBT3904
- Power Dissipation of 200mW
- High Stability and High Reliability

机械数据 Mechanical Data

- SOT-23 Small Outline Plastic Package
- Epoxy UL: 94V-0
- Mounting Position: Any
- High temperature soldering guaranteed: 260°C/10s
- We declare that the material of product compliant with RoHS requirements and Halogen free

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 _{CB0} | -40 | V |
| Collector-Emitter Voltage | V _{CEO} | -40 | V |
| Emitter -Base Voltage | V _{EBO} | -5 | V |
| Collector Current-Continuous | I _c | -200 | mA |
| Collector Power Dissipation | P _c | 200 | mW |
| Junction Temperature | T _j | 150 | °C |
| Storage Temperature | T _{stg} | -55-+150 | °C |
| Thermal resistance From junction to ambient | R _{θJA} | 625 | °C/W |

电特性 (TA = 25°C 除非另有规定)

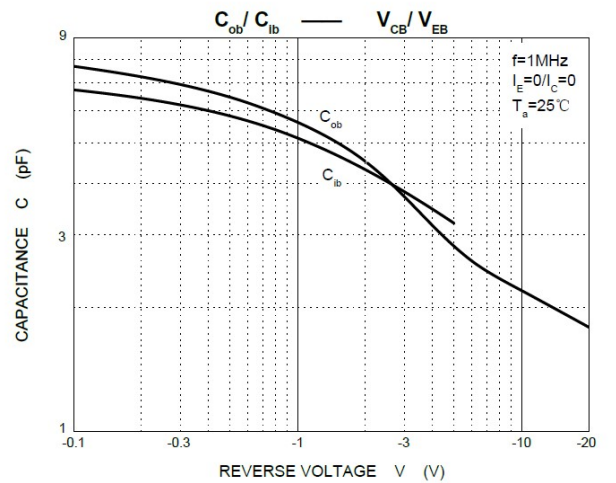
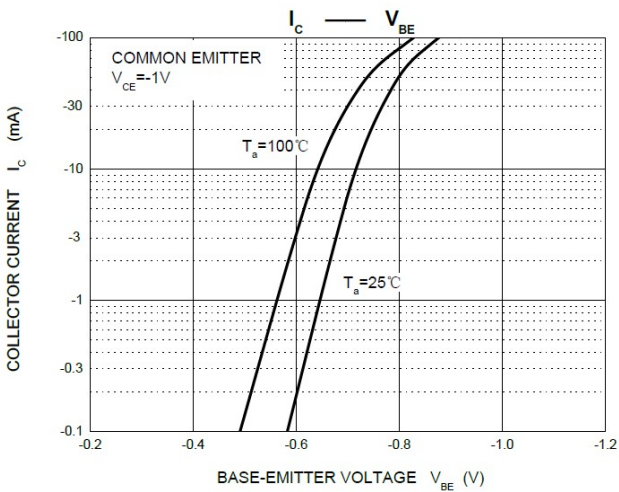
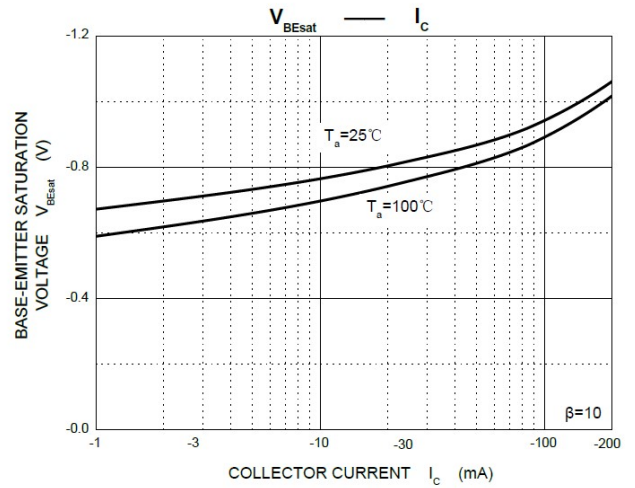
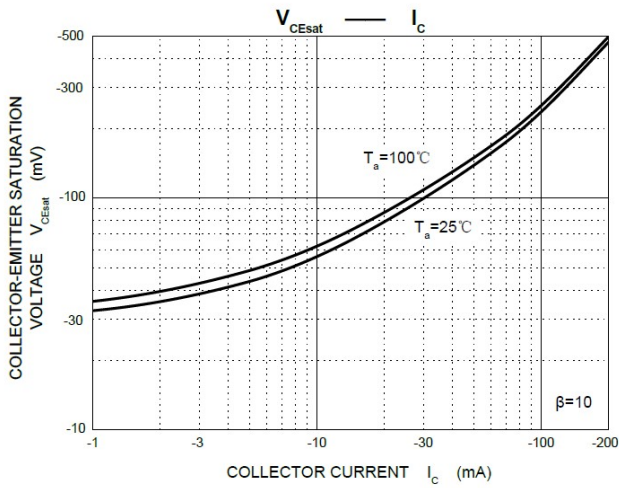
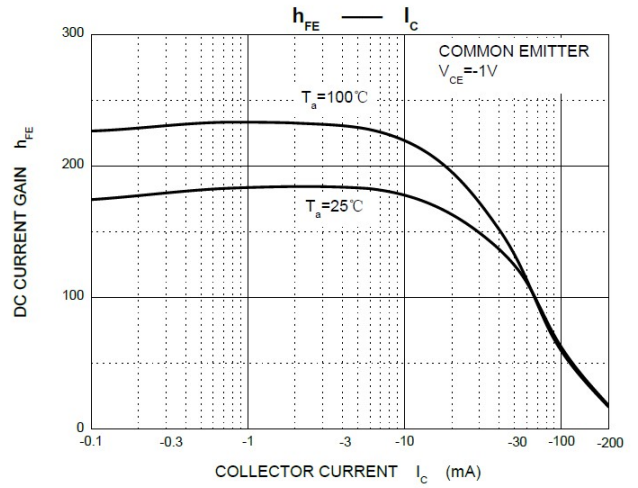
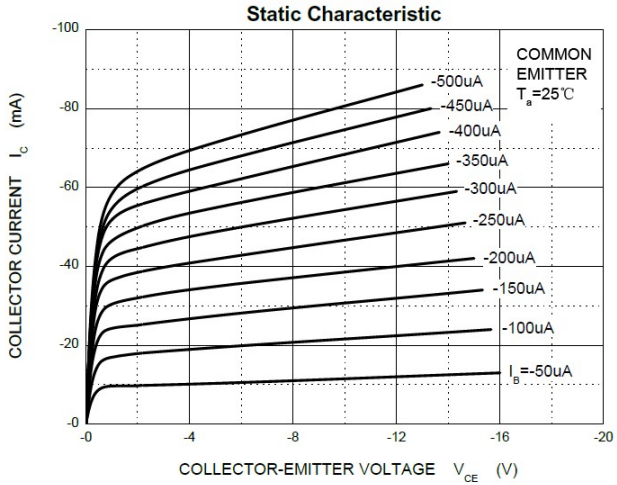
Electrical Characteristics (Ratings at 25°C ambient temperature unless otherwise specified.)

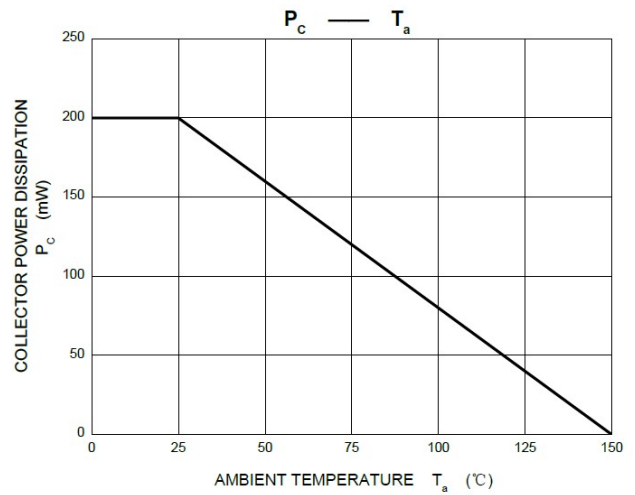
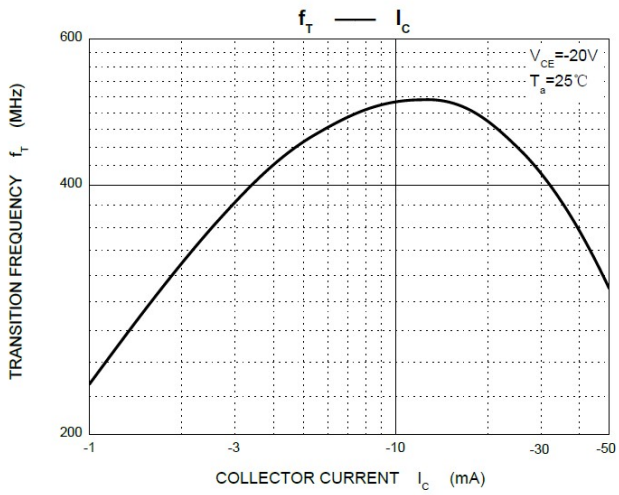
| 参数 Parameter | 符号 Symbols | 测试条件 Test Condition | 界限 Limits | | 单位 Unit |
|--------------------------------------|----------------|---|-----------|-------|---------|
| | | | Min | Max | |
| Collector-base breakdown voltage | V(BR)CBO | IC=-10uA, IE=0 | -40 | | V |
| Collector-emitter breakdown voltage | V(BR)CEO | IC=-1mA, IB=0 | -40 | | V |
| Emitter-base breakdown voltage | V(BR)EBO | IE=-10uA, IC=0 | -5 | | V |
| Collector cut-off current | ICEX | VCE=-30V, VEB(off)=-3V | | -100 | nA |
| Collector cut-off current | ICBO | VCB=-40V, IE=0 | | -50 | nA |
| Emitter cut-off current | IEBO | VEB=-5V, IC=0 | | -50 | nA |
| DC current gain | hFE(1) | VCE=-1V, IC=-10mA | 100 | 300 | |
| | hFE(2) | VCE=-1V, IC=-50mA | 60 | | |
| | hFE(3) | VCE=-1V, IC=-100mA | 30 | | |
| Collector-emitter saturation voltage | VCE(sat)1 | IC=-50mA, IB=-5mA | | -0.30 | V |
| Base -emitter saturation voltage | VBE(sat) | IC=-50mA, IB=-5mA | | -0.95 | V |
| Transition frequency | f _t | VCE=-20V, IC=-10mA, f=100MHz | 300 | | MHz |
| Delay time | t _d | VCC=-3V, VBE(off)=-0.5V, IC=-10mA, IB1=-1mA | | 35 | nS |
| Rise time | t _r | VCC=-3V, VBE(off)=-0.5V, IC=-10mA, IB1=-1mA | | 35 | nS |
| Storage time | t _s | VCC=-3V, IC=-10mA, IB1=IB2=-1mA | | 225 | nS |
| Fall time | t _f | VCC=-3V, IC=-10mA, IB1=IB2=-1mA | | 75 | nS |

CLASSIFICATION OF hFE(1)

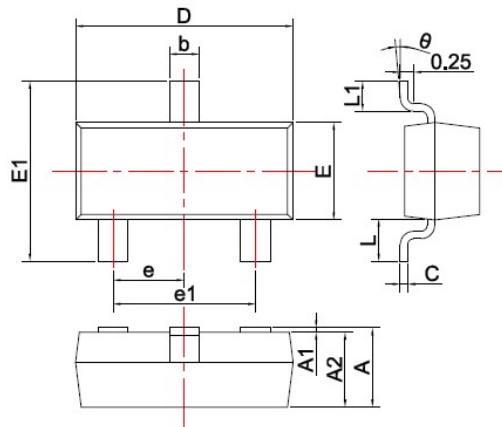
| | | |
|-------|---------|---------|
| HFE | 100-300 | |
| RANK | L | H |
| RANGE | 100-200 | 200-300 |

Typical characteristics





SOT-23 PACKAGE OUTLINE Plastic surface mounted package

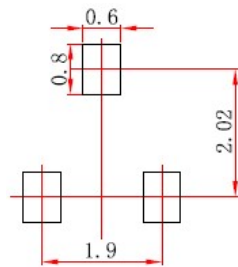


| SYMBOL | DIMENSIONS | |
|--------|------------|-------|
| | MIN. | MAX. |
| A | 0.900 | 1.150 |
| A1 | 0.000 | 0.100 |
| A2 | 0.900 | 1.050 |
| b | 0.300 | 0.500 |
| c | 0.080 | 0.150 |
| D | 2.800 | 3.000 |
| E | 1.200 | 1.400 |
| E1 | 2.250 | 2.550 |
| e | 0.950TYP | |
| e1 | 1.800 | 2.000 |
| L | 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: ±0.05mm.
 3. The pad layout is for reference purposes only.