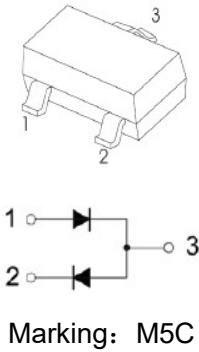


SOT-23

SOT-23 Plastic-Encapsulate Switching Diode



特征 Features

- 开关速度小于 4.0nS; Fast Switching Device (TRR <4.0 nS)
- 最大功率耗散 225mW; Power Dissipation of 225mW
- 高稳定性和可靠性。High Stability and High Reliability
- 反向漏电流小。Low reverse leakage

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℃ 除非另有规定)

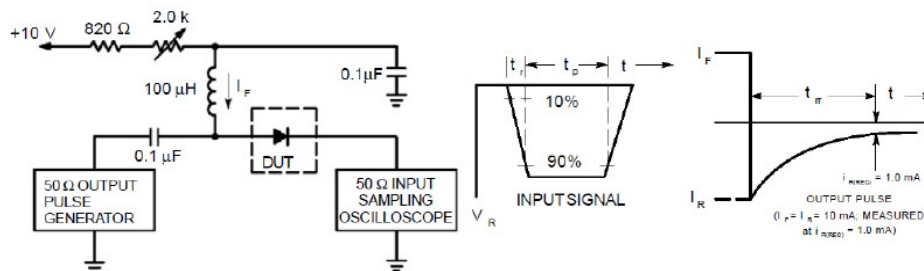
Maximum Ratings & Thermal Characteristics (Ratings at 25℃ ambient temperature unless otherwise specified.)

| 参数 Parameters | 符号 Symbol | 数值 Value | 单位 Unit |
|---|------------------|----------|---------|
| 反向电压 Reverse Voltage | V _R | 100 | V |
| 反向峰值电压 Peak Repetitive Reverse Voltage | V _{RRM} | 100 | V |
| 功率消耗 Power Dissipation | P _d | 225 | mW |
| 正向峰值浪涌电流 Peak Forward Surge Current | I _{FM} | 500 | mA |
| 工作结温 Operating junction temperature | T _j | 150 | ℃ |
| 存储温度 Storage temperature range | T _s | -55-+150 | ℃ |
| 热阻抗 Thermal Resistance from Junction to Ambient | R _{θJA} | 417 | ℃/W |

Valid provided that electrodes are kept at ambient temperature.

电特性 **Electrical Characteristics** (Ratings at 25℃ ambient temperature unless otherwise specified.)

| 符号 Symbols | 参数 Parameter | 测试条件 Test Condition | 界限 Limits | | 单位 Unit |
|----------------|-------------------------------|--|-----------|------|---------|
| | | | Min | Max | |
| V(BR) | 反向电压 Reverse Voltage | I _R =100uA | 100 | | V |
| I _R | 反向漏电流 Reverse Leakage Current | V _R =100V | --- | 3.0 | uA |
| | | V _R =50V | --- | 1 | uA |
| V _F | 正向电压 Forward Voltage | I _F =1mA | --- | 0.72 | V |
| | | F=10mA | --- | 0.82 | |
| | | F=100mA | --- | 1.10 | |
| TRR | 反向恢复时间 Reverse Recovery Time | I _F = I _R =10mA | --- | 4 | nS |
| | | V _R =6V, R _L =100Ω | | | |
| | | I _{RR} =0.1 X I _R | | | |
| CT | 结电容 Capacitance | V _R =0V, f=1MHZ | --- | 1.5 | pF |



- Notes: 1. A 2.0 kΩ variable resistor adjusted for a Forward Current (I_F) of 10mA.
 2. Input pulse is adjusted so I_{R(peak)} is equal to 10mA.
 3. t_p » t_r

Recovery Time Equivalent Test Circuit

Typical Characteristics

Fig.1 Typical Forward Characteristics

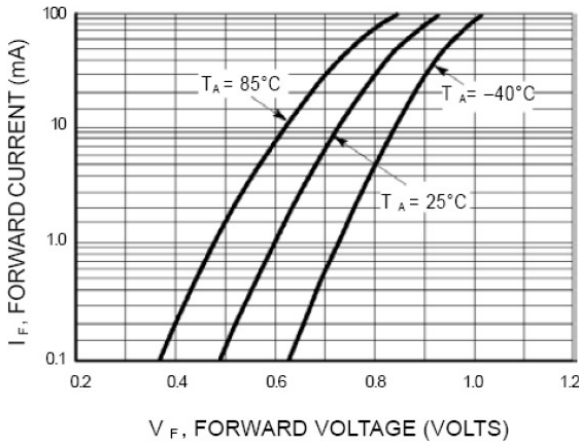


Fig.2 Typical Reverse Characteristics

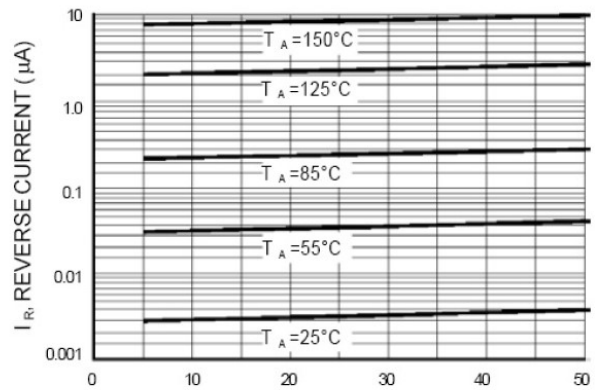
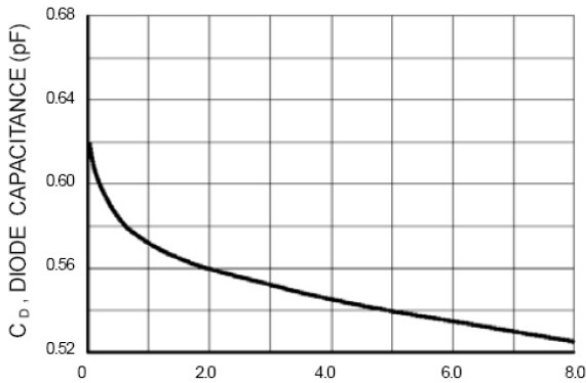
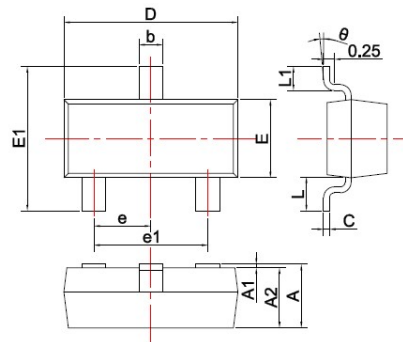


Fig.3 Typical Capacitance Characteristics



SOT-23 PACKAGE OUTLINE

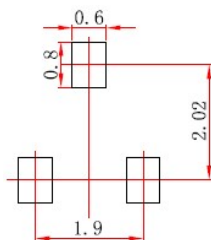
Plastic surface mounted package



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