



SOT-23 ESD 静电保护二极管

■ Features 特点

Two Bidirectional Lines 两个双向
ESD Protection 静电保护

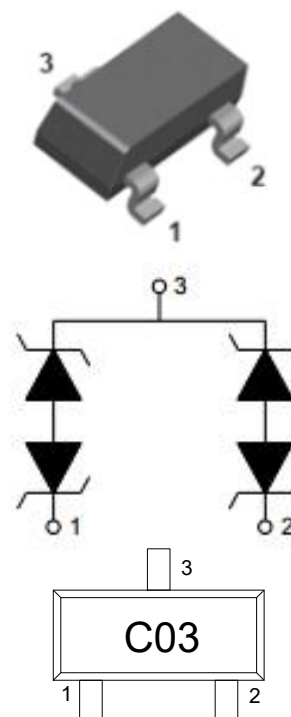
■ Applications 应用

Portable electronics 便携式电子产品
Control & monitoring systems 控制与监视系统
Cellular handsets and accessories 蜂窝手机及配件
Servers, notebooks, and desktop PCs bus protection
服务器、笔记本及台式机总线保护

■ Internal Schematic Diagram 内部结构

■ Device Marking 产品打标

■ Absolute Maximum Ratings 最大额定值



| Characteristic 特性参数 | Symbol 符号 | Rat 额定值 | Unit 单位 |
|---|-----------|----------|---------|
| ESD (IEC61000-4-2 contact discharge) @25°C接触放电 | V_{ESD} | ± 30 | KV |
| ESD (IEC61000-4-2 air discharge) @25°C空气放电 | V_{ESD} | ± 30 | KV |
| Peak Pulse Power @25°C峰值脉冲功率 | P_{PK} | 500 | W |
| Peak Pulse Current @25°C峰值脉冲电流 | I_{PP} | 30 | A |
| Lead Temperature 管脚温度 | T_L | 260 | °C |
| Lead Solder Time 管脚焊接时间 | T_L | 10 | S |
| Operating Temperature 工作温度 | T_{op} | -40~85 | °C |
| Junction Temperature 结温 | T_J | -55~125 | °C |
| Storage Temperature 储存温度 | T_{stg} | -55~150 | °C |

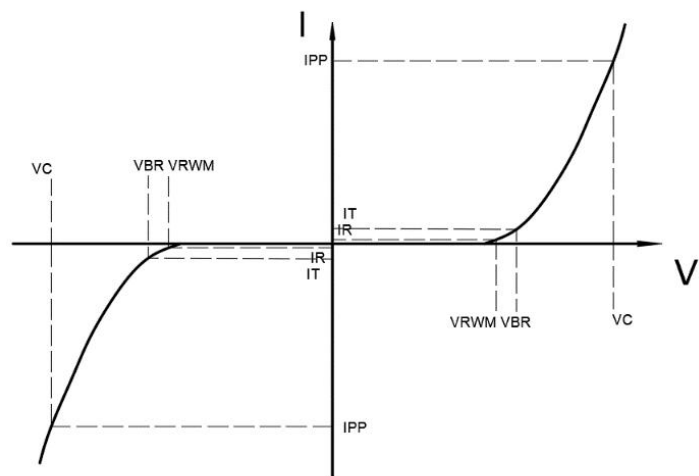


■ Electrical Characteristics 电特性

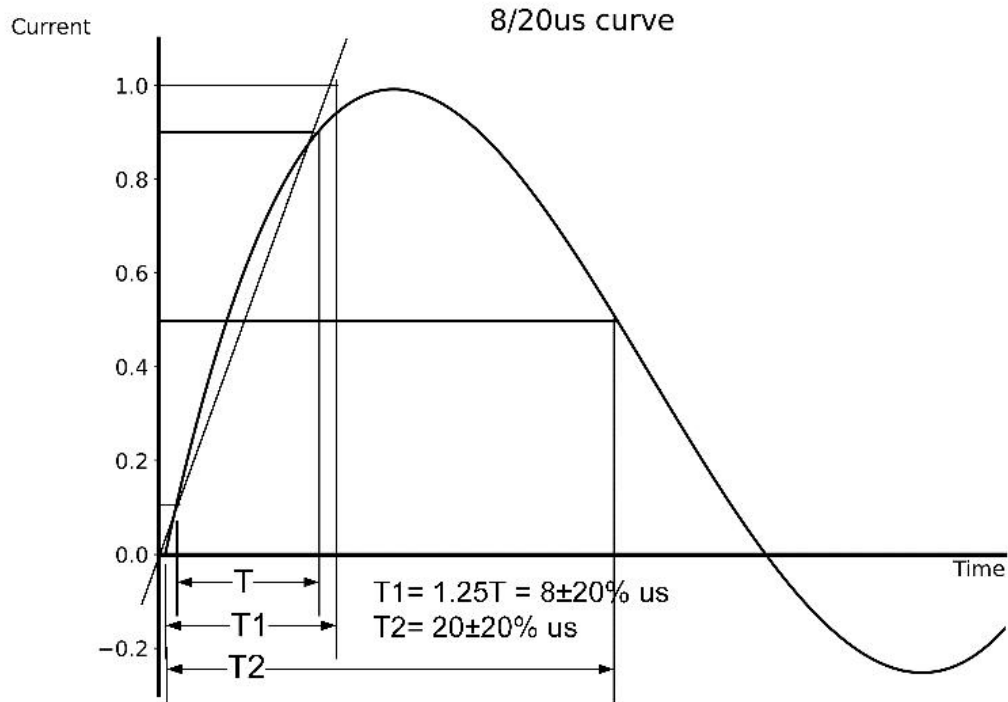
($T_A=25^\circ\text{C}$ unless otherwise noted 如无特殊说明, 温度为 25°C)

| Characteristic Parameters 特性参数 | Symbol 符号 | Min 最小值 | Typ 典型值 | Max 最大值 | Unit 单位 | Condition 条件 |
|-------------------------------------|--------------|------------|------------|------------|---------------|--|
| Reverse Stand-off Voltage 反向工作电压 | V_{RWM} | | | 3.3 | V | |
| Reverse Breakdown Voltage 反向击穿电压 | V_{BR} | 3.6 | | | V | $I_T=1\text{mA}$ |
| Reverse Leakage Current 反向漏电流 | I_R | | | 1 | μA | $V_{RWM}=3.3\text{V}$ |
| Clamping Voltage 钳位电压 | V_C | | 8 | | V | $I_{PP}=1\text{A}, t_p=8/20\mu\text{s}$ |
| Clamping Voltage 钳位电压 | V_C | | 12 | | V | $I_{PP}=30\text{A}, t_p=8/20\mu\text{s}$ |
| Diode Capacitance 二极管电容 | C_D | | 60 | | pF | $V_R=0\text{V}, f=1\text{MHz}$ |

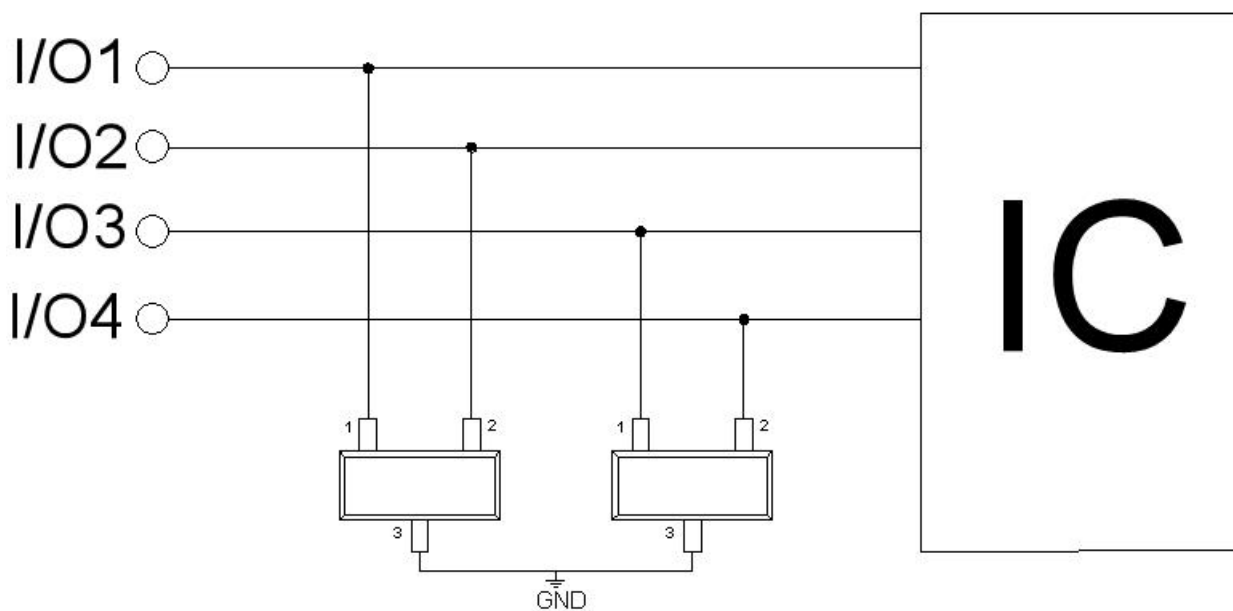
| | |
|-------------|---|
| V_{RWM} | Reverse Working Voltage 反向工作电压 |
| $V_{R(BR)}$ | Reverse Breakdown Voltage 反向击穿电压@ $I_T=1\text{mA}$ |
| I_T | Test Current 测试电流 |
| I_R | Reverse Leakage Current 反向漏电流@ V_{RWM} |
| V_C | Clamping Voltage 钳位电压 |
| I_{PP} | Reverse Peak Pulse Current 浪涌电流 |
| C_D | Diode Capacitance 二极管电容 $V_{I0}=0\text{V}, V_{P-P} = 30\text{mV}, f = 1\text{MHz}$ |



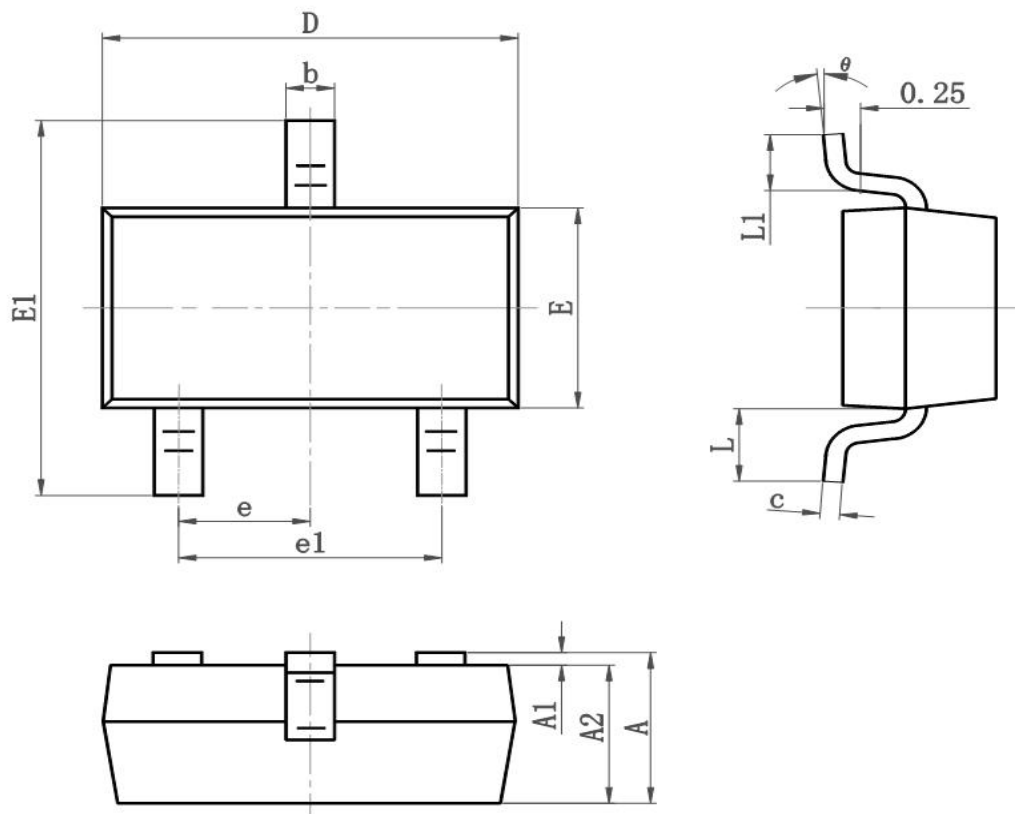
■ Typical Characteristic Curve 典型特性曲线



■ Typical Application 典型应用



Dimension 外形封装尺寸



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|----------|---------------------------|-------|----------------------|-------|
| | Min | Max | Min | Max |
| A | 0.900 | 1.150 | 0.035 | 0.045 |
| A1 | 0.000 | 0.100 | 0.000 | 0.004 |
| A2 | 0.900 | 1.050 | 0.035 | 0.041 |
| b | 0.300 | 0.500 | 0.012 | 0.020 |
| c | 0.080 | 0.150 | 0.003 | 0.006 |
| D | 2.800 | 3.000 | 0.110 | 0.118 |
| E | 1.200 | 1.400 | 0.050 | 0.055 |
| E1 | 2.250 | 2.550 | 0.089 | 0.100 |
| e | 0.950TYP | | 0.037TYP | |
| e1 | 1.800 | 2.000 | 0.071 | 0.079 |
| L | 0.550REF | | 0.022REF | |
| L1 | 0.300 | 0.500 | 0.012 | 0.020 |
| θ | 0° | 8° | 0° | 8° |