

SOT-523 ESD 静电保护二极管

■Features 特点

Un-directional ESD Protection 单向静电保护

Low capacitance 低电容

■Applications 应用

USB / IEEE Interfaces 接口

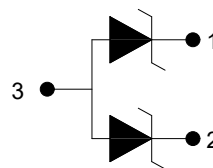
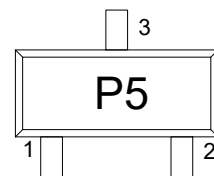
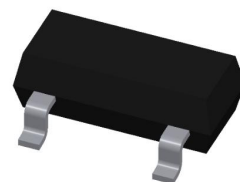
Notebooks 笔记本电脑

HDMI 高清多媒体接口

Marking 印字: P5

■Internal Schematic Diagram 内部结构

■Absolute Maximum Ratings 最大额定值



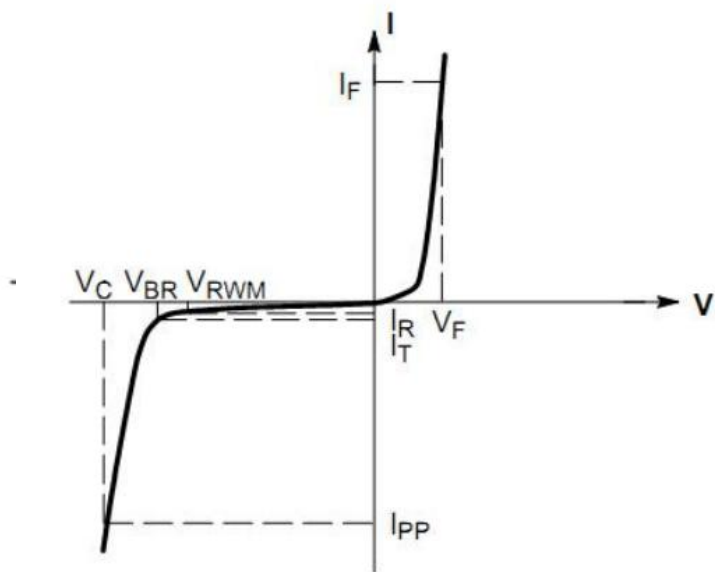
Characteristic 特性参数	Symbol 符号	Rat 额定值	Unit 单位
ESD (IEC61000-4-2 contact discharge) @25°C接触放电	V_{ESD}	± 15	KV
ESD (IEC61000-4-2 air discharge) @25°C 空气放电	V_{ESD}	± 15	KV
Peak Pulse Current @25°C峰值脉冲电流	I_{PP}	4	A
Peak Pulse Power @25°C峰值脉冲功率	P_{PK}	60	W
Lead Temperature 管脚温度	T_L	260	°C
Lead Solder Time 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}	-55~125	°C

■ Electrical Characteristics 电特性

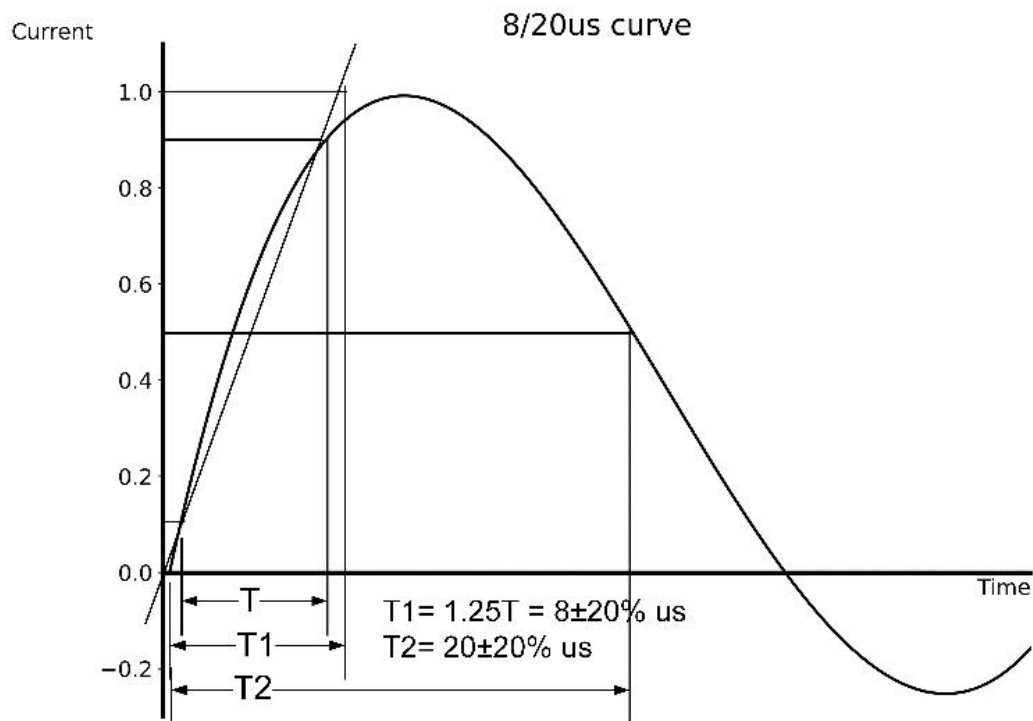
($T_A=25^{\circ}\text{C}$ unless otherwise noted 如无特殊说明, 温度为 25°C)

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}			5	V	
Reverse Breakdown Voltage 反向击穿电压	$V_{\text{R(BR)}}$	6			V	$I_{\text{T}}=1\text{mA}$
Reverse Leakage Current 反向漏电流	I_{R}			1	μA	$V_{\text{RWM}}=5\text{V}$
Clamping Voltage 钳位电压	V_{C}		10		V	$I_{\text{PP}}=1\text{A}, t_{\text{p}}=8/20\mu\text{s}$
Clamping Voltage 钳位电压	V_{C}		15		V	$I_{\text{PP}}=4\text{A}, t_{\text{p}}=8/20\mu\text{s}$
Junction Capacitance 结电容	C_{J}		0.6		pF	$V_{\text{R}}=0\text{V}, f=1\text{MHz}$

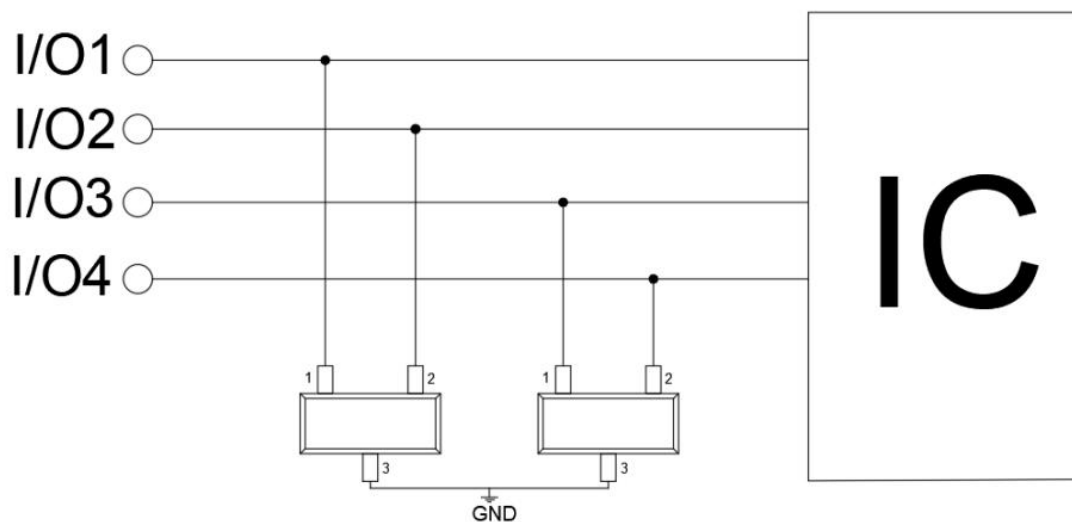
V_{RWM}	Reverse Working Voltage 反向工作电压
$V_{\text{R(BR)}}$	Reverse Breakdown Voltage 反向击穿电压@ $I_{\text{T}}=1\text{mA}$
I_{T}	Test Current 测试电流
I_{R}	Reverse Leakage Current 反向漏电流@ V_{RWM}
V_{C}	Clamping Voltage 钳位电压
I_{PP}	Reverse Peak Pulse Current 浪涌电流
C_{J}	Junction Capacitance 结电容 $V_{\text{IO}}=0\text{V}, V_{\text{P-P}}=30\text{mV}, f=1\text{MHz}$



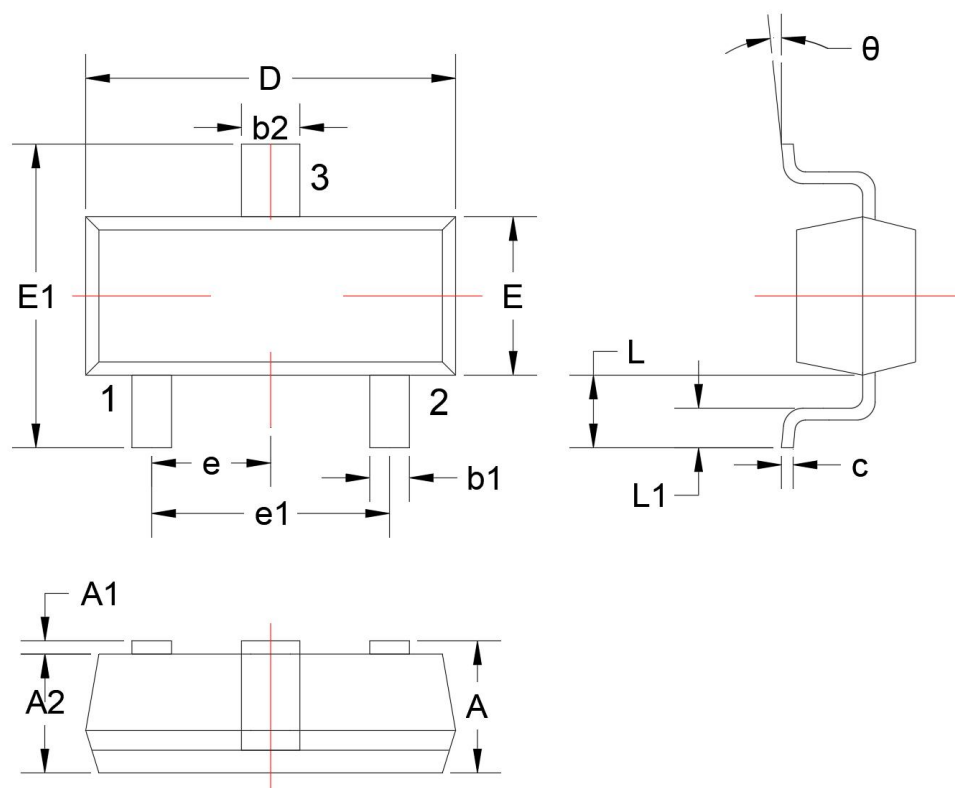
■ Typical Characteristic Curve 典型特性曲线



■ Typical Application 典型应用



■ Dimension 外形封装尺寸



Dimensions in Millimeters					
Symbol	Min.	Max.	Symbol	Min.	Max.
A	0.700	0.900	e1	0.900	1.100
A1	0.00	0.100	e	0.500TYP	
A2	0.700	0.800	L	0.400REF	
b1	0.150	0.250	L1	0.260	0.460
b2	0.250	0.350	θ	0°	8°
c	0.100	0.200			
D	1.500	1.700			
E	0.700	0.900			
E1	1.450	1.750			