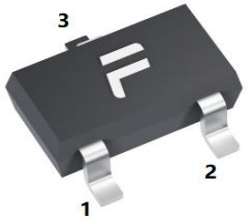
SOT-23 ESD 静电保护二极管



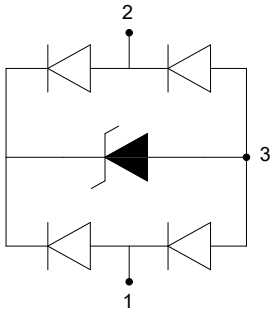
■Features 特点

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
Communication System 通信系统
Marking 印字：R22



■Internal Schematic Diagram 内部结构

■Absolute Maximum Ratings 最大额定值

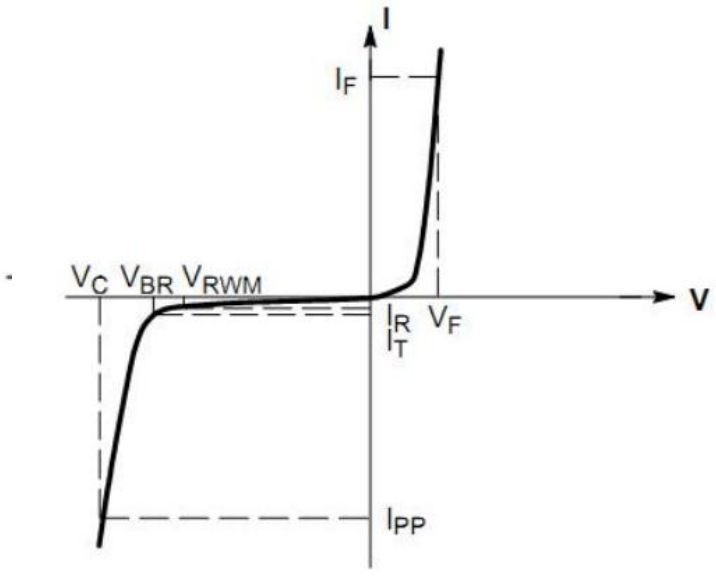
Characteristic 特性参数	Symbol 符号	Rat 额定值	Unit 单位
ESD (IEC61000-4-2 contact discharge) @25℃接触放电	V_{ESD}	±10	KV
ESD (IEC61000-4-2 air discharge) @25℃ 空气放电	V_{ESD}	±15	KV
Peak Pulse Current @25℃峰值脉冲电流	I_{PP}	4	A
Peak Pulse Power @25℃峰值脉冲功率	P_{PK}	50	W
Lead Temperature 管脚温度	T_L	260	℃
Lead Solder Time 管脚焊接时间	T_L	10	S
Operating Temperature 工作温度	T_{op}	-40~85	℃
Junction Temperature 结温	T_J	-55~125	℃
Storage Temperature 储存温度	T_{stg}	-55~125	℃

■Electrical Characteristics 电特性

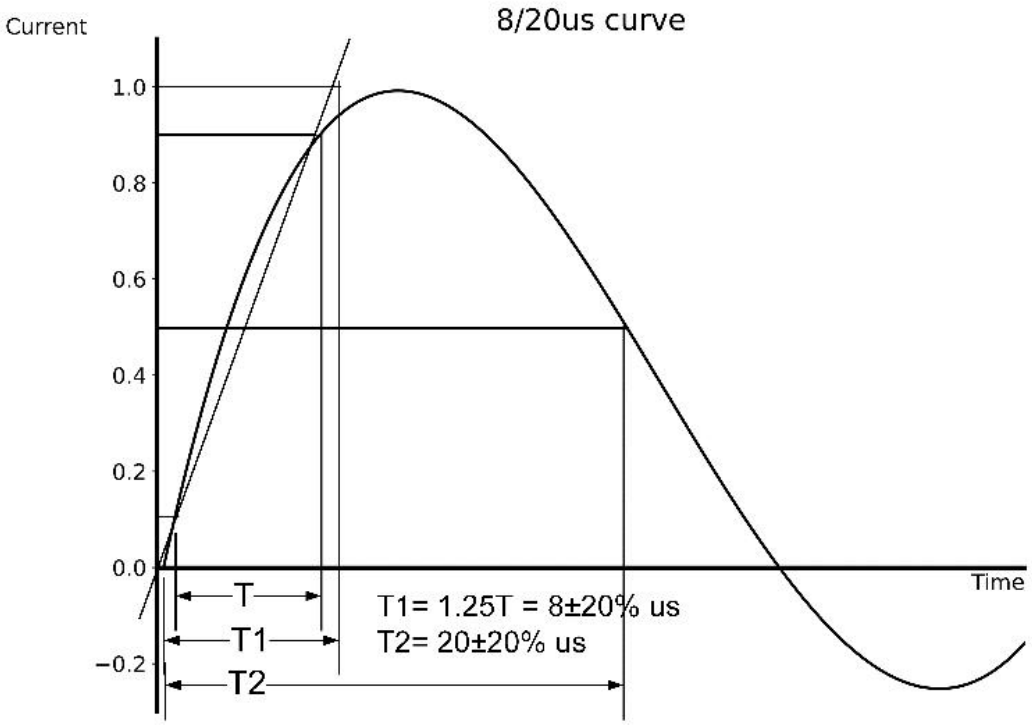
(T_A=25℃ unless otherwise noted 如无特殊说明，温度为 25℃)

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	$V_{R(BR)}$	6			V	I_T=1mA
Reverse Leakage Current 反向漏电流	I_R			1	μA	V_{RWM}=5V
Clamping Voltage 钳位电压	V_C		10		V	I_{PP}=1A,tp=8/20μs
Clamping Voltage 钳位电压	V_C		15		V	I_{PP}=4A,tp=8/20μs
Junction Capacitance 结电容	C_J		0.6		pF	V_R=0V,f=1MHz

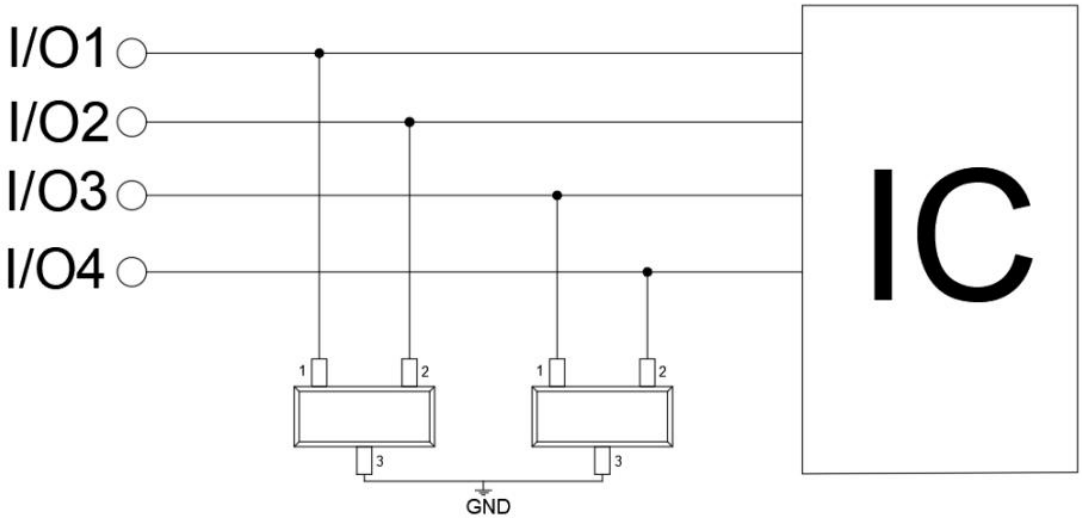
V_{RWM}	Reverse Working Voltage 反向工作电压
$V_{R(BR)}$	Reverse Breakdown Voltage 反向击穿电压@I_T=1mA
I_T	Test Current 测试电流
I_R	Reverse Leakage Current 反向漏电流@V_{RWM}
V_C	Clamping Voltage 钳位电压
I_{PP}	Reverse Peak Pulse Current 浪涌电流
C_J	Junction Capacitance 结电容 V_{IO}=0V, V_{P-P} = 30mV, f = 1MHz



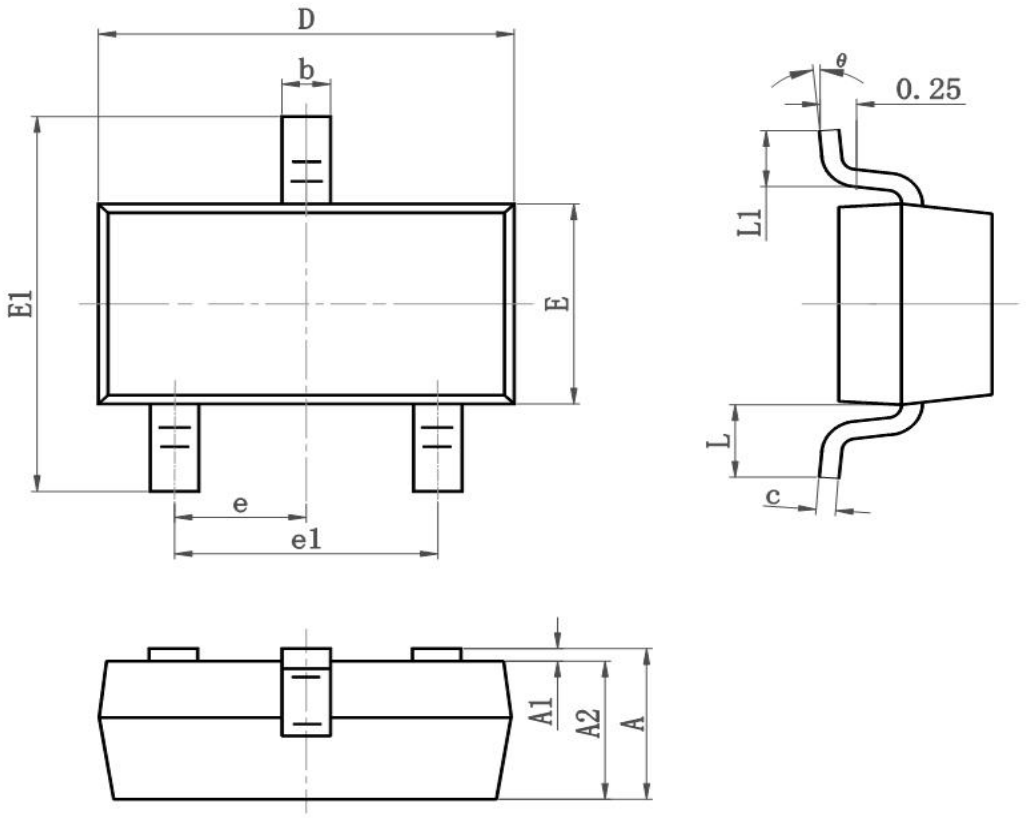
■Typical Characteristic Curve 典型特性曲线



■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	0.900	1.00	0.035	0.039
e1	1.800	2.000	0.071	0.079
L	0.500	0.600	0.020	0.024
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°