

SOT-23 ESD 静电保护二极管

■Features 特点

Two Un-directional Lines 两个单向
Or Bidirectional 或双向
ESD Protection 静电保护

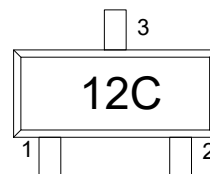
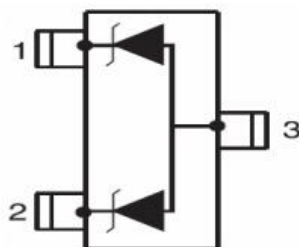
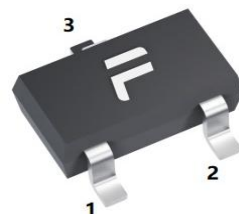
■Applications 应用

Computer 计算机
Set-top box 机顶盒
Portable electronics 便携电子产品
Control & Monitoring 控制和监视器
Communication System 通信系统

■Internal Schematic Diagram 内部结构

■Device Marking 产品打标

■Absolute Maximum Ratings 最大额定值



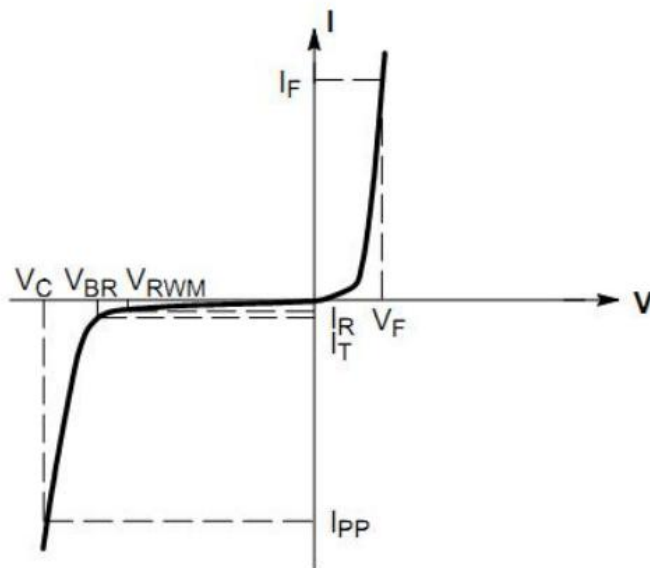
Characteristic 特性参数	Symbol 符号	Rat 额定值	Unit 单位
ESD (IEC61000-4-2 contact discharge) @25°C接触放电	V_{ESD}	± 30	KV
ESD (IEC61000-4-2 air discharge) @25°C空气放电	V_{ESD}	± 30	KV
Peak Pulse Power @25°C峰值脉冲功率	P_{PK}	250	W
Peak Pulse Current @25°C峰值脉冲电流	I_{PP}	10	A
Lead Temperature 管脚温度	T_L	260	°C
Lead Solder Time 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

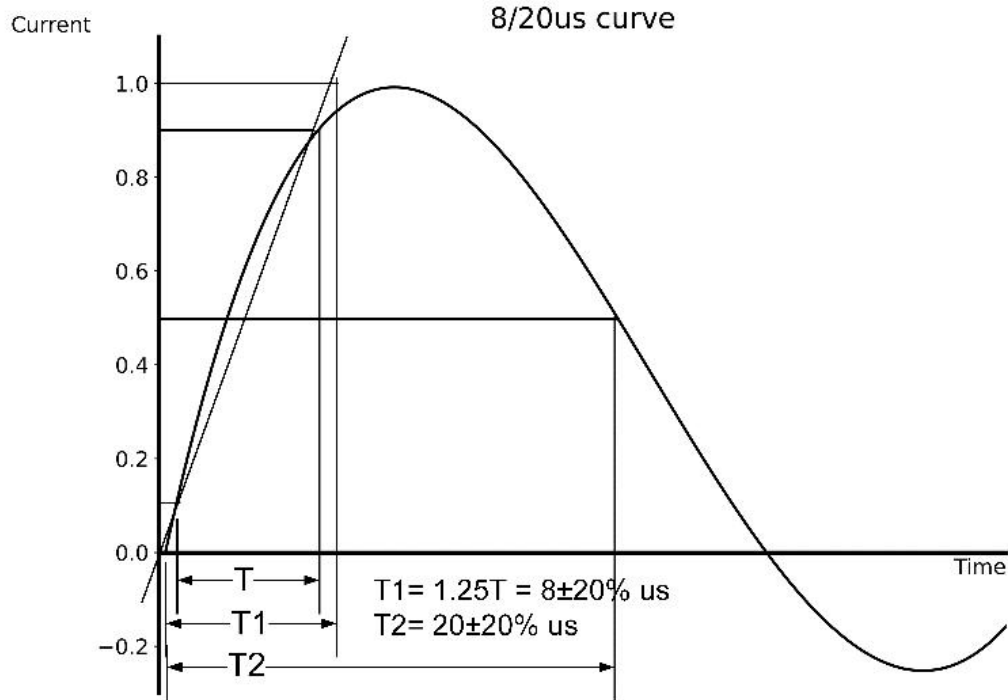
($T_A=25^{\circ}\text{C}$ unless otherwise noted 如无特殊说明, 温度为 25°C)

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}			12	V	
Reverse Breakdown Voltage 反向击穿电压	V_{BR}	13.5			V	$I_{\text{T}}=1\text{mA}$
Reverse Leakage Current 反向漏电流	I_{R}			1	μA	$V_{\text{RWM}}=12\text{V}$
Clamping Voltage 钳位电压	V_{C}		15		V	$I_{\text{PP}}=1\text{A}, t_{\text{p}}=8/20\mu\text{s}$
Clamping Voltage 钳位电压	V_{C}		25		V	$I_{\text{PP}}=10\text{A}, t_{\text{p}}=8/20\mu\text{s}$
Diode Capacitance 二极管电容	C_{D}		120		pF	$V_{\text{R}}=0\text{V}, f=1\text{MHz}$

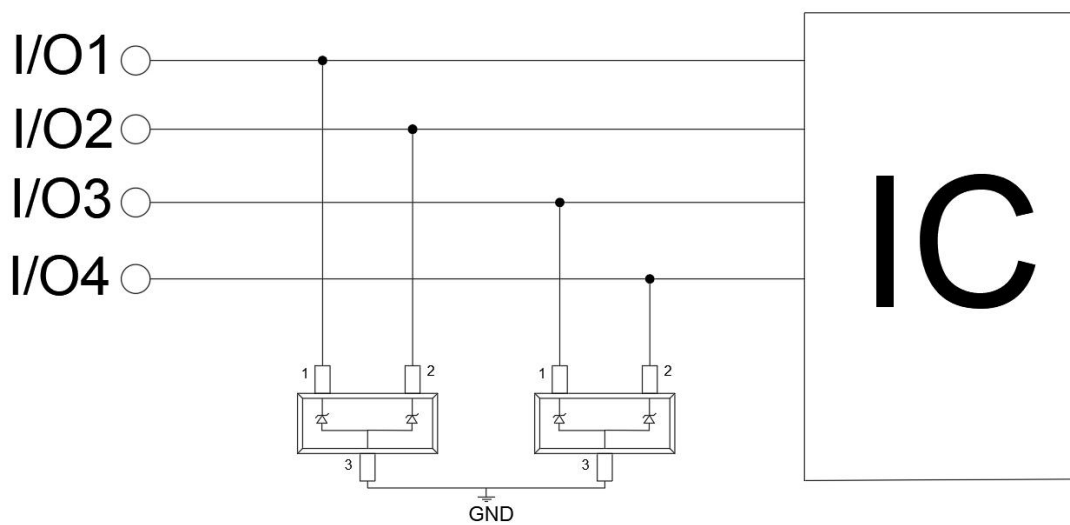
V_{RWM}	Reverse Working Voltage 反向工作电压
$V_{\text{R(BR)}}$	Reverse Breakdown Voltage 反向击穿电压@ $I_{\text{T}}=1\text{mA}$
I_{T}	Test Current 测试电流
I_{R}	Reverse Leakage Current 反向漏电流@ V_{RWM}
V_{C}	Clamping Voltage 钳位电压
I_{PP}	Reverse Peak Pulse Current 浪涌电流
C_{D}	Diode Capacitance 二极管电容 $V_{\text{IO}}=0\text{V},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



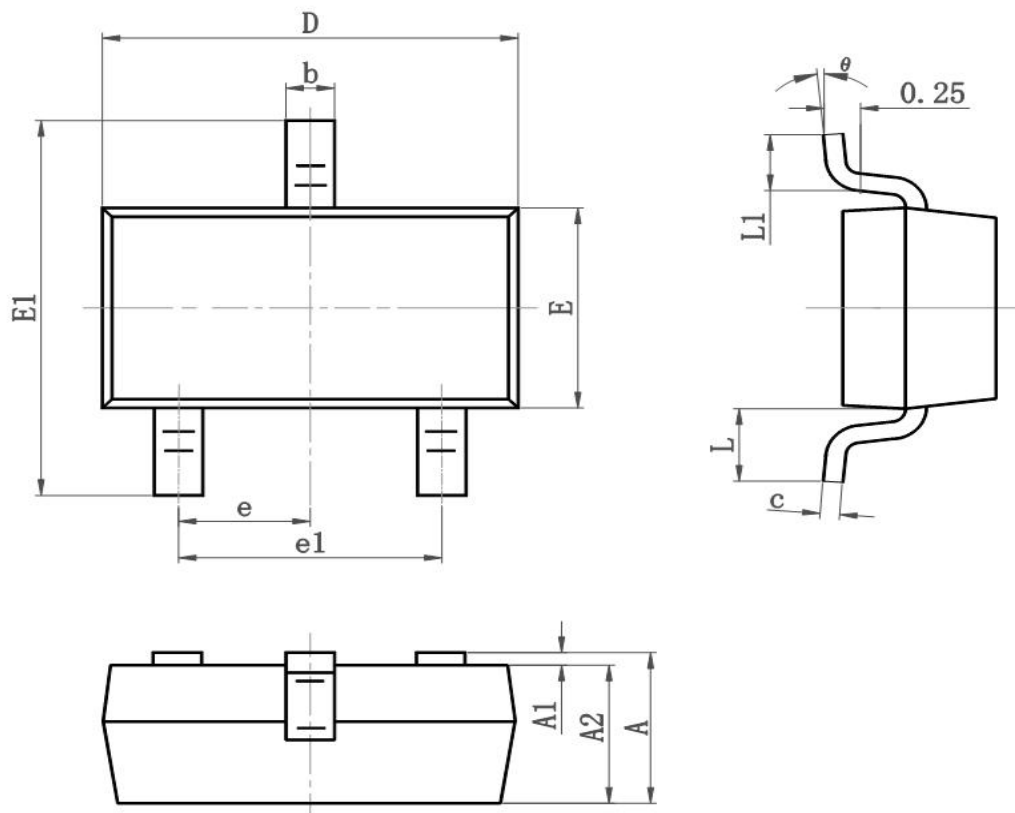
■ Typical Characteristic Curve 典型特性曲线



■ Typical Application 典型应用



■ Dimension 外形封装尺寸



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°