

SOT-23-6L ESD 静电保护二极管

■ Features 特点

Un-directional ESD Protection 单向静电保护

Ultra-low capacitance 极低电容

■ Applications 应用

Notebooks Computer 笔记本电脑

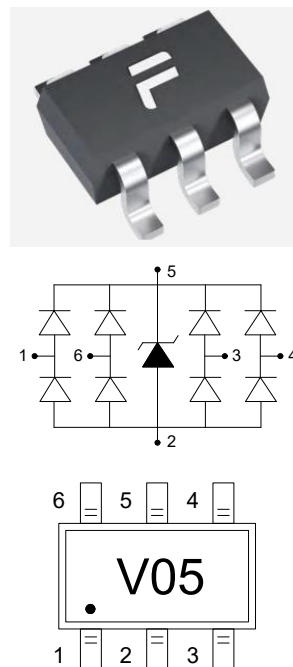
SIM Ports and Ethernet 用户识别和以太网

USB&ATM Interface 移动 U 盘及自动柜员机接口

Monitors and flat panel display 监视器和平板显示器

■ Internal Schematic Diagram 内部结构

■ Device Marking 产品打标



■ Absolute Maximum Ratings 最大额定值

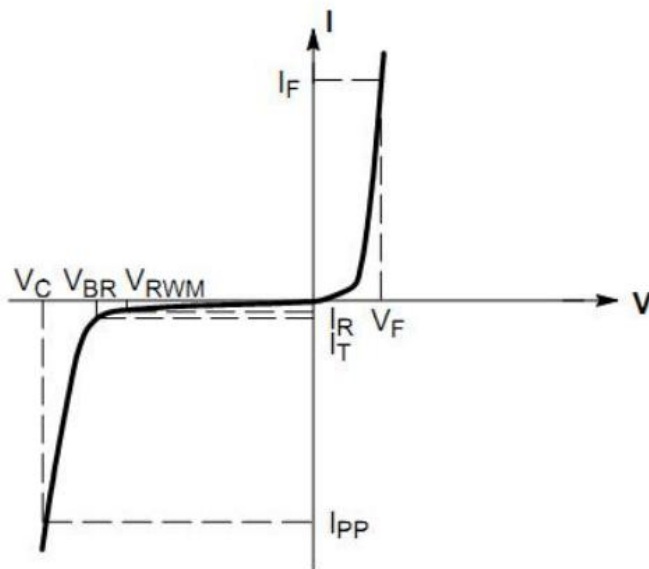
Characteristic 特性参数	Symbol 符号		Rat 额定值	Unit 单位
ESD (IEC61000-4-2 contact discharge) @25°C接触放电	V_{ESD}		± 15	KV
ESD (IEC61000-4-2 air discharge) @25°C空气放电	V_{ESD}		± 20	KV
Peak Pulse Power @25°C峰值脉冲功率	P_{PK}	I/O-GND Vcc-GND	60 300	W
Peak Pulse Current @25°C峰值脉冲电流	I_{PP}	I/O-GND Vcc-GND	4.5 17	A
Lead Temperature 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

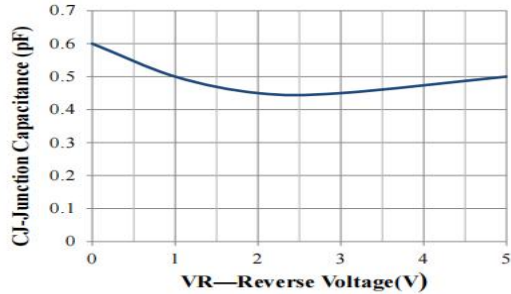
($T_A=25^{\circ}\text{C}$ unless otherwise noted 如无特殊说明, 温度为 25°C)

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}			5	V	
Reverse Breakdown Voltage 反向击穿电压	V_{BR}	6	7.5	8.5	V	$I_{\text{T}}=1\text{mA}$
Reverse Leakage Current 反向漏电流	I_{R}			0.5	μA	$V_{\text{RWM}}=5\text{V}$
Clamping Voltage 钳位电压	V_{C}		14	15	V	$I_{\text{PP}}=4.5\text{A}$, $t_{\text{p}}=8/20\mu\text{s}$
Clamping Voltage 钳位电压	V_{C}		16	18	V	$I_{\text{PP}}=17\text{A}$, $t_{\text{p}}=8/20\mu\text{s}$
Diode Capacitance 二极管电容	C_{D}	I/O to GND Between I/O	0.6 0.3	0.7 0.4	pF	$V_{\text{R}}=0\text{V}$, $f=1\text{MHz}$

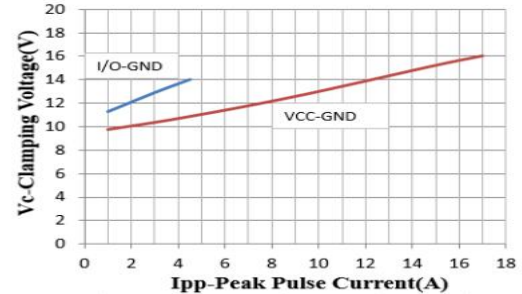
V_{RWM}	Reverse Working Voltage 反向工作电压
$V_{\text{R(BR)}}$	Reverse Breakdown Voltage 反向击穿电压@ $I_{\text{T}}=1\text{mA}$
I_{T}	Test Current 测试电流
I_{R}	Reverse Leakage Current 反向漏电流@ V_{RWM}
V_{C}	Clamping Voltage 钳位电压
I_{PP}	Reverse Peak Pulse Current 浪涌电流
C_{D}	Diode Capacitance 电容 $V_{\text{IO}}=0\text{V}$,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



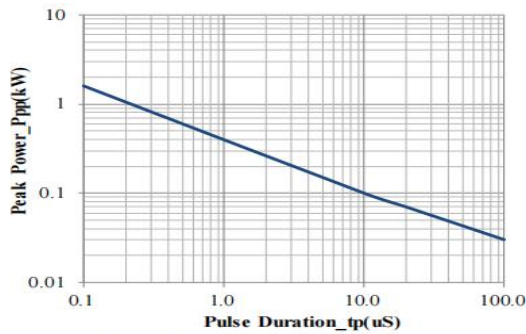
■ Typical Characteristic Curve 典型特性曲线



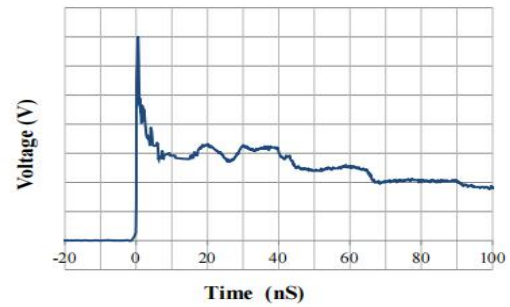
Junction Capacitance vs. Reverse Voltage



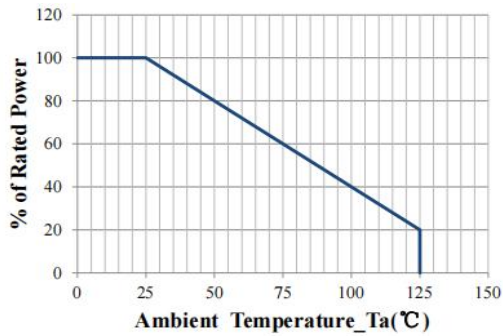
Clamping Voltage vs. Peak Pulse Current



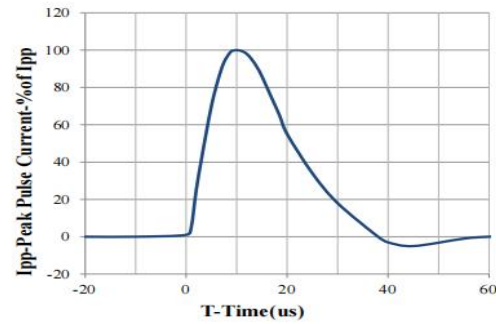
Peak Power vs. Pulse Time



IEC61000-4-2 Pulse Waveform

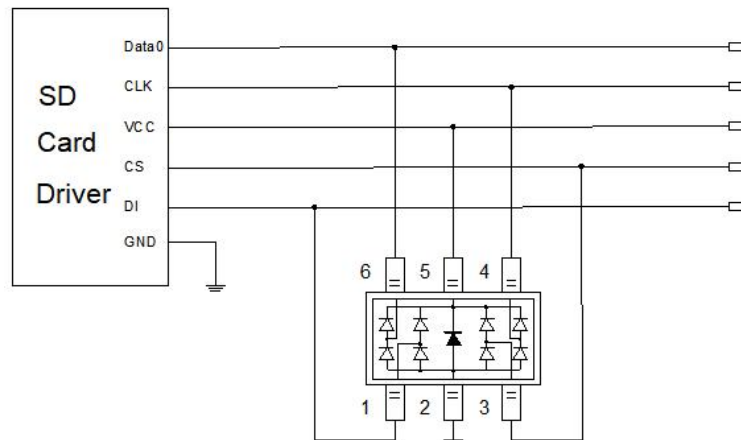


Power Derating Curve

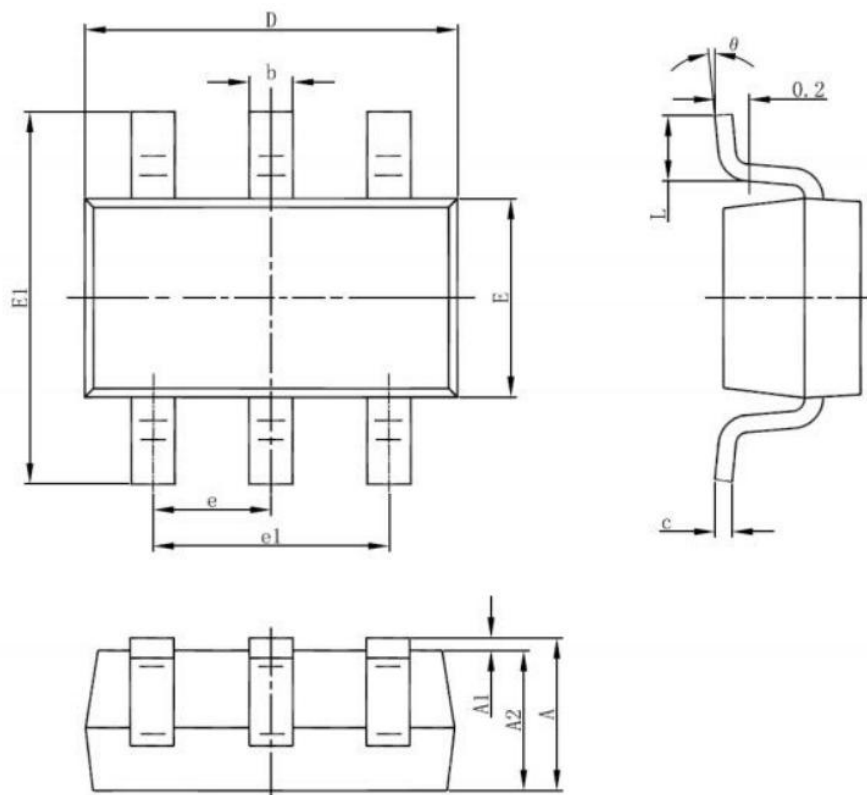


8 X 20us Pulse Waveform

■ 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	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E	1.500	1.700	0.059	0.067
E1	2.650	2.950	0.104	0.116
e	0.900	1.00	0.035	0.039
e1	1.800	2.000	0.071	0.079
L	0.450	0.650	0.018	0.026
L1	0.300	0.600	0.012	0.024
θ	0°	8°	0°	8°