

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

IEEE 1394 Firewire Ports 火线站点

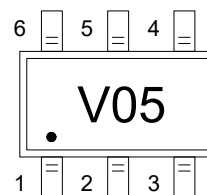
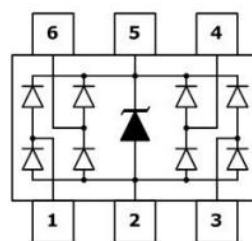
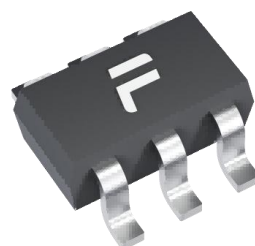
SIM Ports and Gigabit Ethernet 用户识别和以太网

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

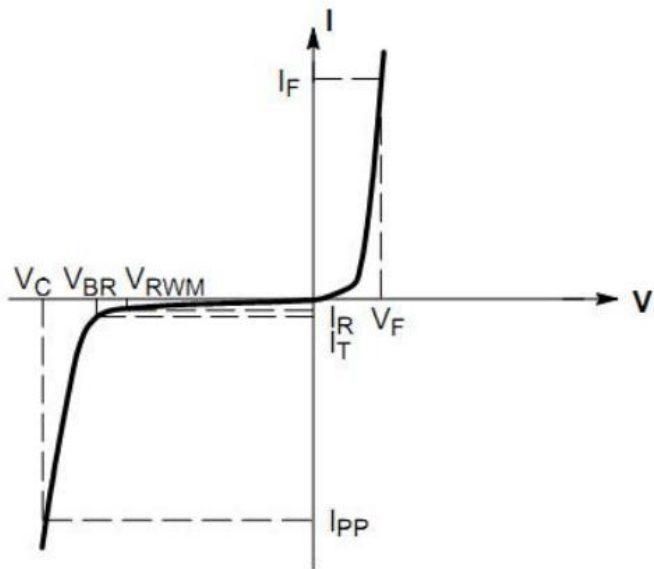
Characteristic 特性参数	Symbol 符号	Rat 额定值	Unit 单位
ESD (IEC61000-4-2 contact discharge) @25°C接触放电	V_{ESD}	± 30	KV
ESD (IEC61000-4-2 air discharge) @25°C空气放电	V_{ESD}	± 30	KV
Peak Pulse Current @25°C峰值脉冲电流	I_{PP} Pin1/3/4/6~Pin2	4	A
Peak Pulse Current @25°C峰值脉冲电流	I_{PP} Pin5~Pin2	20	A
Lead Temperature 管脚温度	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

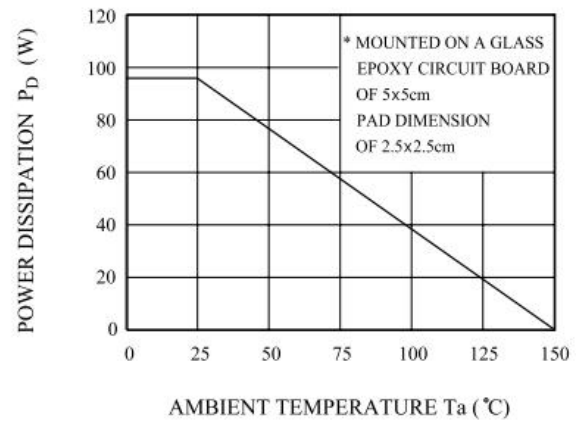
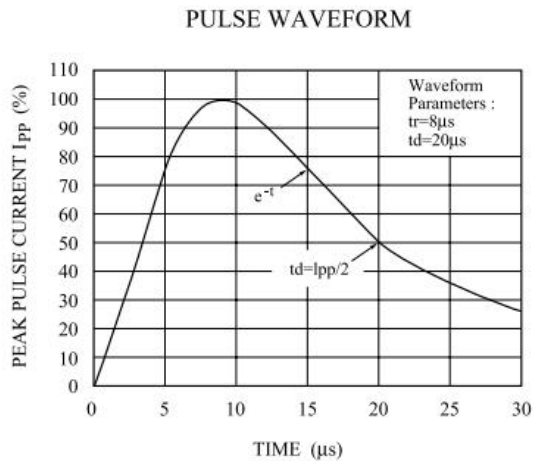
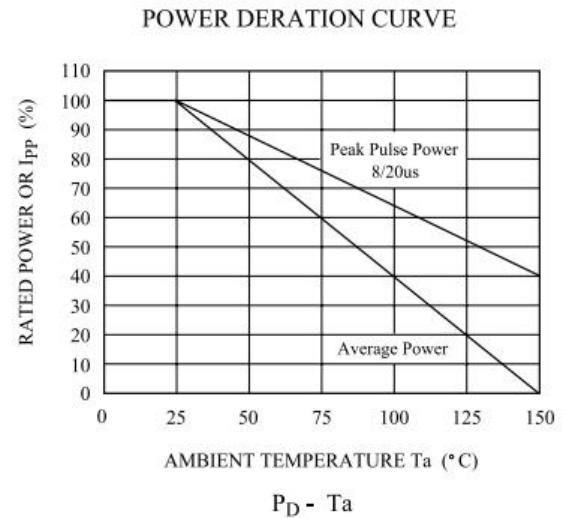
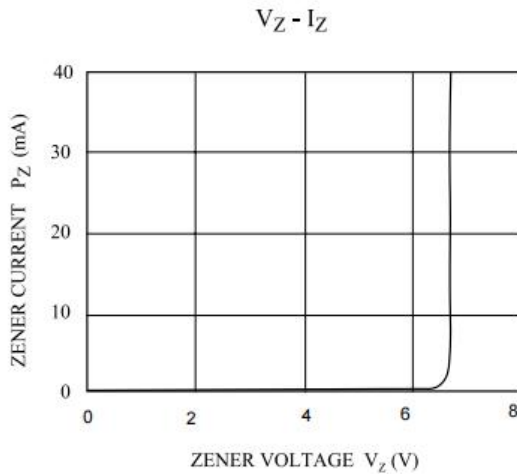
($T_A=25^{\circ}\text{C}$ unless otherwise noted 如无特殊说明, 温度为 25°C)

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		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}	Pin1/3/4/6 ~Pin2	9		V	$I_{\text{PP}}=1\text{A}, 8/20\mu\text{s}$
			13.5	15		$I_{\text{PP}}=4\text{A}, 8/20\mu\text{s}$
Clamping Voltage 钳位电压	V_{C}	Pin5~Pin2	8.5		V	$I_{\text{PP}}=1\text{A}, 8/20\mu\text{s}$
			20	22		$I_{\text{PP}}=20\text{A}, 8/20\mu\text{s}$
Junction Capacitance 结电容	C_{J}	Pin1/3/4/6 ~Pin2	0.5	0.8	pF	$V_{\text{R}}=0\text{V}$, $f=1\text{MHz}$
Junction Capacitance 结电容	C_{J}	Pin5~Pin2	150		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 $V_{\text{IO}}=0\text{V}$, $f=1\text{MHz}$

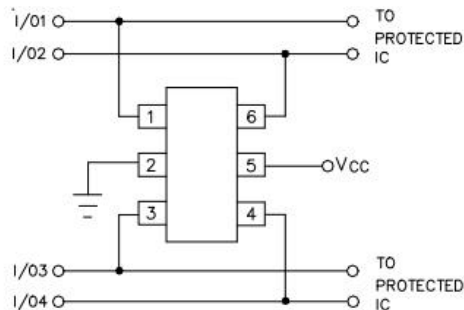


■ Typical Characteristic Curve 典型特性曲线

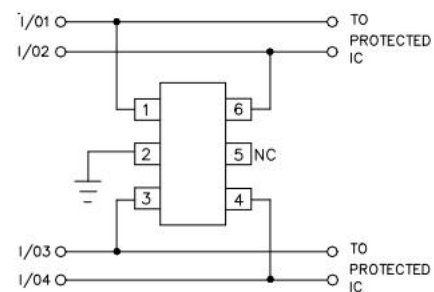


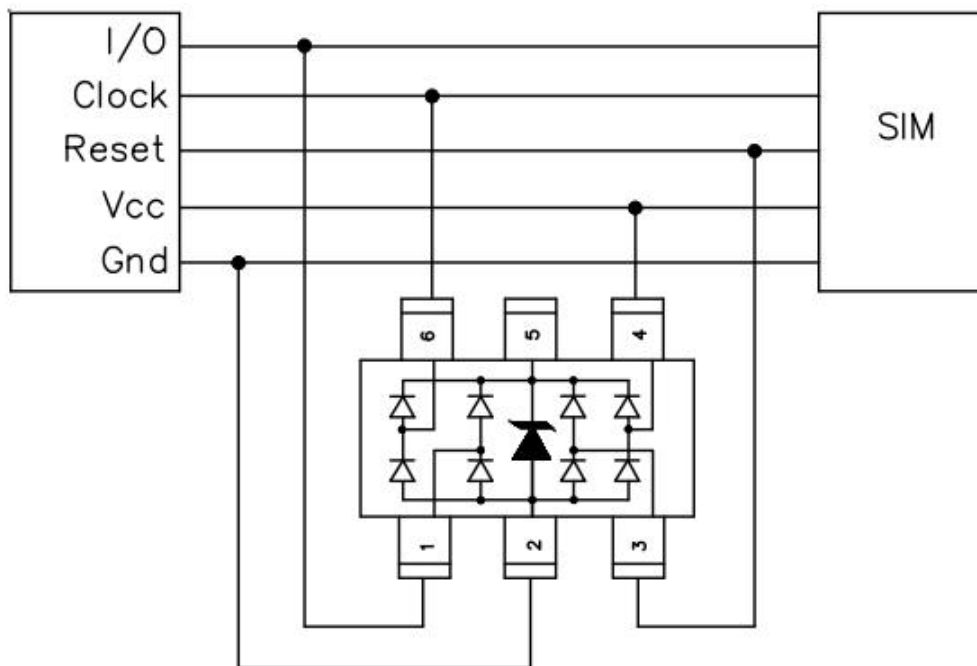
■ Typical Application 典型应用

Protection of Four Data Lines and Power Supply Line

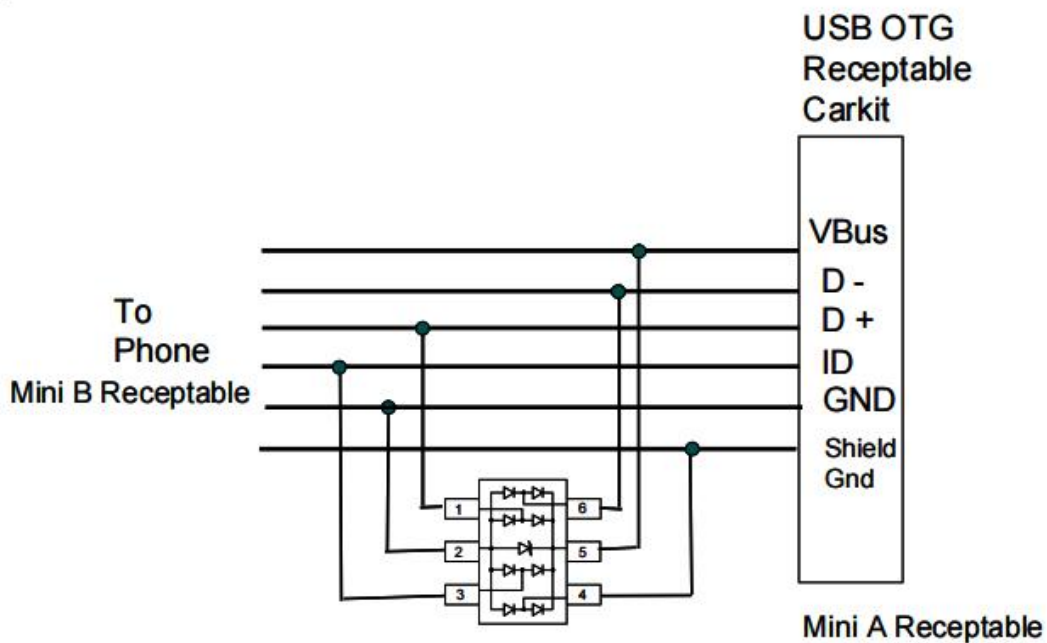


Protection of Four Data Lines Using Internal TVS Diode as Reference

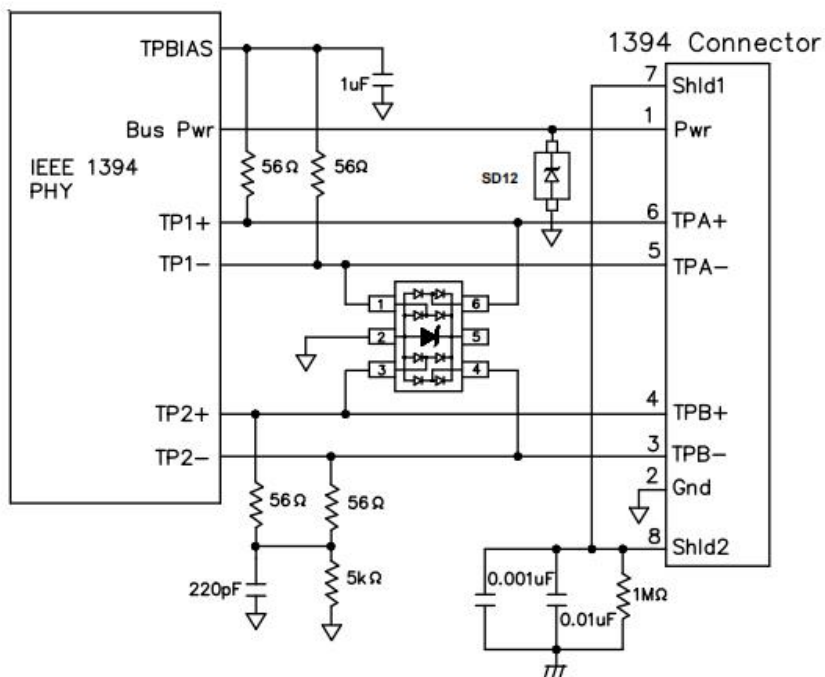




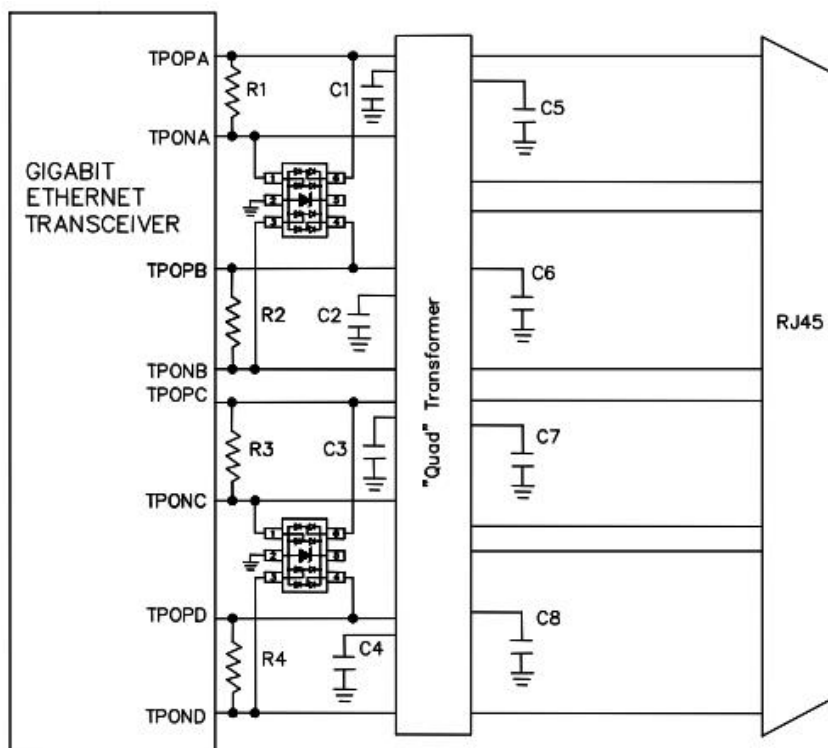
SIM Port - Protection of Three Data Lines and VCC



USB OTG CarKit Protection



IEEE 1394 Firewire Protection



Gigabit Ethernet Protection

■ Dimension 外形封装尺寸

