

DFN1006-2L ESD 静电保护二极管

■ Features 特点

Low Capacitance ESD Protection 低电容静电保护

- $\pm 20\text{kV}$ Contact Discharge 接触放电

- $\pm 30\text{kV}$ Air Discharge 空气放电

■ Applications 应用

HDMI 高清数字多媒体

High-speed data lines 高速数据线

Notebooks & Desktop Computers 笔记本及电脑

Cellular Handsets & Accessories 蜂窝手机及助手

Ethernet&Communication systems 以太网及通讯系统

■ Marking&Internal Schematic Diagram 字标及内部结构

Marking: Q4/21/5F



DFN1006-2L

■ Absolute Maximum Ratings 最大额定值

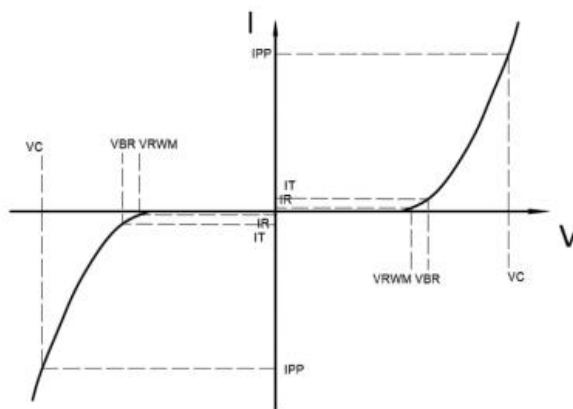
Characteristic 特性参数	Symbol 符号	Rat 额定值	Unit 单位
ESD (IEC61000-4-2 contact discharge) @25°C接触放电	V_{ESD}	± 20	KV
ESD (IEC61000-4-2 air discharge) @25°C 空气放电	V_{ESD}	± 30	KV
Peak Pulse Current @25°C峰值脉冲电流	I_{PP}	4	A
Peak Pulse Power @25°C峰值脉冲功率	P_{PK}	84	W
Lead Temperature 管脚温度	T_L	260	°C
Operating Temperature 工作温度	T_{op}	-40~125	°C
Junction Temperature 结温	T_J	150	°C
Storage Temperature 储存温度	T_{stg}	-55~150	°C

■ Electrical Characteristics 电特性

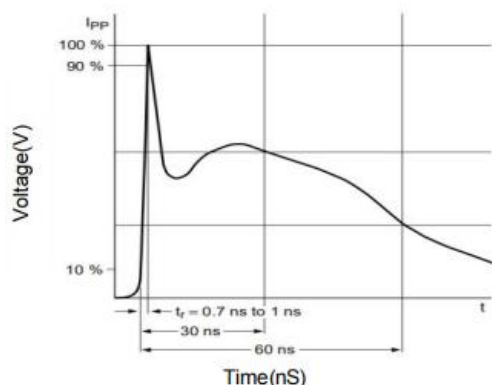
($T_A=25^{\circ}\text{C}$ unless otherwise noted 如无特殊说明, 温度为 25°C)

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}	6.8		9	V	$I_{\text{T}}=1\text{mA}$
Reverse Leakage Current 反向漏电流	I_{R}			0.1	μA	$V_{\text{RWM}}=5\text{V}$
Clamping Voltage 钳位电压	V_{C}		12	15	V	$I_{\text{PP}}=1\text{A}, t_{\text{p}}=8/20\mu\text{s}$
Clamping Voltage 钳位电压	V_{C}		19.5	21	V	$I_{\text{PP}}=4\text{A}, t_{\text{p}}=8/20\mu\text{s}$
Junction Capacitance 结电容	C_{J}		0.35	0.4	pF	$V_{\text{R}}=0\text{V}, f=1\text{MHz}$

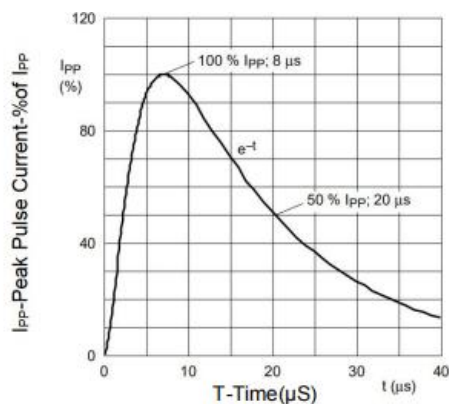
V_{RWM}	Reverse Working Voltage 反向工作电压
$V_{\text{R(BR)}}$	Reverse Breakdown Voltage 反向击穿电压@ $I_{\text{T}}=1\text{mA}$
I_{T}	Test Current 测试电流
I_{R}	Reverse Leakage Current 反向漏电流@ V_{RWM}
V_{C}	Clamping Voltage 钳位电压
I_{PP}	Reverse Peak Pulse Current 浪涌电流
C_{J}	Junction Capacitance 结电容 $V_{\text{IO}}=0\text{V},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



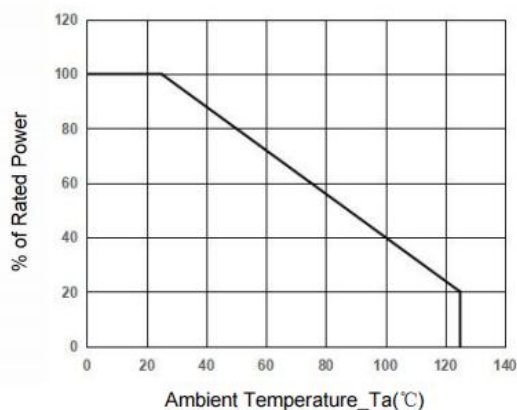
■ Typical Characteristic Curve 典型特性曲线



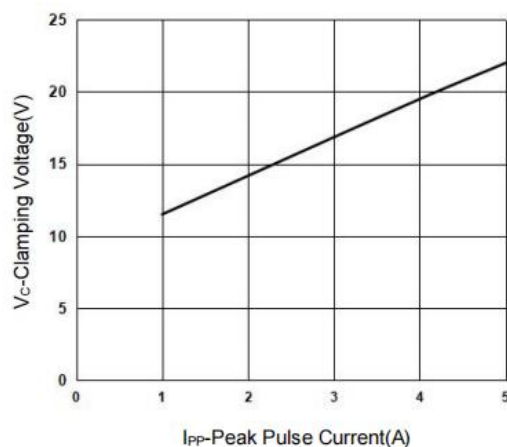
IEC61000-4-2 Pulse Waveform



IEC61000-4-5 8X20 μ s Pulse Waveform

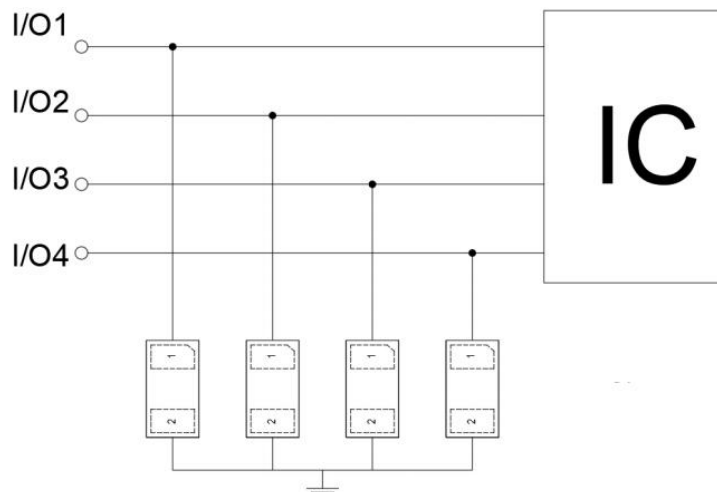


Power Derating Curve

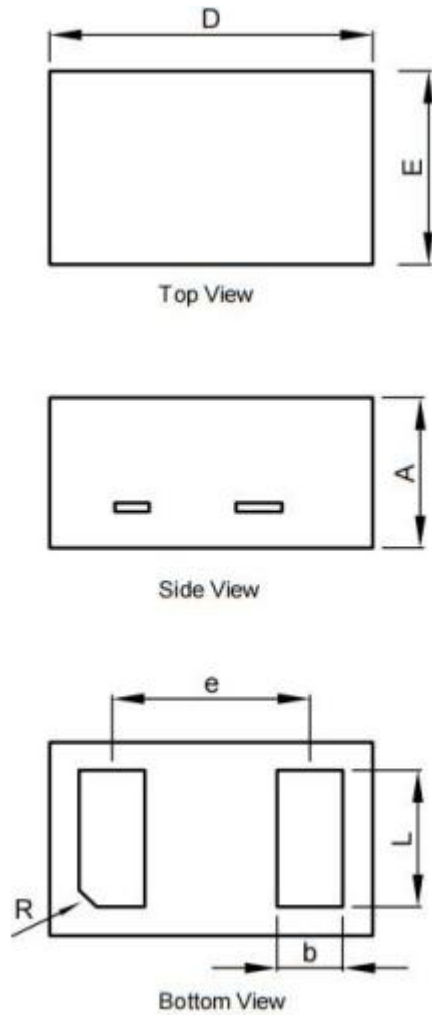


Clamping Voltage vs. Peak Pulse Current

■ Typical Applications 典型应用



■ **Dimension 外形封装尺寸**



SYMBOL	MILLIMETERS		
	MIN	TYP	MAX
A	0.45	0.50	0.55
D	0.95	1.00	1.05
E	0.55	0.60	0.65
b	0.20	0.25	0.30
L	0.45	0.50	0.55
e	0.675		
R	0.07	0.10	0.13