DFN1006-2L ESD 静电保护二极管

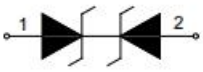
■Features 特点

IEC 61000-4-2 Level 4 ESD Protection 静电保护
- ±30kV Contact Discharge 接触放电
- ±30kV Air Discharge 空气放电

■Applications 应用

USB Ports 接口电路
Wearable Devices 可穿戴产品
Notebooks & Handhelds 笔记本或手持机
Cellular handsets and accessories 蜂窝手机及附件

■Internal Schematic Diagram 内部结构



DFN1006-2L

■Absolute Maximum Ratings 最大额定值

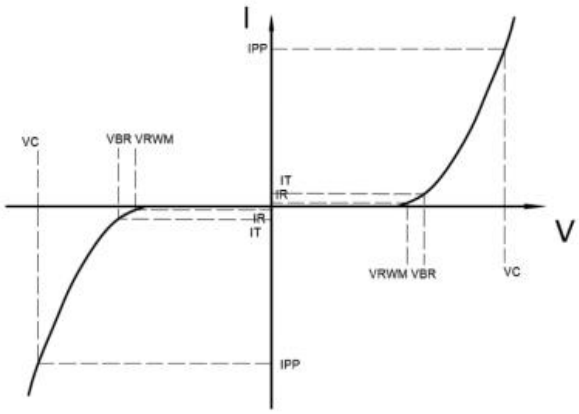
Characteristic 特性参数	Symbol 符号	Rat 额定值	Unit 单位
ESD (IEC61000-4-2 contact discharge) @25℃接触放电	V_{ESD}	±30	KV
ESD (IEC61000-4-2 air discharge) @25℃ 空气放电	V_{ESD}	±30	KV
Peak Pulse Current @25℃峰值脉冲电流	I_{PP}	8	A
Peak Pulse Power @25℃峰值脉冲功率	P_{PK}	100	W
Lead Temperature 管脚温度	T_L	260	℃
Operating Temperature 工作温度	T_{op}	-40~85	℃
Junction Temperature 结温	T_J	150	℃
Storage Temperature 储存温度	T_{stg}	-55~150	℃

■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_{BR}	5.5	6.4	7.8	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			7.5	V	I_{PP}=3A,tp=8/20μs
Clamping Voltage 钳位电压	V_C			12	V	I_{PP}=8A,tp=8/20μs
Diode Capacitance 二极管电容	C_D		15		pF	V_R=0V,f=1MHz

Symbol	Parameters
V_{RWM}	Peak Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
I_F	Forward Current
V_F	Forward Voltage @ I_F



■Typical Characteristic Curve 典型特性曲线

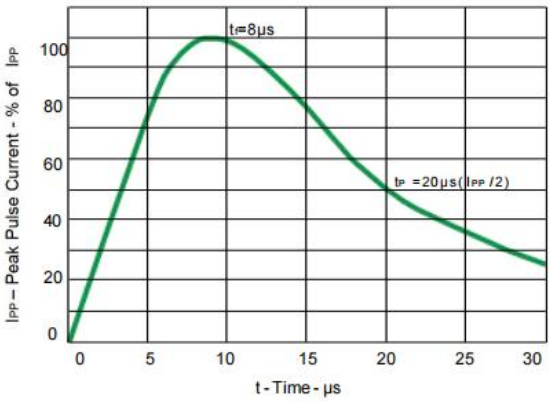


Fig 1.Pulse Waveform

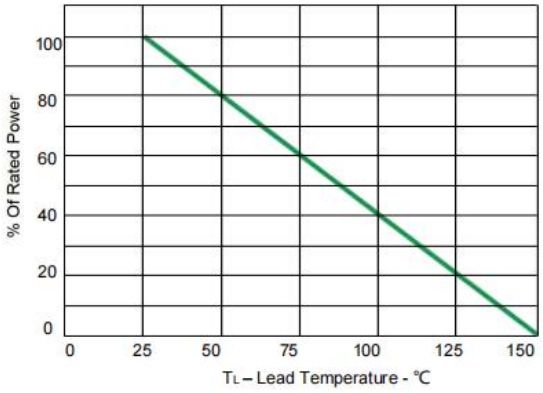


Fig 2.Power Derating Curve

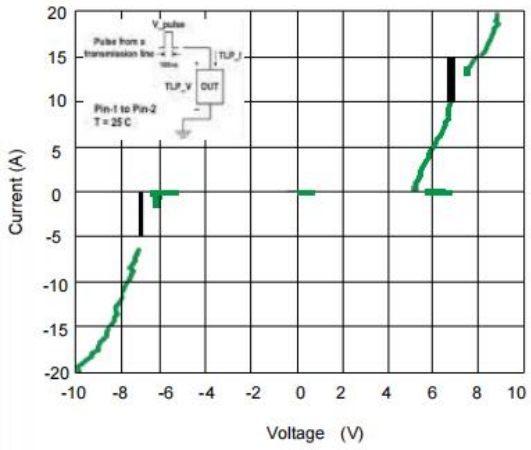


Fig 3.TLP Measurement

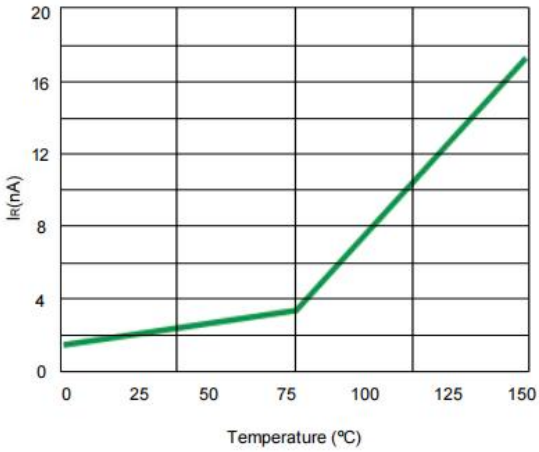


Fig 4.Typical Leakage Current vs. Temperature

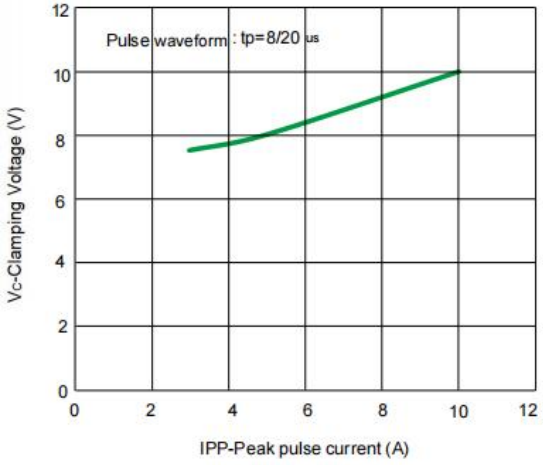


Fig 5. Clamping voltage vs. Peak pulse current

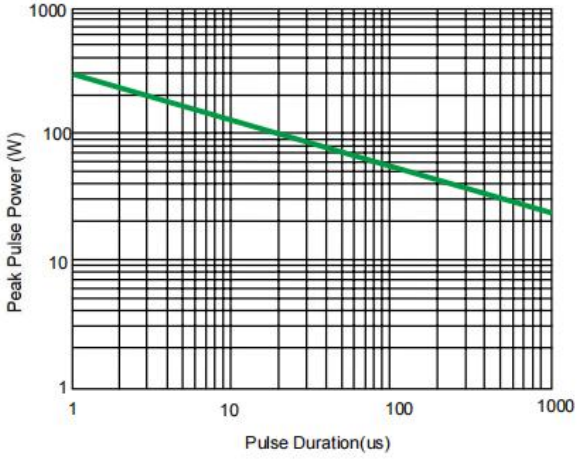
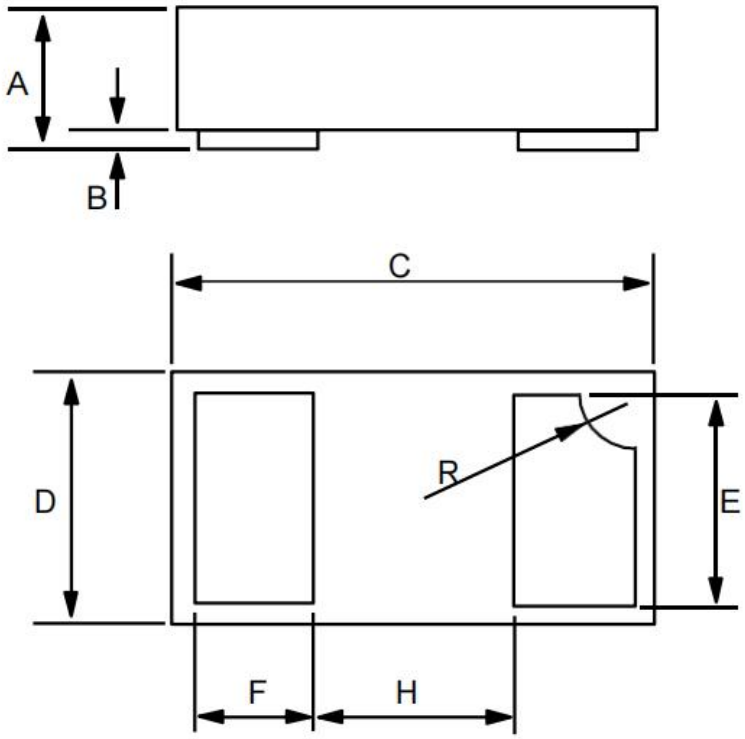


Fig 6. Non-Repetitive Peak Pulse Power vs. Pulse time

■ Dimension 外形封装尺寸



Dim	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.013	0.020	0.34	0.50
B	0.000	0.002	0.00	0.05
C	0.037	0.043	0.95	1.080
D	0.022	0.027	0.55	0.680
E	0.016	0.024	0.40	0.60
F	0.008	0.012	0.20	0.30
H	0.015Typ.		0.40Typ.	
R	0.001	0.005	0.05	0.15