

BRESD36VL1B2ZP

Rev.A Mar.-2024

描述 / Descriptions

DFN1006-2L 塑封封装 ESD 保护二极管。
DFN1006-2L Plastic Package ESD Protection Diode.

特征 / Features

超小封装，正常响应时间小于 1ns，防静电等级达到 30KV 以上，符合 IEC61000-4-2 的 4 级 ESD 保护项目，无卤产品。

Ultra small package, Response Time is Typically < 1 ns, ESD > 30 kV per Human Body Model, IEC61000-4-2 Level 4 ESD Protection, HF Product.

用途 / Applications

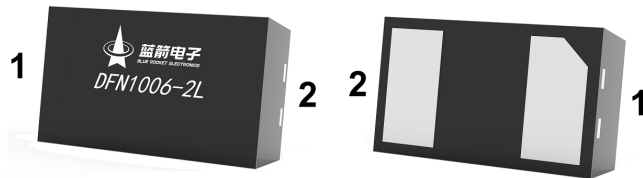
适用于手机音频、MP3 播放器、数码相机、便携式设备、移动电话等用户端。

Suitable for cellular phones audio, MP3 players, Digital cameras, Portable devices, mobile telephone and other users.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



印章代码 / Marking

见印章说明。

See Marking Instructions.

极限参数 / Absolute Maximum Ratings(Ta=25°C)

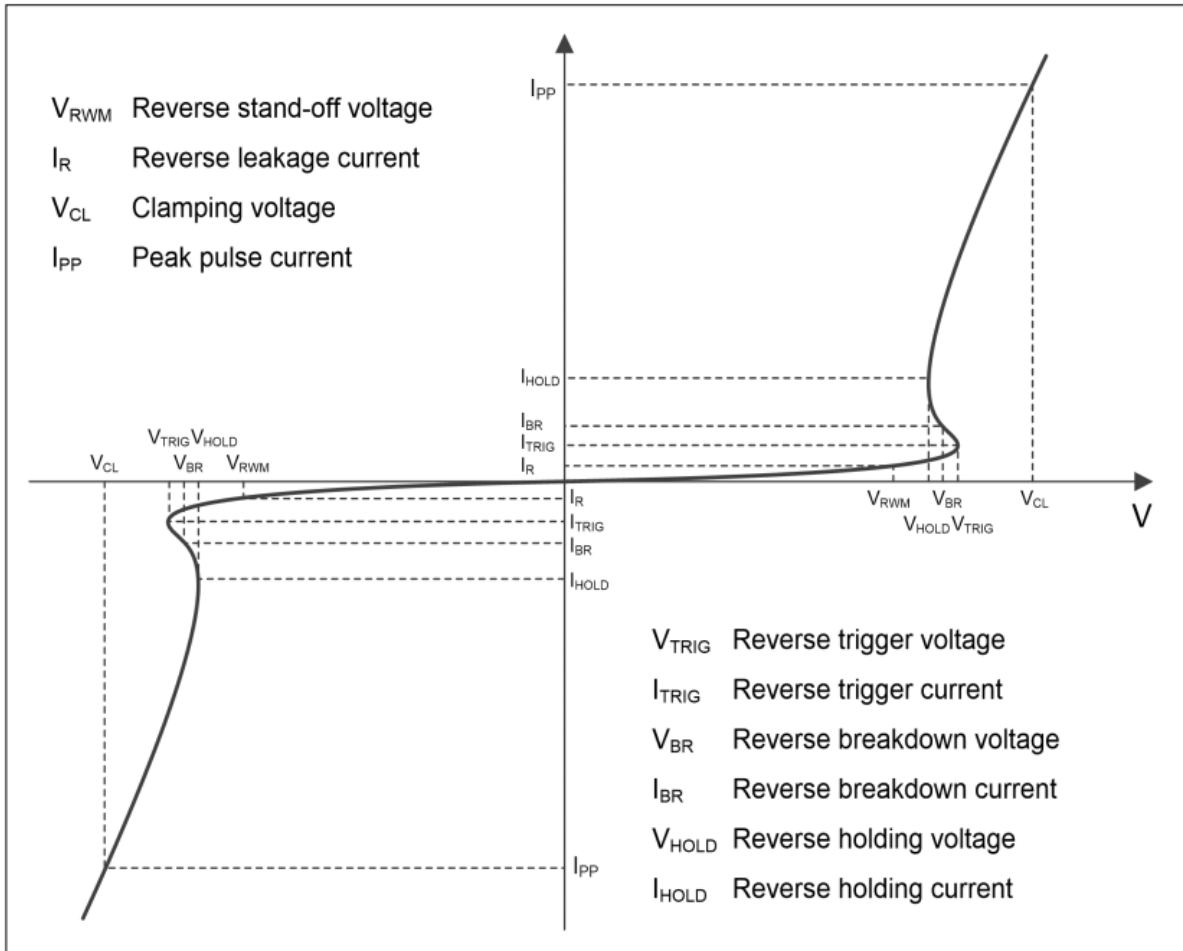
参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Peak pulse power ($t_p = 8/20\mu s$)	P_K	420	W
Peak pulse current ($t_p = 8/20\mu s$)	I_{PP}	7	A
ESD according to IEC61000-4-2 air discharge	V_{ESD}	± 30	KV
ESD according to IEC61000-4-2 contact discharge		± 30	
Junction temperature	T_J	125	°C
Storage temperature	T_{STG}	-55~+150	°C

电性能参数 / Electrical Characteristics(Ta=25°C)

参数 Parameter	符号 Symbol	测试条件 Test Conditions	最小值 Min	典型值 Typ	最大值 Max	单位 Unit
Reverse maximum working voltage	V_{RWM}				± 36	V
Reverse leakage current	I_R	$V_{RWM} = \pm 36V$			100	nA
Reverse breakdown voltage ¹⁾	V_{BR}	$I_T = 1mA$	36			V
Clamping voltage ²⁾	V_C	$I_{PP} = 1A \ t_p = 8/20\mu s$		46	48	V
		$I_{PP} = 7A \ t_p = 8/20\mu s$		75	77	V
		$V_{ESD}=8KV$ ³⁾		65		V
Junction capacitance	C_J	$V_R = 0V \ f = 1MHz$		15	20	pF
Clamping voltage ⁴⁾	V_{CL}	$I_{PP} = 16A \ t_p = 100ns$		60		V
Dynamic resistance ⁴⁾	R_{DYN}			0.22		Ω

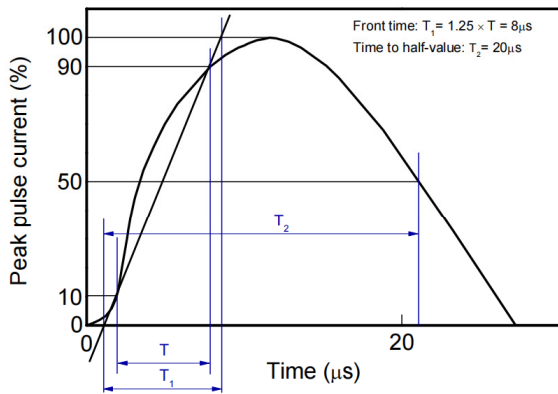
Notes:

- V_{BR} is measured with a pulse test current I_T at an ambient temperature of 25°C.
- Non-repetitive current pulse, according to IEC61000-4-5.
- Contact discharge mode, according to IEC61000-4-2.
- TLP parameter: $Z_0 = 50\Omega$, $t_p = 100ns$, $t_r = 2ns$, averaging window from 60ns to 80ns. R_{DYN} is calculated from 4A to 16A.

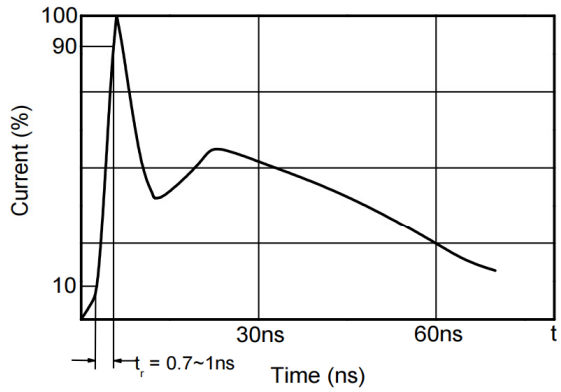


Definitions of electrical characteristics

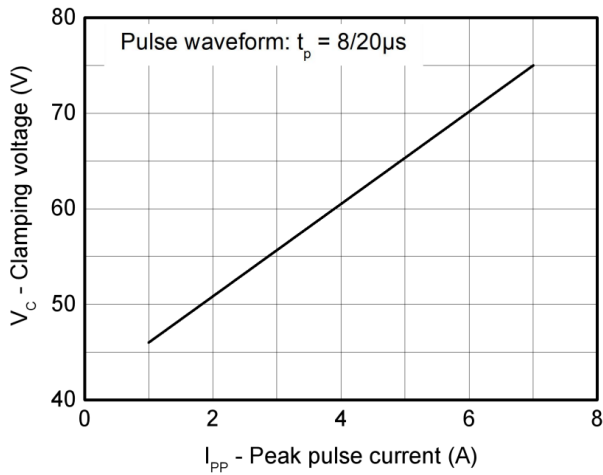
电参数曲线图 / Electrical Characteristic Curve



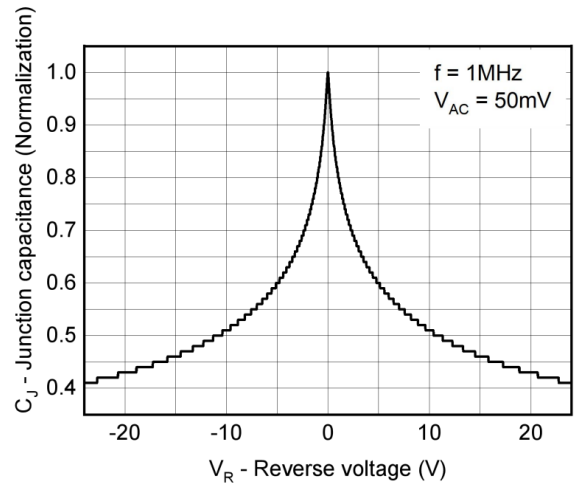
8/20μs waveform per IEC61000-4-5



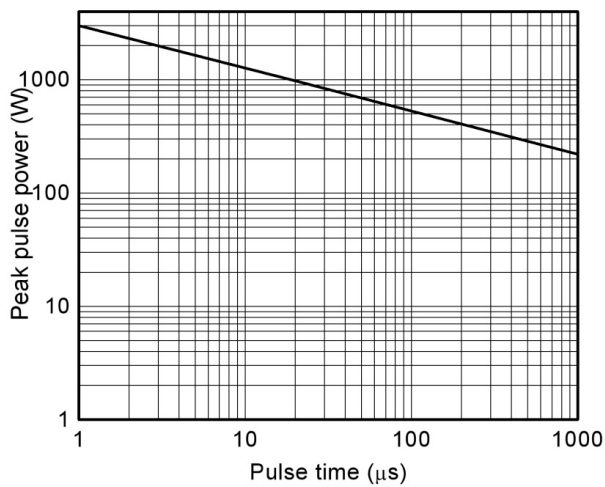
Contact discharge current waveform per IEC61000-4-2



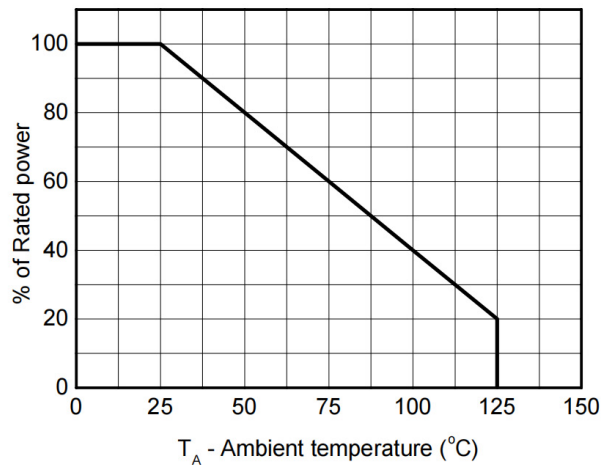
Clamping voltage vs. Peak pulse current



Capacitance vs. Reverse voltage

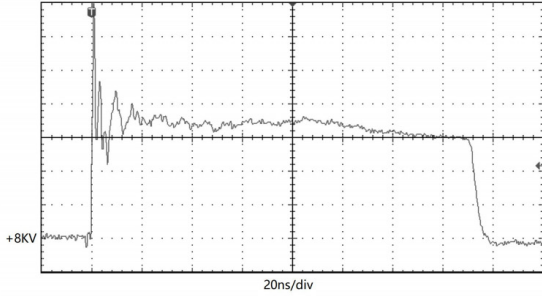


Non-repetitive peak pulse power vs. Pulse time

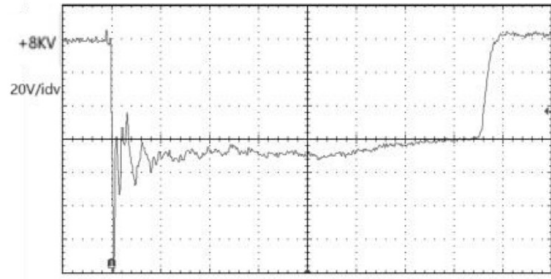


Power derating vs. Ambient temperature

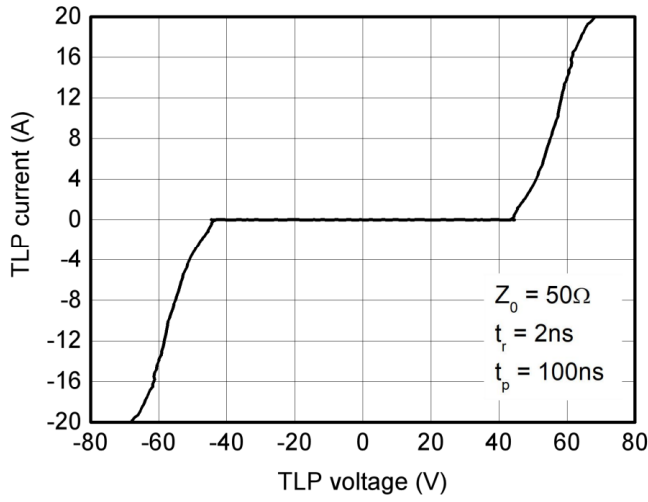
电参数曲线图 / Electrical Characteristic Curve



ESD clamping
(+8kV contact discharge per IEC61000-4-2)



ESD clamping
(-8kV contact discharge per IEC61000-4-2)



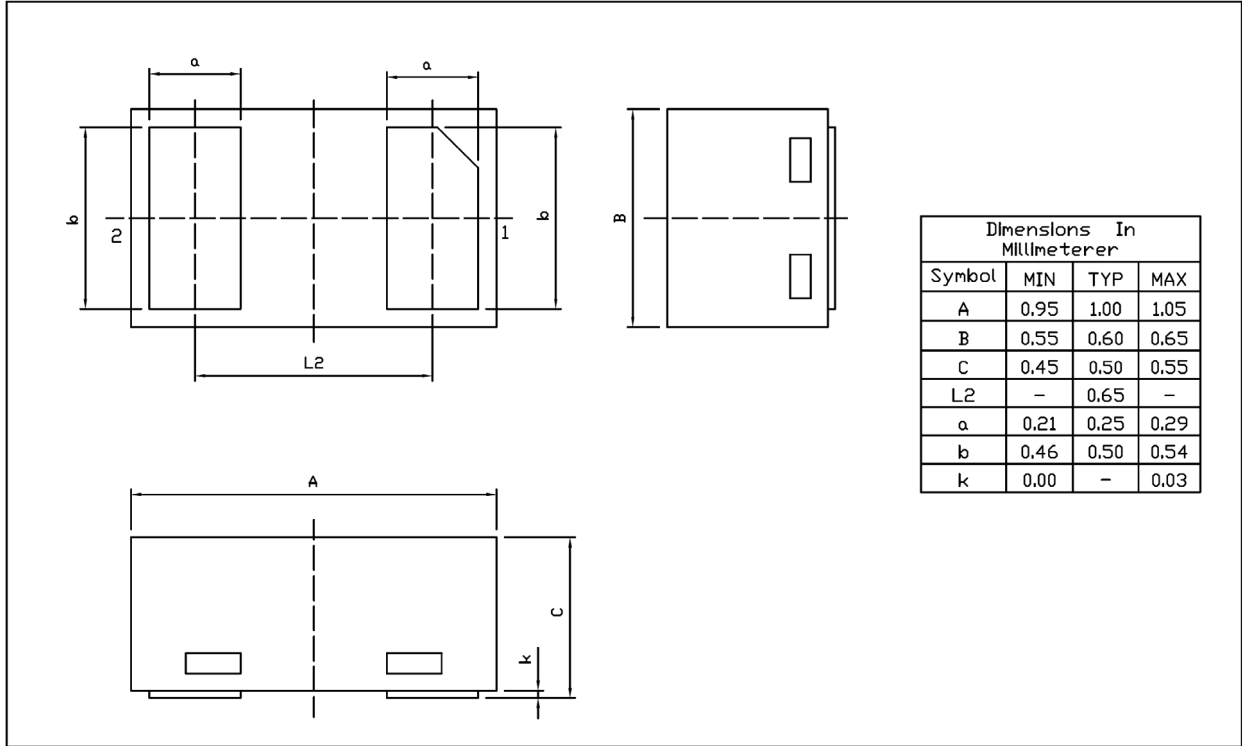
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外形尺寸图 / Package Dimensions

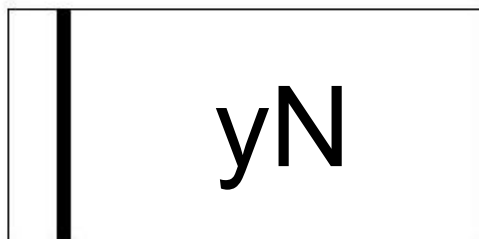
DFN1006-2L

Unit:mm



Rev.01 202108

印章说明 / Marking Instructions



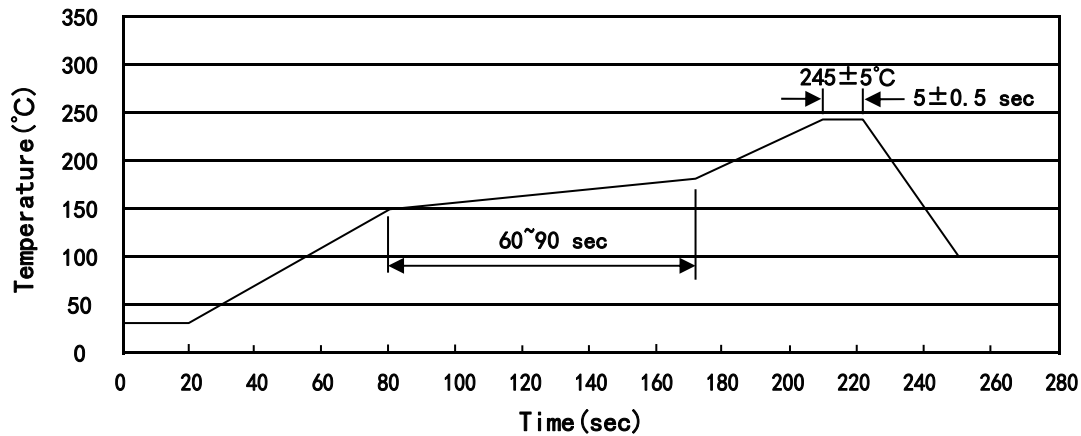
说明：

yN： 为型号代码

Note：

yN： Product Type Code

回流焊温度曲线图(无铅) / Temperature Profile for IR Reflow Soldering(Pb-Free)



说明：

- 1、预热温度 150~180°C，时间 60~90sec;
- 2、峰值温度 245±5°C，时间持续为 5±0.5sec;
- 3、焊接制程冷却速度为 2~10°C/sec.

Note:

- 1.Preheating:150~180°C, Time:60~90sec.
- 2.Peak Temp.:245±5°C, Duration:5±0.5sec.
3. Cooling Speed: 2~10°C/sec.

耐焊接热试验条件 / Resistance to Soldering Heat Test Conditions

温度：260±5°C

时间：10±1 sec.

Temp.:260±5°C

Time:10±1 sec

包装规格 / Packaging SPEC.

卷盘包装 / REEL

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Reel 只/卷盘	Reels/Inner Box 卷盘/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Reel	Inner Box 盒	Outer Box 箱
DFN1006-2L	10,000	10	100,000	6	600,000	7" ×8	180×120×180	390×385×205

使用说明 / Notices