BRESD5V0L1B2ZP

Rev.C Dec-2022

蓝箭电子
BLUE ROCKET ELECTRONICS
DATA SHEET

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。

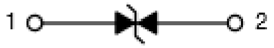
Ultra small package, Response Time is Typically < 1 ns, ESD > 30 kV per Human Body Model,IEC61000−4−2 Level 4 ESD Protection,HF Product.

用途 / Applications

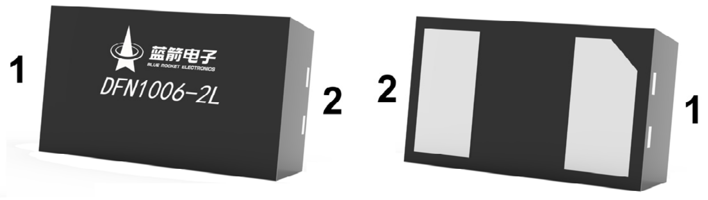
适用于手机音频、MP3 播放器、数码相机、便携式设备、移动电话等用户端。

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℃)

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Peak pulse power (t_p = 8/20μs)	P_K	69	W
Peak pulse current (t_p = 8/20μs)	I_{PP}	5.5	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	150	℃
Storage temperature	T_{STG}	-55~+150	℃

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

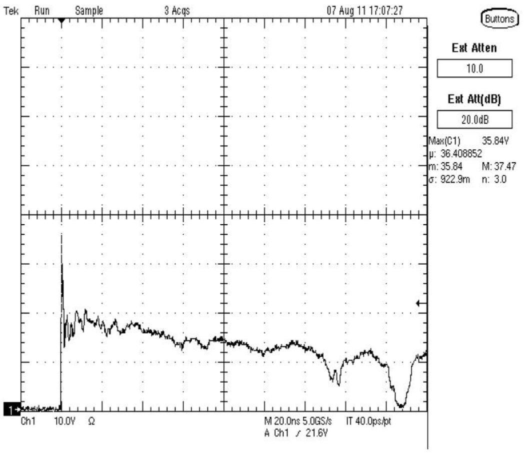
参数 Parameter	符号 Symbol	测试条件 Test Conditions	最小值 Min	典型值 Typ	最大值 Max	单位 Unit
Reverse maximum working voltage	V_{RWM}				5.0	V
Reverse leakage current	I_R	V_{RWM} = 5V			0.5	uA
		V_{RWM} = 3.5V			0.3	uA
Reverse breakdown voltage$^{1)}$	V_{BR}	I_T = 1mA	5.6			V
Clamping voltage$^{2)}$	V_C	I_{PP} = 1A t_p = 8/20μs			9.8	V
		I_{PP} = 5.5A t_p = 8/20μs			12.5	V
Junction capacitance	C_J	V_R = 0V f = 1MHz			15	pF

Notes:

1) V_{BR} is measured with a pulse test current IT at an ambient temperature of 25℃.

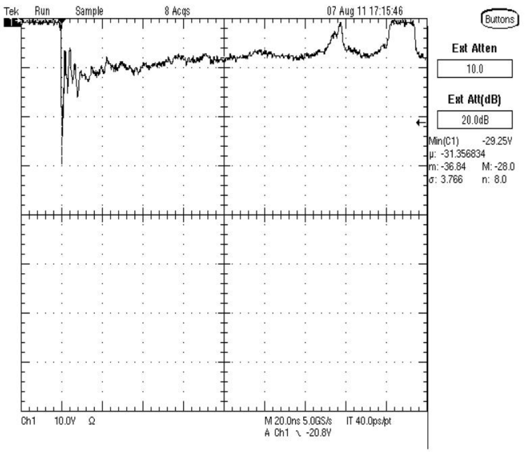
2) Non-repetitive current pulse, according to IEC61000-4-5.

电参数曲线图 / Electrical Characteristic Curve



Ext Atten 10.0
Ext Att(dB) 20.0dB
Max(C1) 35.84V
μ: 36.408852
m: 35.84 M: 37.47
σ: 922.9m n: 3.0
Ch1 10.0V Ω
M 20.0ns 5.0GS/s IT 40.0ps/pt
A Ch1 ⁄ 21.6V

Fig1. ESD Clamping Voltage Screenshot



Ext Atten 10.0
Ext Att(dB) 20.0dB
Min(C1) -29.25V
μ: -31.356834
m: -36.84 M: -28.0
σ: 3.766 n: 8.0
Ch1 10.0V Ω
M 20.0ns 5.0GS/s IT 40.0ps/pt
A Ch1 ∖ -20.8V

Fig2. ESD Clamping Voltage Screenshot

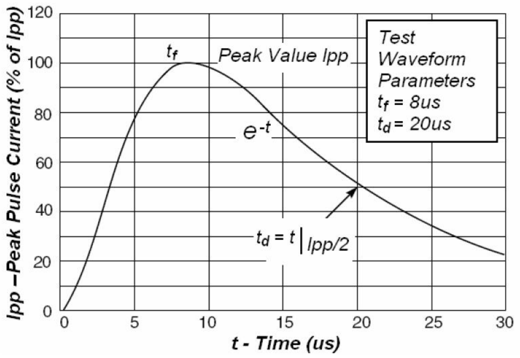
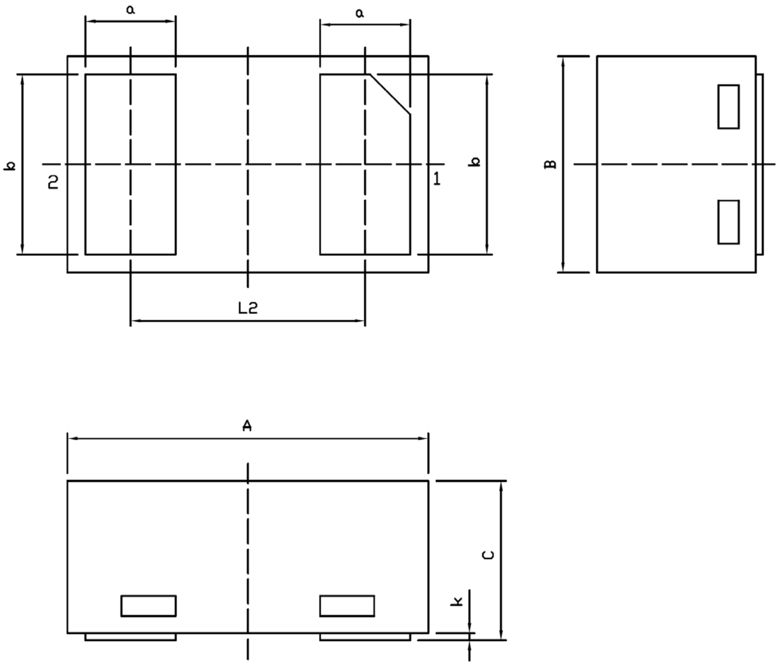


Fig3. Pulse Waveform

外形尺寸图 / Package Dimensions

DFN1006-2L

Unit:mm



Symbol	Dimensions In Millimeterer MIN	TYP	MAX
A	0.95	1.00	1.05
B	0.55	0.60	0.65
C	0.45	0.50	0.55
L2	–	0.65	–
a	0.21	0.25	0.29
b	0.46	0.50	0.54
k	0.00	-	0.03

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印章说明 / Marking Instructions

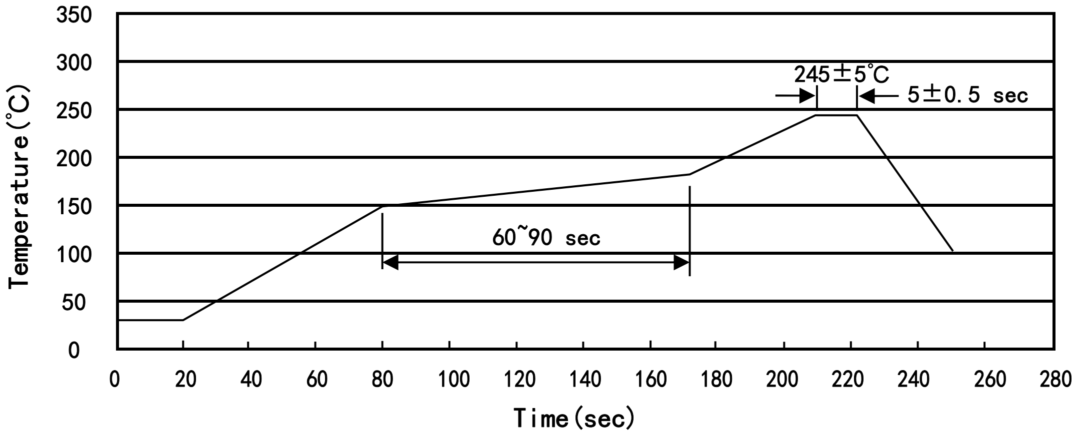
说明：

5A：	为型号代码

Note：

5A：	Product Type

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



说明：	Note:
1、预热温度 150～180℃，时间 60～90sec;	1.Preheating:150~180℃, Time:60~90sec.
2、峰值温度 245±5℃，时间持续为 5±0.5sec;	2.Peak Temp.:245±5℃, Duration:5±0.5sec.
3、焊接制程冷却速度为 2～10℃/sec.	3. Cooling Speed: 2~10℃/sec.

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

温度：260±5℃　　时间：10±1 sec.　　Temp.:260±5℃　　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