

BRESD18VL1B2ZPQ

Rev.A Feb.-2023

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，符合 AEC-Q101 标准高可靠性要求，无卤产品。

Ultra small package, Response Time is Typically <1ns, ESD>30kV per Human Body Model, IEC61000-4-2 Level 4 ESD Protection, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

用途 / Applications

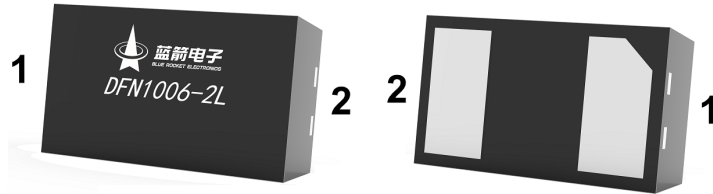
适用于手机音频、MP3 播放器、数码相机、便携式设备、移动电话等用户端，满足汽车应用的严格要求。

Suitable for cellular phones audio, MP3 players, Digital cameras, Portable devices, mobile telephone and other users, Meet the stringent requirements of automotive applications.

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 | 320 | W |
| Peak pulse current ($t_p = 8/20\mu s$) | I_{PP} | 6 | 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 | -55~+150 | °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} | | | | 18 | V |
| Reverse leakage current | I_R | $V_{RWM} = 18V$ | | | 1 | μA |
| Reverse breakdown voltage ¹⁾ | V_{BR} | $I_T = 1mA$ | 19 | | | V |
| Clamping voltage ²⁾ | V_C | $I_{PP} = 1A$ $t_p = 8/20\mu s$ | | | 26 | V |
| | | $I_{PP} = 6A$ $t_p = 8/20\mu s$ | | | 40 | V |
| Junction capacitance | $C_{I/O}$ | $V_R = 0V$ $f = 1MHz$ Between I/O Pins and GND | | | 40 | pF |

Notes:

- 1) V_{BR} is measured with a pulse test current I_T at an ambient temperature of 25°C.
- 2) Non-repetitive current pulse, according to IEC61000-4-5.

电参数曲线图 / Electrical Characteristic Curve

Fig.1 Non-Repetitive Pulse Power vs.Pulse Time

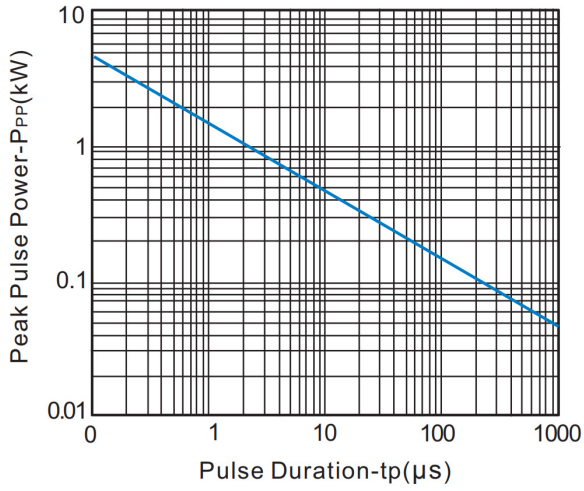
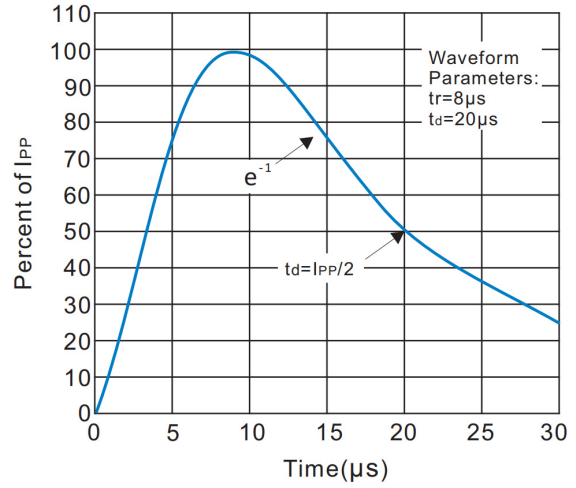


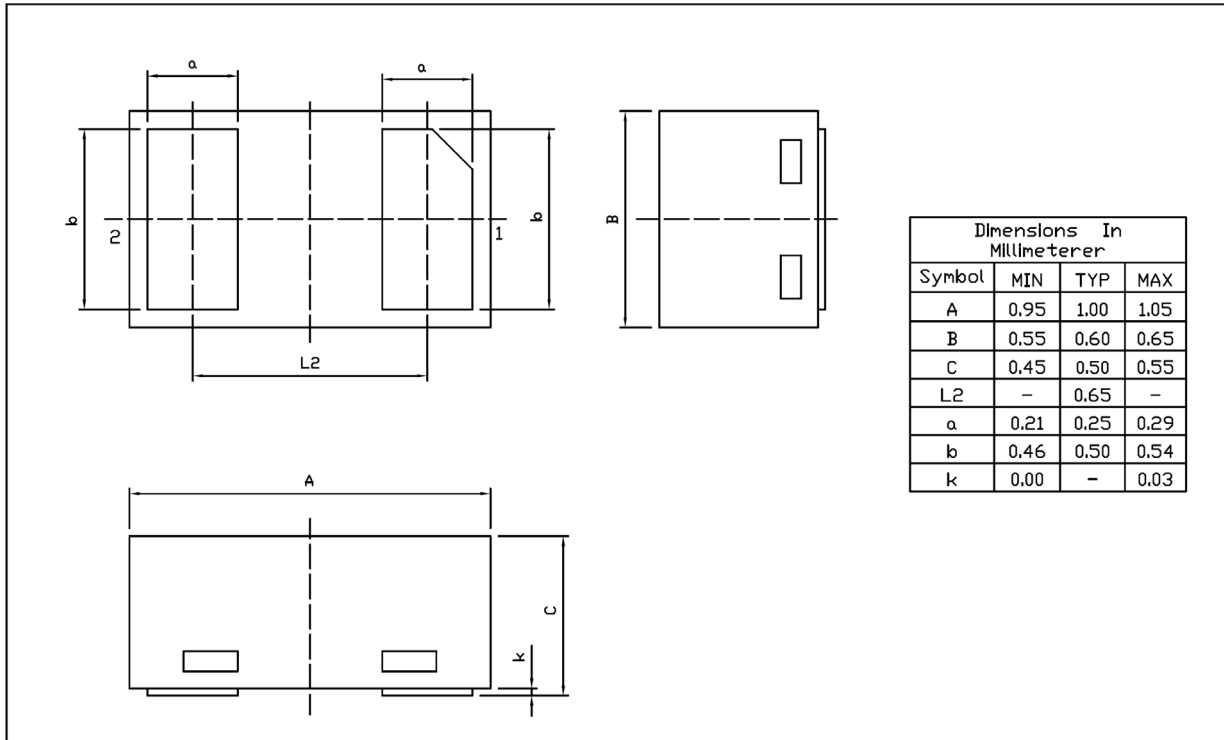
Fig.2 Pulse Waveform



外形尺寸图 / Package Dimensions

DFN1006-2L

Unit:mm



| Dimensions In Millimeter | | | |
|--------------------------|------|------|------|
| Symbol | 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：

Q： 为汽车无卤产品标识

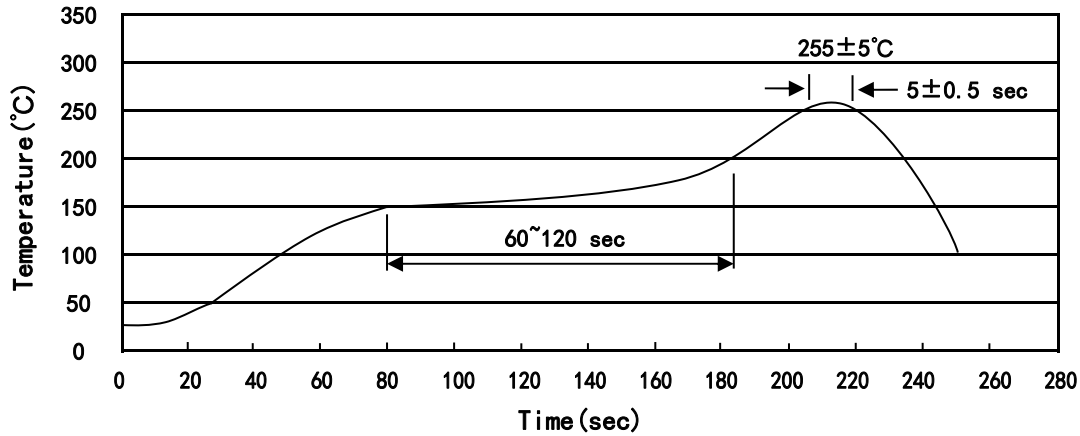
JA： 为型号代码

Note：

Q： Automobile halogen-free product Code

JA： Product Type

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 150~200°C，时间 60~120sec;
- 2、峰值温度 255±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:150~200°C, Time:60~120sec.
- 2.Peak Temp.:255±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