

# BRES5V0L1B2Z-02

Rev.D Jun.-2018

## 描述 / Descriptions

DFN0603 塑封封装 ESD 保护二极管。  
DFN0603 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 3 级（16KV 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 Rating of Class 3 (> 16 kV) per Human Body Model, IEC61000-4-2 Level 4 ESD Protection . HF Product.

## 用途 / Applications

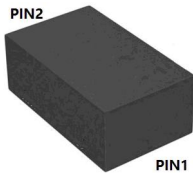
适用于手机音频、MP3 播放器、数码相机、便携式设备、移动电话等用户端。

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



PIN1:Cathode

PIN2:Anode

## 放大及印章代码 / h<sub>FE</sub> Classifications & Marking

见印章说明。See Marking Instructions.

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

| 参数<br>Parameter                                 | 符号<br>Symbol | 数值<br>Rating | 单位<br>Unit |
|---|--------------|--------------|------------|
| Peak pulse power ( $t_p = 8/20\mu s$ )          | $P_K$        | 69           | W          |
| Peak pulse current ( $t_p = 8/20\mu s$ )        | $I_{PP}$     | 5.5          | A          |
| ESD according to IEC61000-4-2 air discharge     | $V_{ESD}$    | $\pm 15$     | KV         |
| ESD according to IEC61000-4-2 contact discharge |              | $\pm 8$      |            |
| Junction temperature                            | $T_J$        | 150          | °C         |
| Storage temperature                             | $T_{STG}$    | -55~+150     | °C         |

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

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

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.

**电参数曲线图 / Electrical Characteristic Curve**

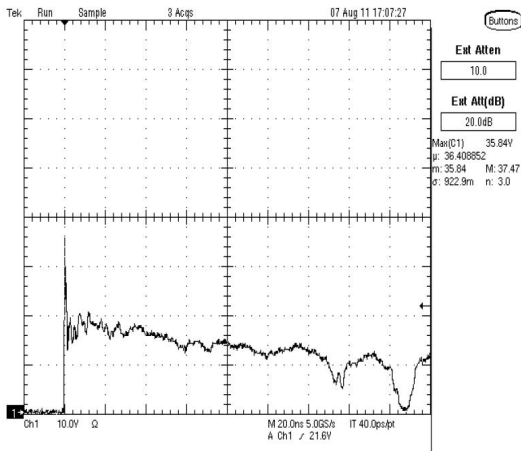


Fig1. ESD Clamping Voltage Screenshot

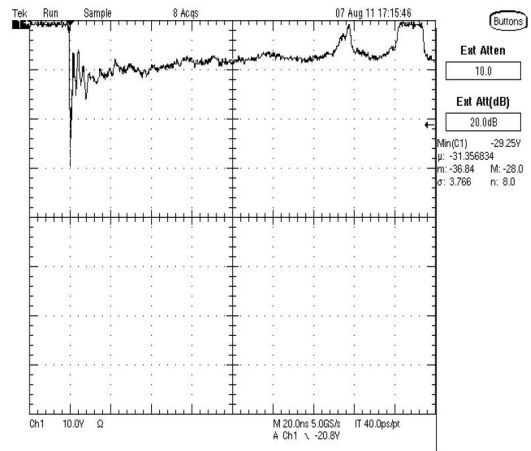


Fig2. ESD Clamping Voltage Screenshot

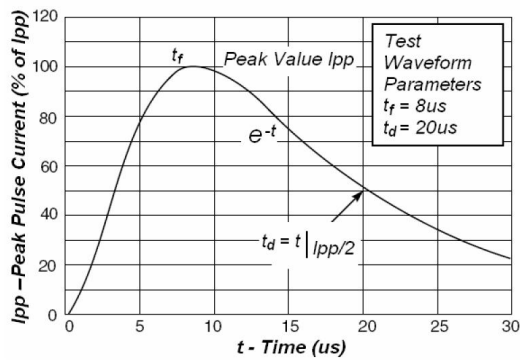
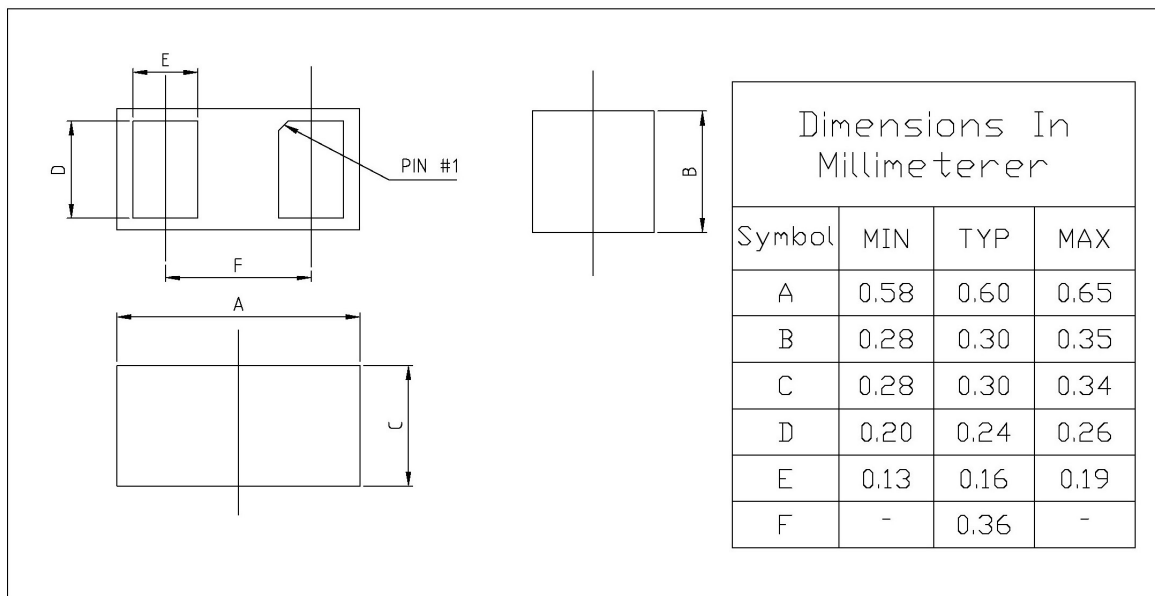


Fig3. Pulse Waveform

外形尺寸图 / Package Dimensions

DFN0603-2L

Unit:mm



印章说明 / Marking Instructions



说明：

G：为型号代码

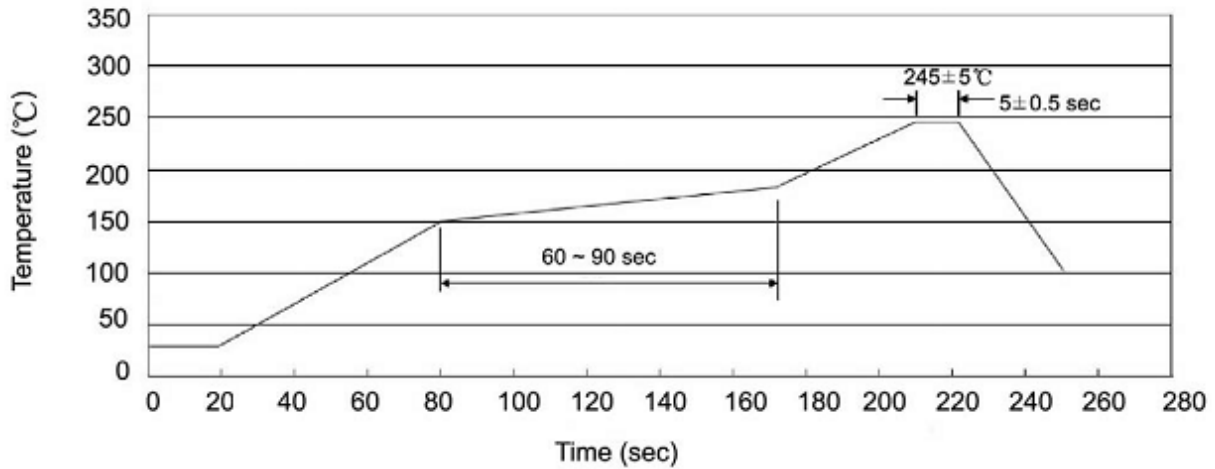
\*：为生产批号代码，随生产批号变化

Note：

G：Product Type.

\*：Lot No. Code,code change with Lot No.

**波峰焊温度曲线图(无铅) / Temperature Profile for Dip 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<br>封装形式 | Units 包装数量         |                         |                        |                              |                        | Dimension 包装尺寸 (unit: mm <sup>3</sup> ) |             |             |
|----------------------|--------------------|-------------------------|------------------------|------------------------------|------------------------|---|-------------|-------------|
|                      | Units/Reel<br>只/卷盘 | Reels/Inner Box<br>卷盘/盒 | Units/Inner Box<br>只/盒 | Inner Boxes/Outer Box<br>盒/箱 | Units/Outer Box<br>只/箱 | Reel                                    | Inner Box 盒 | Outer Box 箱 |
| DFN0603-2L           | 15,000             | 10                      | 150,000                | 6                            | 900,000                | 7" x8                                   | 180×120×180 | 390×385×205 |

**使用说明 / Notices**