

BRES5V0L1A2Z

Rev.C Jun.-2018

描述 / Descriptions

DFN0603 塑封封装 ESD 保护二极管。
DFN0603 Plastic Package ESD Protection Diode.

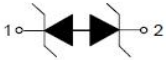
特征 / Features

超小封装, 低电容 $C_d = 9\text{pF}$, ESD 防护能力高达 $\pm 30\text{ kV}$, 符合 IEC 61000-4-2 项目。无卤产品。
Ultra small package, Low diode capacitance $C_d = 9\text{ pF}$, ESD protection up to $\pm 30\text{ kV}$ according IEC 61000-4-2. HF Product.

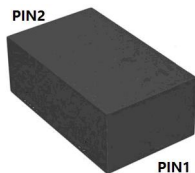
用途 / Applications

适用于手机及配件, 便携式电子产品, 通信系统, 计算机及周边设备。
Suitable for cellular handsets and accessories, Portable electronics, Communication systems, Computers and peripherals.

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_{FE} Classifications & 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_{pp}	70	W
Peak pulse current ($t_p = 8/20\mu s$)	I_{pp}	6.0	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

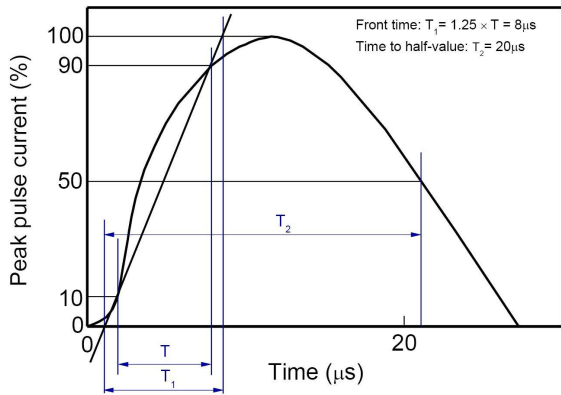
电性能参数 / Electrical Characteristics(Ta=25°C)

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}				± 5.0	V
Reverse leakage current	I_R	$V_{RWM} = 5V$			1	μA
Reverse breakdown voltage ³⁾	V_{BR}	$I_R = \pm 1.0mA$	± 5.1			V
Clamping voltage ^{1,2)}	V_{CL}	$I_{PP} = 1.0A$			8	V
		$I_{PP} = 6.0A$			12	
Diode capacitance ⁴⁾	C_J	$V_R = 0V \quad f = 1MHz$		9	12	pF
		$V_R = 5.0V \quad f = 1MHz$		6	8	
Dynamic resistance ⁵⁾	R_{dyn}			0.28		Ω

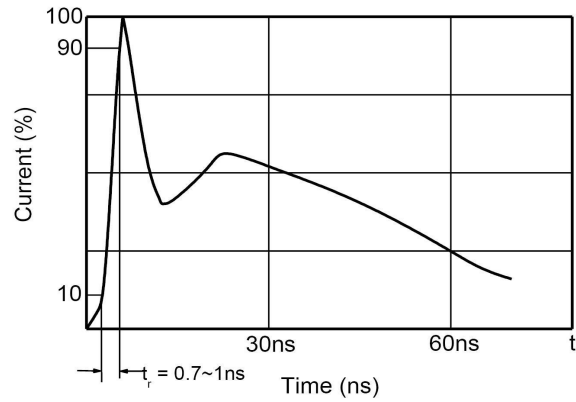
Notes:

- [1] Non-repetitive current pulse 8/20 μs exponentially decaying waveform according to IEC 61000-4-5.
- [2] Measured from pin 1 to pin 2.
- [3] Breakdown voltage is always symmetrical within the characterized range, which means no difference breakdown voltage from pin 1 to pin 2 and vice versa.
- [4] This parameter is guaranteed by design.
- [5] Calculated from S-parameter values.

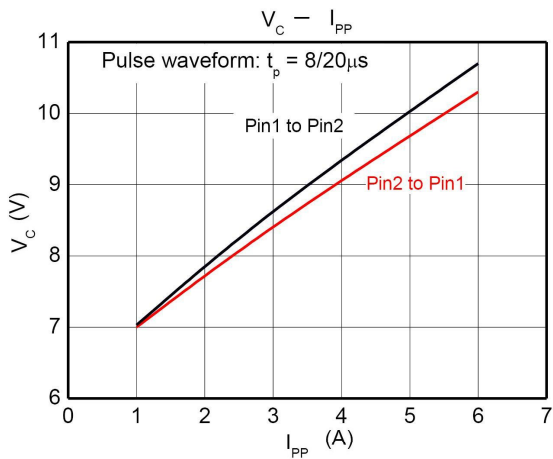
电参数曲线图 / Electrical Characteristic Curve



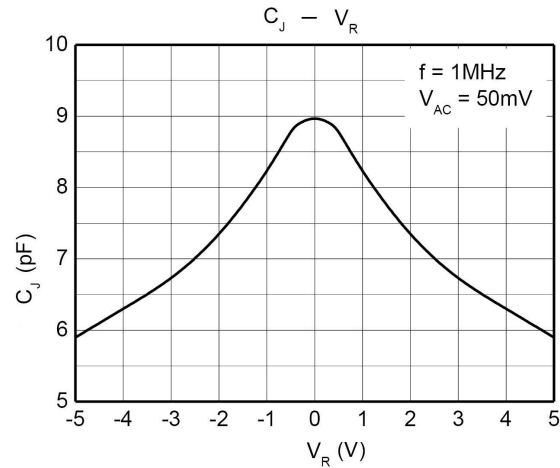
8/20μs waveform per IEC61000-4-5



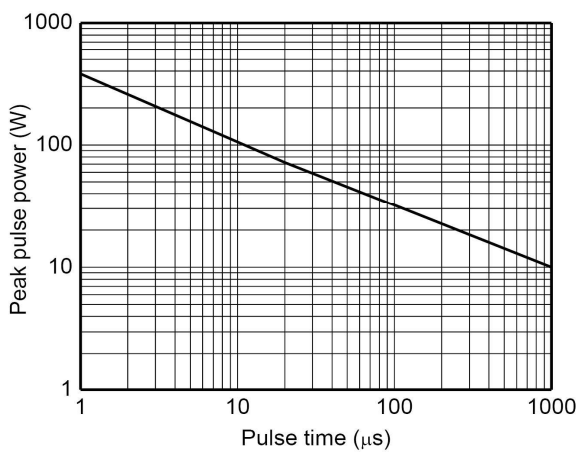
Contact discharge current waveform per IEC61000-4-2



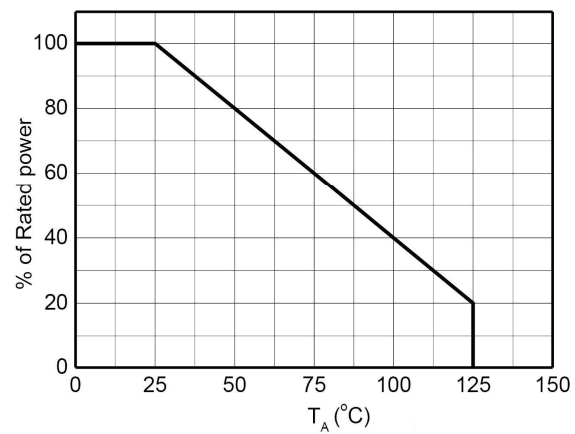
Clamping voltage vs. Peak pulse current



Capacitance vs. Reverse voltage

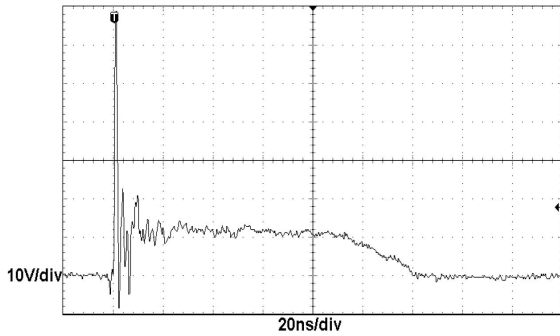


Non-repetitive peak pulse power vs. Pulse time

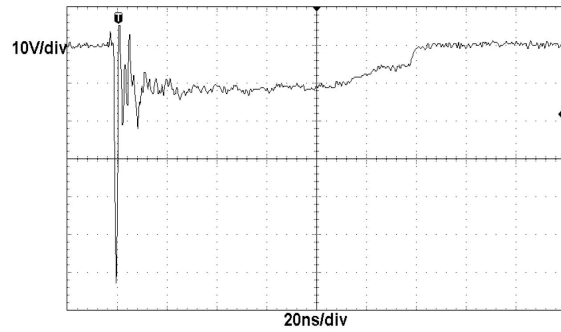


Power derating vs. Ambient temperature

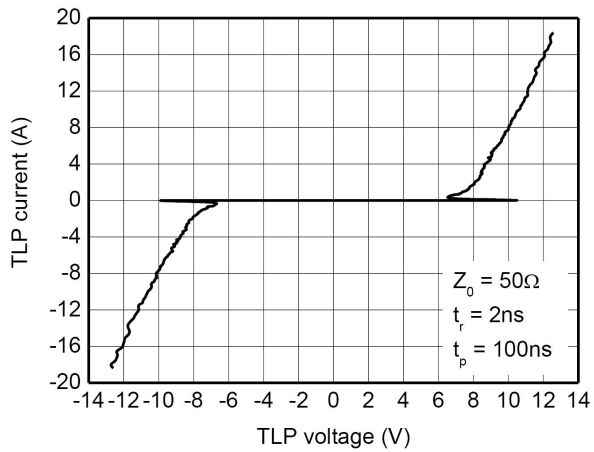
电参数曲线图 / Electrical Characteristic Curve



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



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

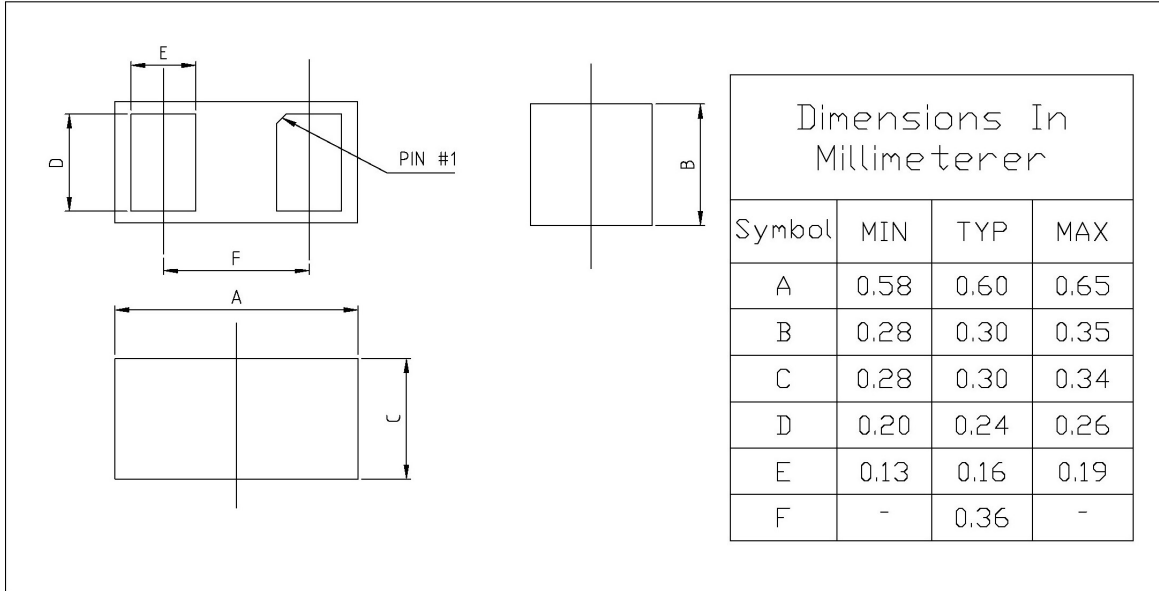


TLP Measurement

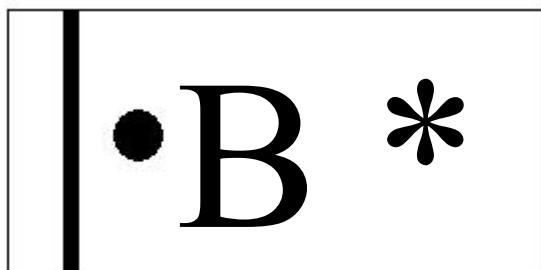
外形尺寸图 / Package Dimensions

DFN0603-2L

Unit:mm



印章说明 / Marking Instructions



说明：

B： 为型号代码

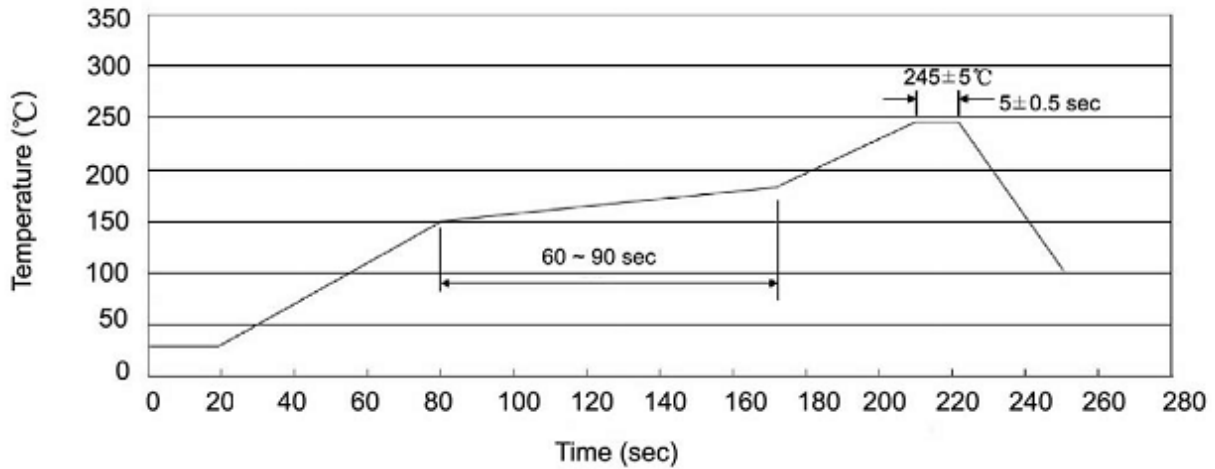
*： 为生产批号代码，随生产批号变化

Note：

B： 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 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
DFN0603-2L	15,000	10	150,000	6	900,000	7" x8	180×120×180	390×385×205

使用说明 / Notices