

描述 / Descriptions

DFN0603 塑封封装单线程双向 ESD 保护二极管。

DFN0603 Plastic Package 1-Line,Bi-directional , 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 20KV 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。

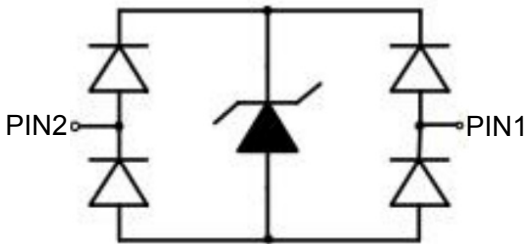
Ultra small package, Response Time is Typically < 1 ns, ESD > 20 kV per Human Body Model,IEC61000-4-2 Level 4 ESD Protection, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

用途 / Applications

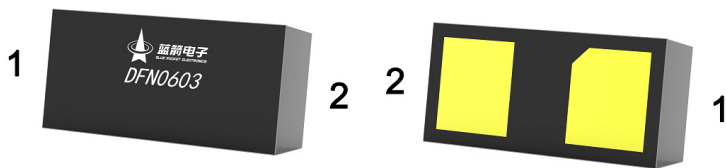
适用于手机音频、MP3 播放器、数码相机、便携式设备、移动电话等用户端，满足汽车应用的严格要求。

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

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Peak Pulse Power($t_p = 8/20\mu s$)	P_{PK}	56	W
Peak Pulse Current($t_p = 8/20\mu s$)	I_{PP}	4	A
ESD according to IEC61000-4-2 air discharge	V_{ESD}	± 20	KV
ESD according to IEC61000-4-2 contact discharge		± 20	
Junction temperature	T_J	125	$^{\circ}C$
Storage Temperature	T_{STG}	-55~+150	$^{\circ}C$

电性能参数 / Electrical Characteristics($T_a=25^{\circ}C$)
Definitions of electrical characteristics

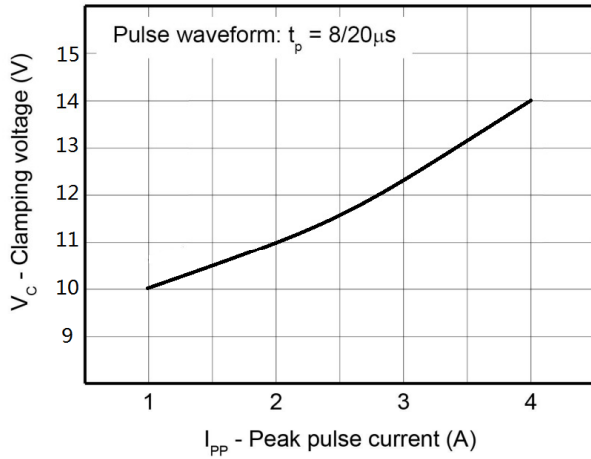
参数 Parameter	符号 Symbol	测试条件 Test Conditions	最小值 Min	典型值 Typ	最大值 Max	单位 Unit
Reverse maximum working voltage	V_{RWM}				5.0	V
Reverse leakage current	I_R	$V_{RWM} = 5.0V$			100	nA
Reverse breakdown voltage ¹⁾	V_{BR}	$I_T=1mA$	6.0			V
Clamping voltage ²⁾	V_{CL}	$I_{PP} = 1A \quad t_p = 8/20\mu s$			10	V
		$I_{PP} = 4A \quad t_p = 8/20\mu s$			14	V
Junction Capacitance	C_J	$V_R = 0V \quad f = 1MHz$		0.20	0.40	pF

Notes:

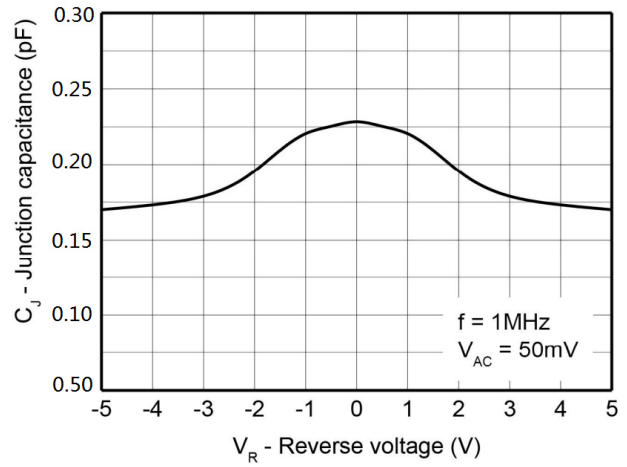
1) V_{BR} is measured with a pulse test current I_T at an ambient temperature of $25^{\circ}C$.

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

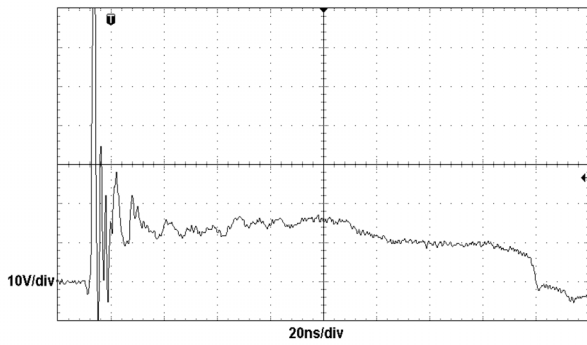
电参数曲线图 / Electrical Characteristic Curve(Ta=25°C)



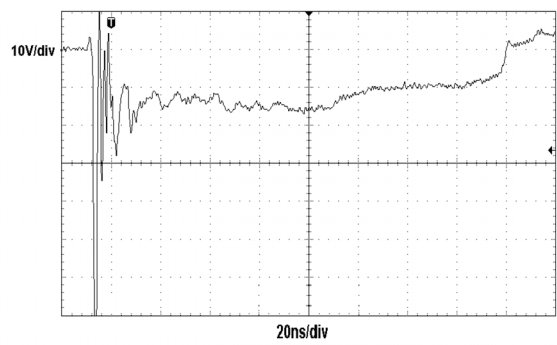
Clamping voltage vs. Peak pulse current



Capacitance vs. Reverse voltage



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

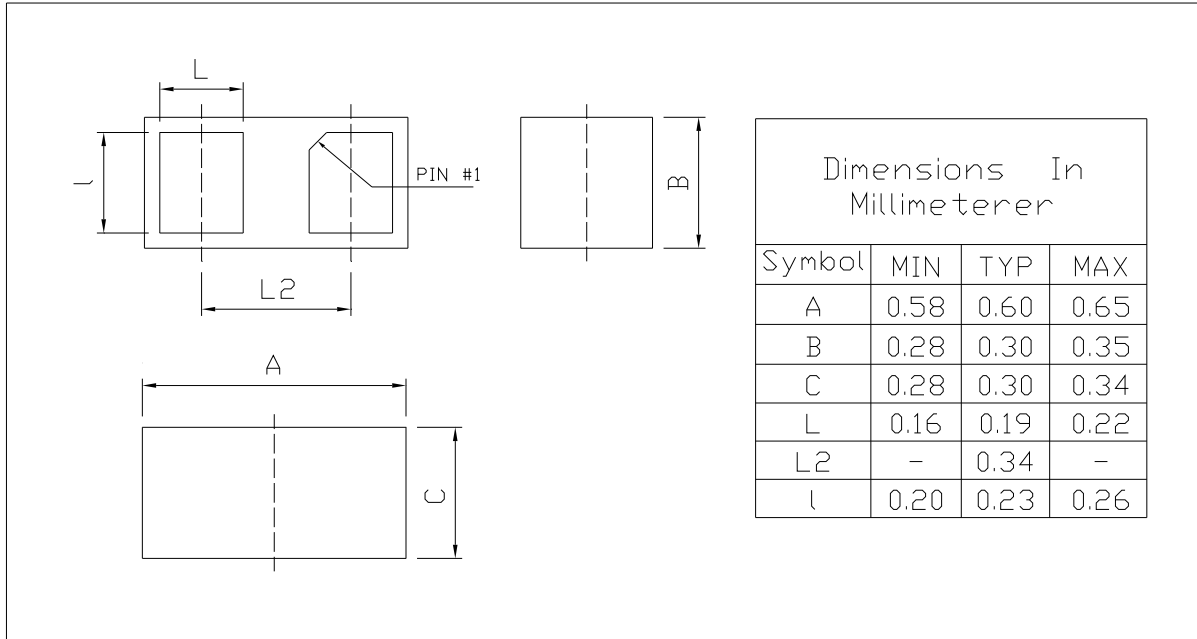


ESD clamping
(-8kV contact discharge per IEC61000-4-2)

外形尺寸图 / Package Dimensions

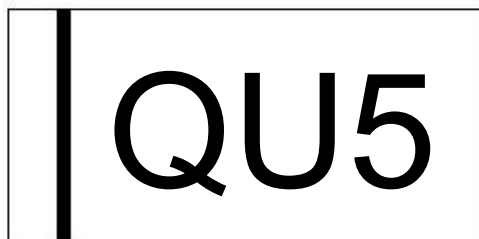
DFN0603

Unit:mm



Rev.02 202102

印章说明 / Marking Instructions



说明：

Q： 为汽车无卤产品标识

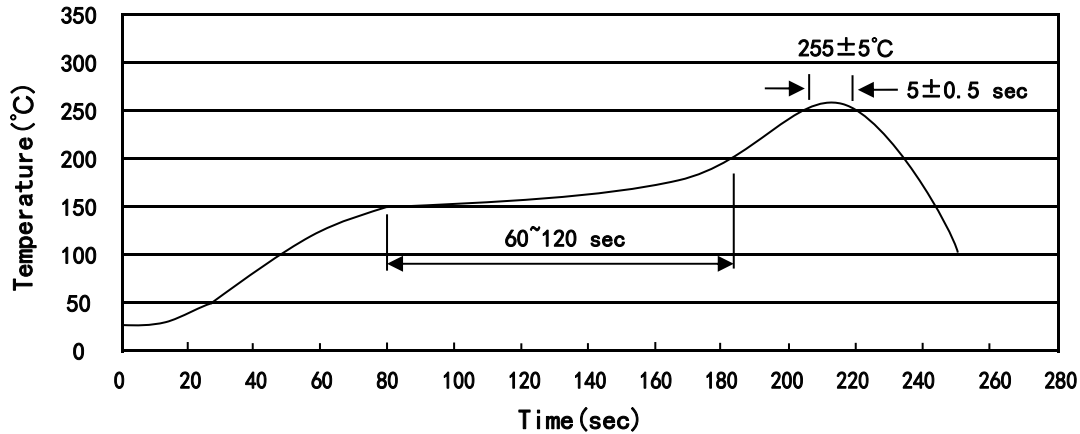
U5： 为型号代码

Note：

Q: Automobile halogen-free product Code

U5: 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
DFN0603	15,000	10	150,000	4	600,000	7" ×8	210×205×205	445×230×435

使用说明 / Notices