

描述 / Descriptions

DFN0603 塑封封装 ESD 保护二极管。

DFN0603 Plastic Package ESD Protection Diode.

特征 / Features

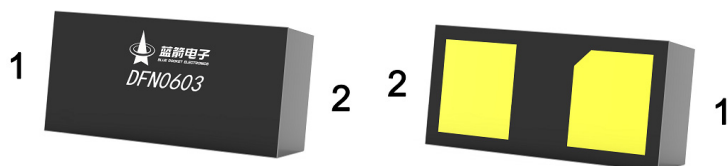
超小封装，正常响应时间小于 1ns，防静电等级达到 30KV 以上，符合 IEC61000-4-2 的 4 级 ESD 保护项目，符合 AEC-Q101 标准高可靠性要求，无卤产品。

Ultra small package, Response Time is Typically < 1 ns, ESD > 30 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(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	35	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}	± 30	KV
ESD according to IEC61000-4-2 contact discharge		± 30	
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 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	μA
		$V_{RWM} = 3.5V$			0.3	μA
Reverse breakdown voltage ¹⁾	V_{BR}	$I_T = 1mA$	5.6			V
Clamping voltage ²⁾	V_C	$I_{PP} = 1A \quad t_p = 8/20\mu s$			9.8	V
		$I_{PP} = 5.5A \quad t_p = 8/20\mu s$			12.5	V
Junction capacitance	C_J	$V_R = 0V \quad f = 1MHz$			15	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

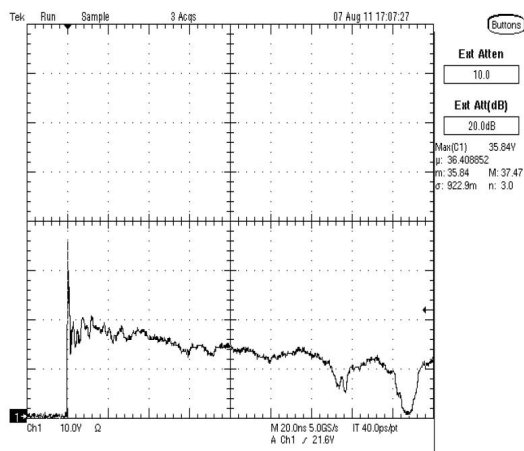


Fig1. ESD Clamping Voltage Screenshot

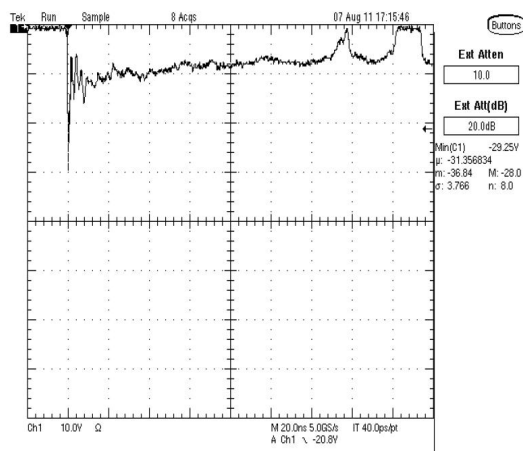


Fig2. ESD Clamping Voltage Screenshot

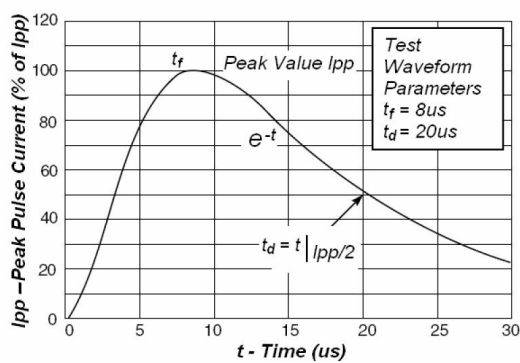
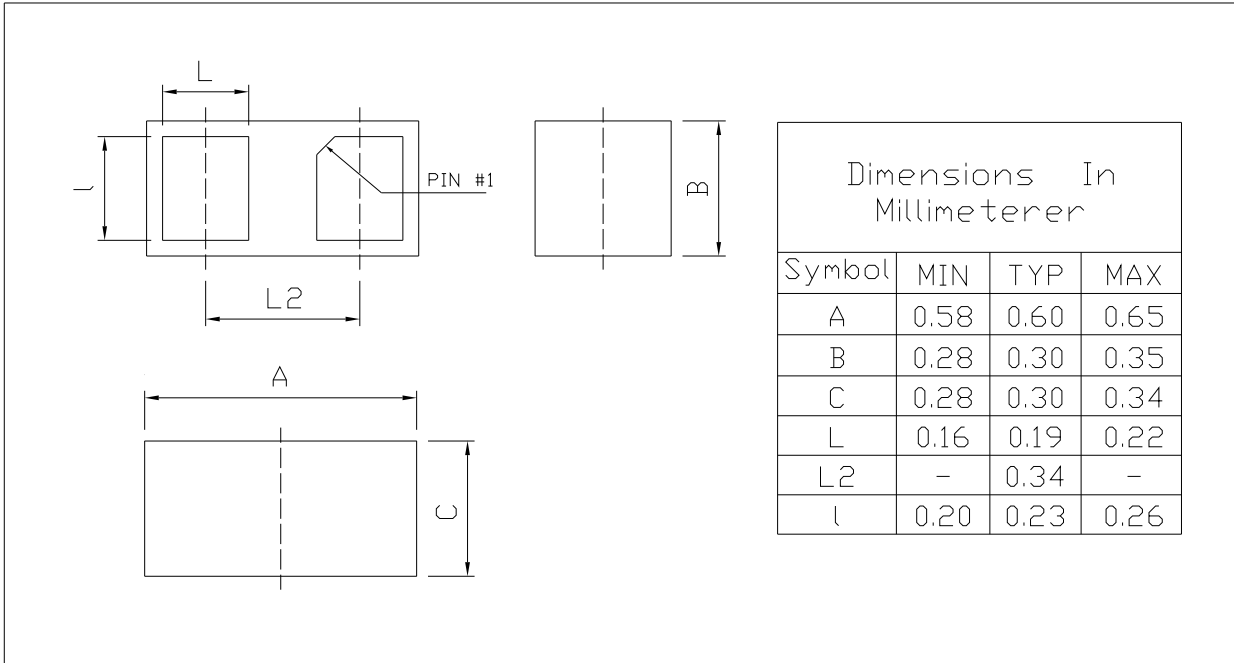


Fig3. Pulse Waveform

外形尺寸图 / Package Dimensions

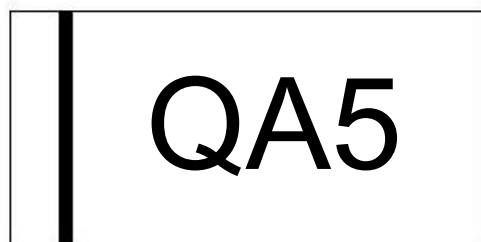
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Unit:mm



Rev.02 202102

印章说明 / Marking Instructions



说明：

Q：为汽车无卤产品标识

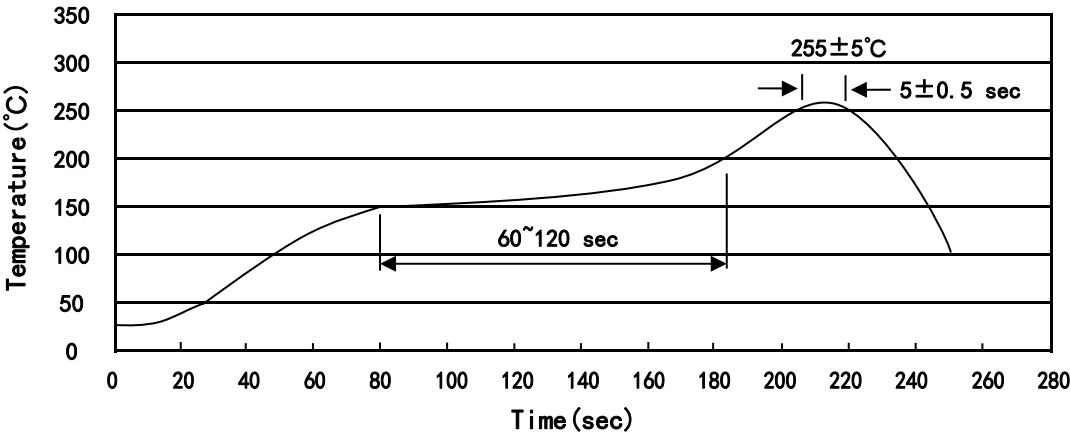
A5：为型号代码

Note：

Q: Automobile halogen-free product Code

A5: Product Type Code

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 ~ 200℃，时间 60 ~ 120sec;

1.Preheating:150~200℃, Time:60~120sec.

2、峰值温度 255±5℃，时间持续为 5±0.5sec;

2.Peak Temp.:255±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
DFN0603	15,000	10	150,000	4	600,000	7" ×8	210×205×205	445×435×230

使用说明 / Notices