

描述 / Descriptions

DFN0603 塑封封装 ESD 保护二极管。

DFN0603 Plastic Package ESD Protection Diode.

特征 / Features

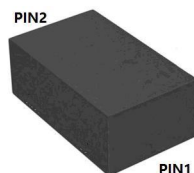
超小封装，低电容 $C_d = 35\text{pF}$, ESD 防护能力高达 $\pm 30\text{KV}$ ，符合 IEC 61000-4-2 项目。无卤产品。

Ultra small package, Low diode capacitance $C_d = 35\text{pF}$, 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****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}	100	W
Peak pulse current ($t_p = 8/20\mu s$)	I_{pp}	8.0	A
ESD according to IEC61000-4-2 air discharge	V_{ESD}	30	KV
ESD according to IEC61000-4-2 contact discharge		30	
MIL-STD-883 (human body model)		30	
Junction temperature	T_J	150	°C
Ambient temperature	T_{amb}	-55~+150	°C
Storage temperature	T_{STG}	-65~+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		5.0	V
Reverse leakage current	I_{RM}	$V_{RWM} = 5V$		1.0	100	nA
Reverse breakdown voltage ³⁾	V_{BR}	$I_R = 1.0mA$	6.0		10	V
		$I_R = -1.0mA$	-10		-6.0	
Clamping voltage ^{1,2)}	V_{CL}	$I_{PP} = 1.0A$			12	V
		$I_{PP} = 8.0A$			15.5	
Diode capacitance ⁴⁾	C_J	$V_R = 0V \quad f = 1MHz$	25	35	45	pF
		$V_R = 2.5V \quad f = 1MHz$		26.5	35	
		$V_R = 5.0V \quad f = 1MHz$		23.7	31	
Series inductance ⁵⁾	L_S			0.05		nH
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; see Figure 1.

[2] Measured from pin 1 to pin 2.

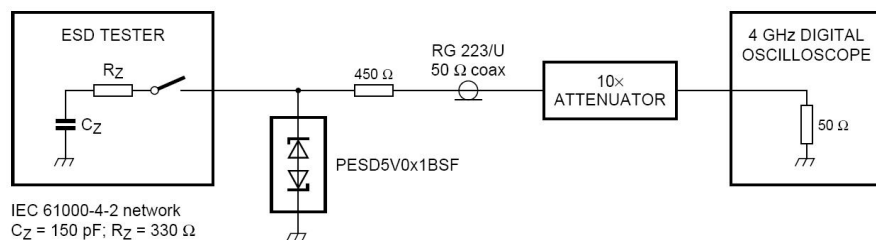
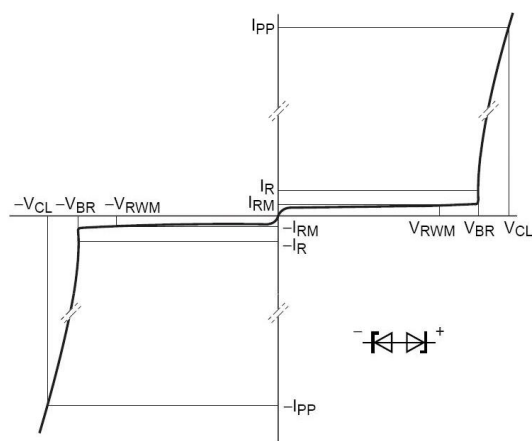
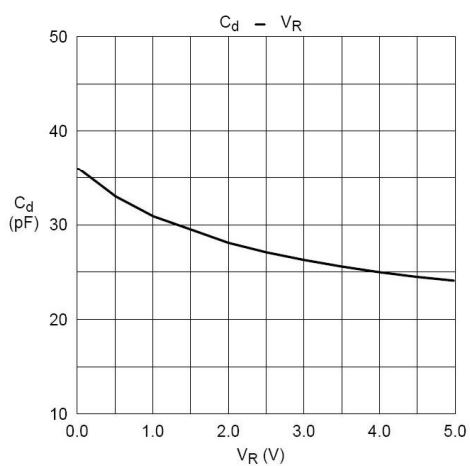
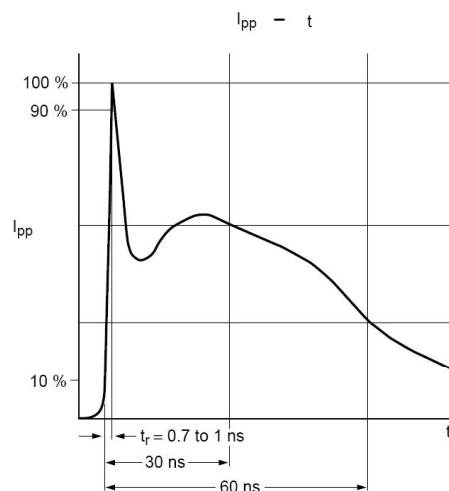
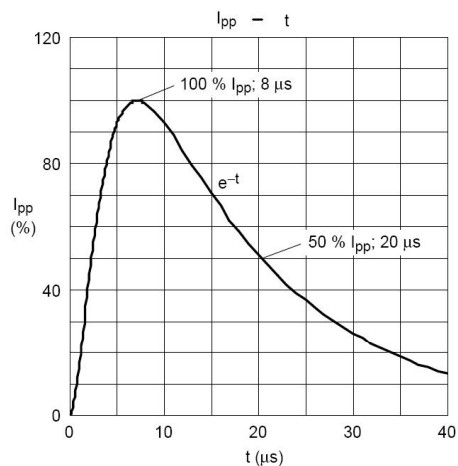
[3] Breakdown voltage is always symmetrical within the characterized range, which means no difference breakdown voltage from pin 1 to pin 2 and vice versa.

[4] This parameter is guaranteed by design.

[5] Calculated from S-parameter values.

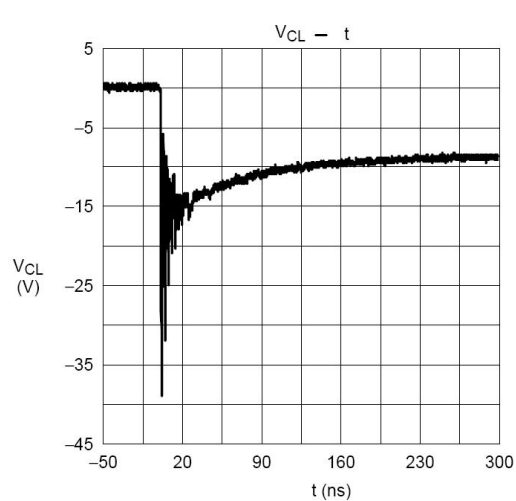
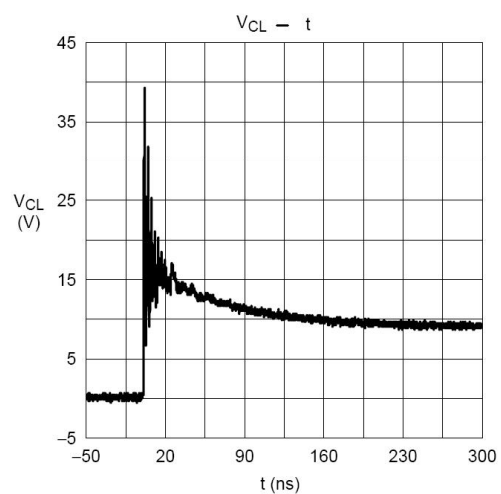
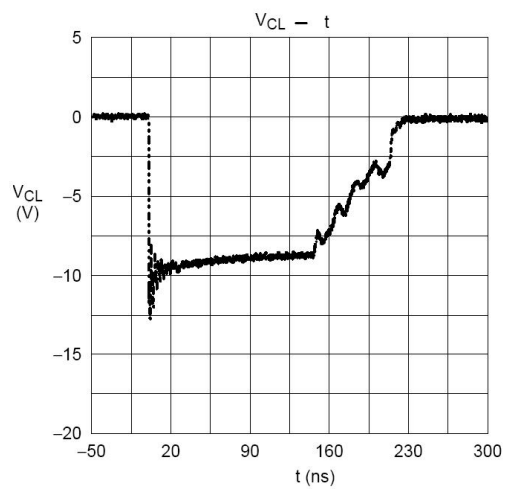
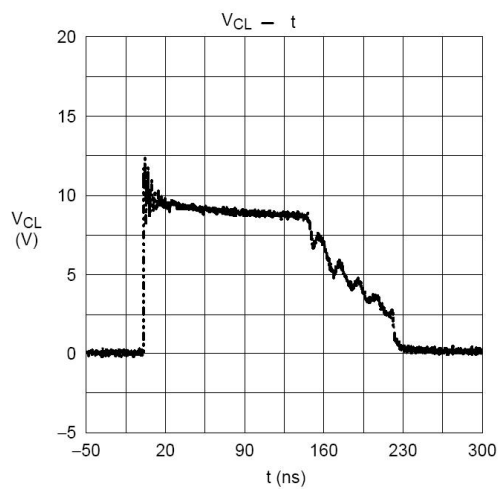
[6] Non-repetitive current pulse, Transmission Line Pulse (TLP) $t_p = 100 ns$; square pulse; ANS/IESD STM5.1-2008.

电参数曲线图 / Electrical Characteristic Curve





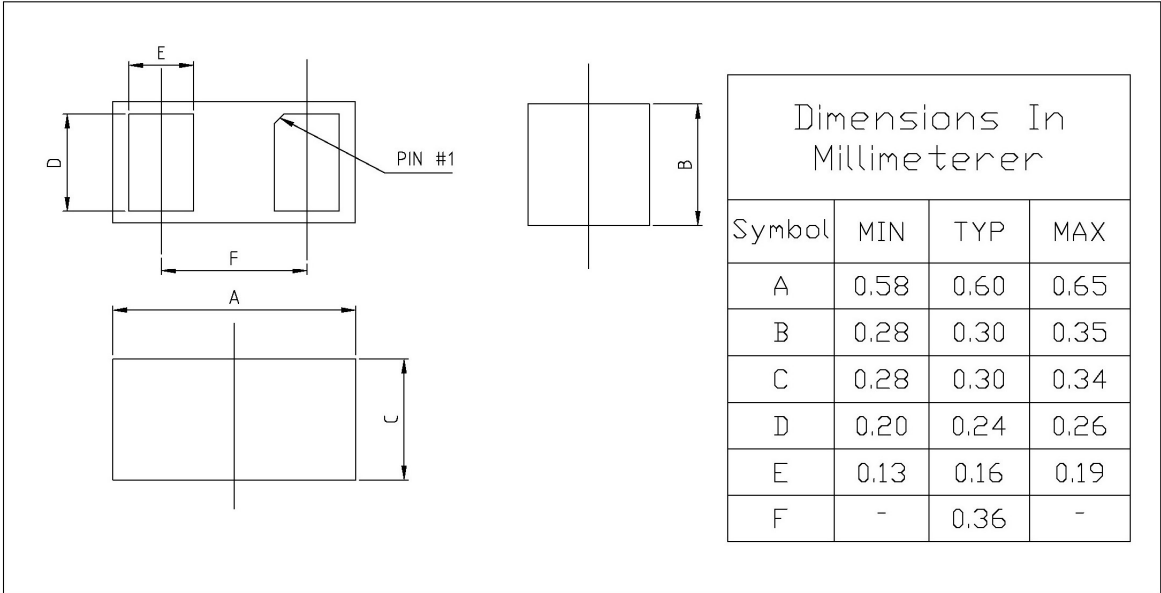
电参数曲线图 / Electrical Characteristic Curve



外形尺寸图 / Package Dimensions

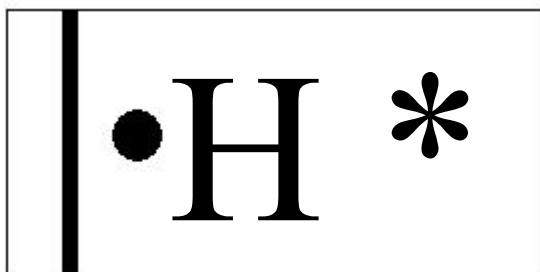
DFN0603-2L

Unit:mm





印章说明 / Marking Instructions



说明：

H：为型号代码

*：为生产批号代码，随生产批号变化

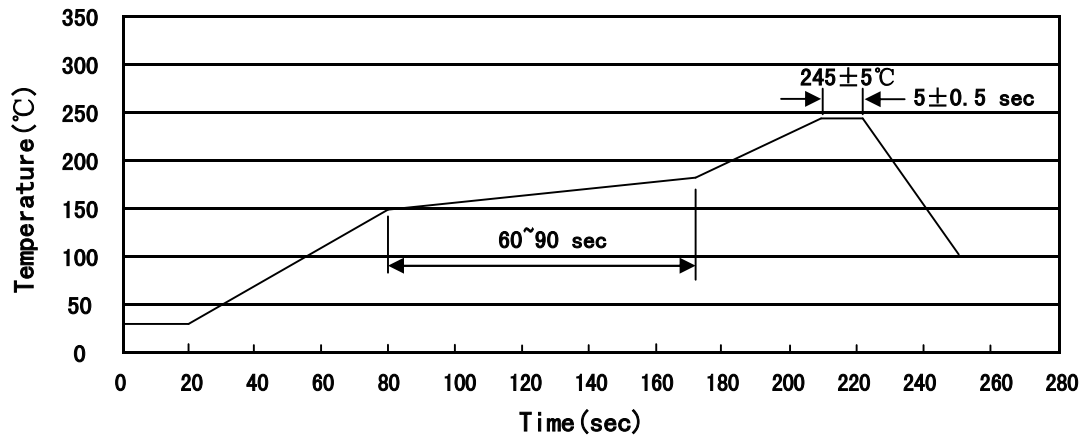
Note：

H：Product Type.

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



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 ~ 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" × 8	180×120×180	390×385×205

使用说明 / Notices