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描述 / Descriptions

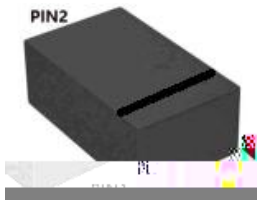
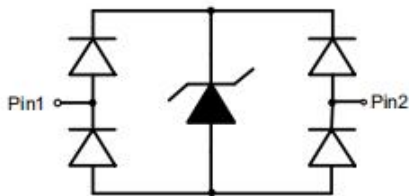
DFN0603 ESD

DFN0603 Plastic Package 1-Line,Bi-directional , ESD Protection Diode.

特征 / Features

- ◆ Stand-off voltage: 5V Max.
- ◆ Transient protection for each line according to IEC61000-4-2(ESD): $\pm 15\text{kV}$ (contact)
IEC61000-4-5(surge): 4A (8/20 μs)
- ◆ Ultra-low capacitance: $C_J = 0.4\text{pF}$ typ.
- ◆ Ultra-low leakage current: $I_R < 1\text{nA}$ typ.
- ◆ Low clamping voltage: $V_{CL} = 8.0\text{V}$ typ. @ $I_{PP} = 16\text{A}$ (TLP)
- ◆ Solid-state silicon technology
- ◆ HF Product

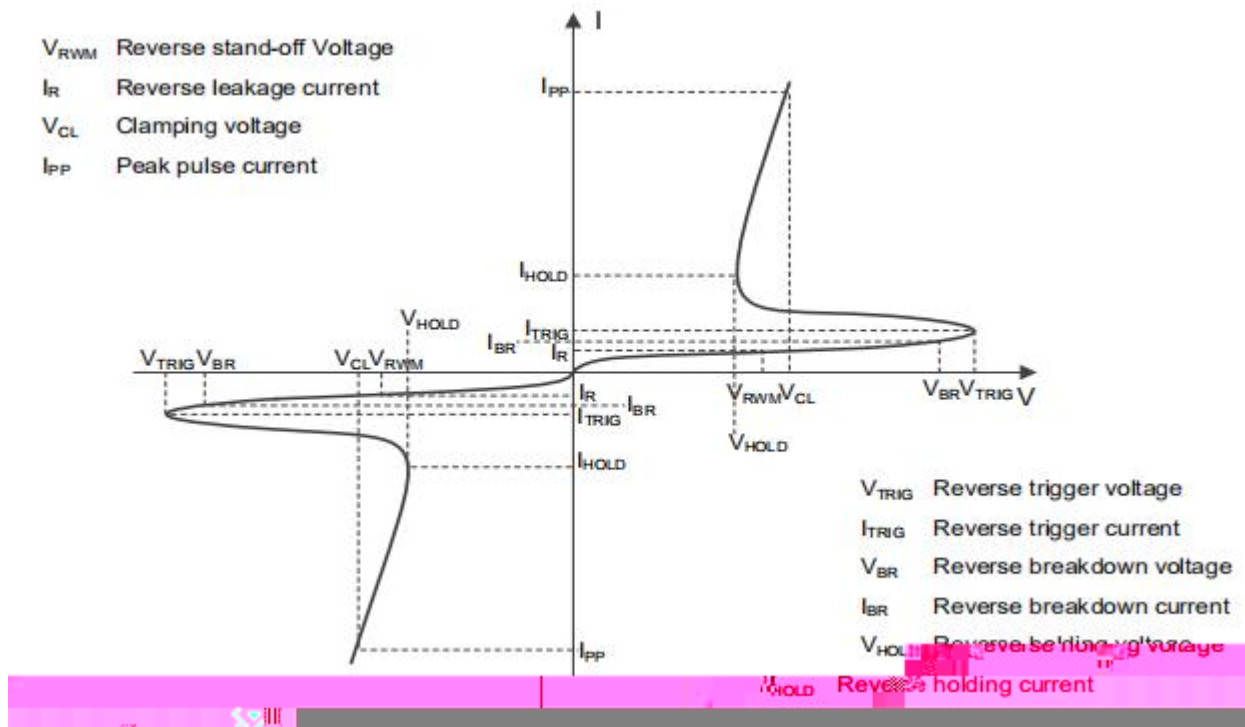
- ◆ USB 2.0 and USB 3.0
- ◆ HDMI 1.3, HDMI 1.4 and HDMI 2.0
- ◆ SATA and eSATA interface
- ◆ DVI
- ◆ IEEE 1394
- ◆ Portable Electronics and Notebooks

**放大及印章代码 / h_{FE} Classifications & Marking**

See Marking Instructions.

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Peak Pulse Power($t_p = 8/20\mu s$)	P_{PK}	34	W
Peak Pulse Current($t_p = 8/20\mu s$)	I_{PP}	4	A
ESD according to IEC61000-4-2 air discharge	V_{ESD}	± 15	KV

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



Definitions of electrical characteristics

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse maximum working voltage	V_{RWM}				3.3	V
Reverse leakage current	I_R	$V_{RWM} = 3.3V$		<1	50	nA
Reverse breakdown voltage	V_{BR}	$I_T = 1mA$	7.0	10.0		V
Clamping voltage ¹⁾	V_{CL}	$I_{PP} = 16A$ $t_p = 100ns$		8		V
Dynamic resistance ¹⁾	R_{DYN}			0.25		Ω
Clamping voltage ²⁾	V_{CL}	$V_{ESD} = 8kV$		8.0		V
Clamping voltage ³⁾	V_{CL}	$I_{PP} = 1A$ $t_p = 8/20\mu s$		4.5	5.5	V
		$I_{PP} = 4A$ $t_p = 8/20\mu s$		7	8.5	V
Junction Capacitance	C_J	$V_R = 0V$ $f = 1MHz$		0.4	0.55	pF

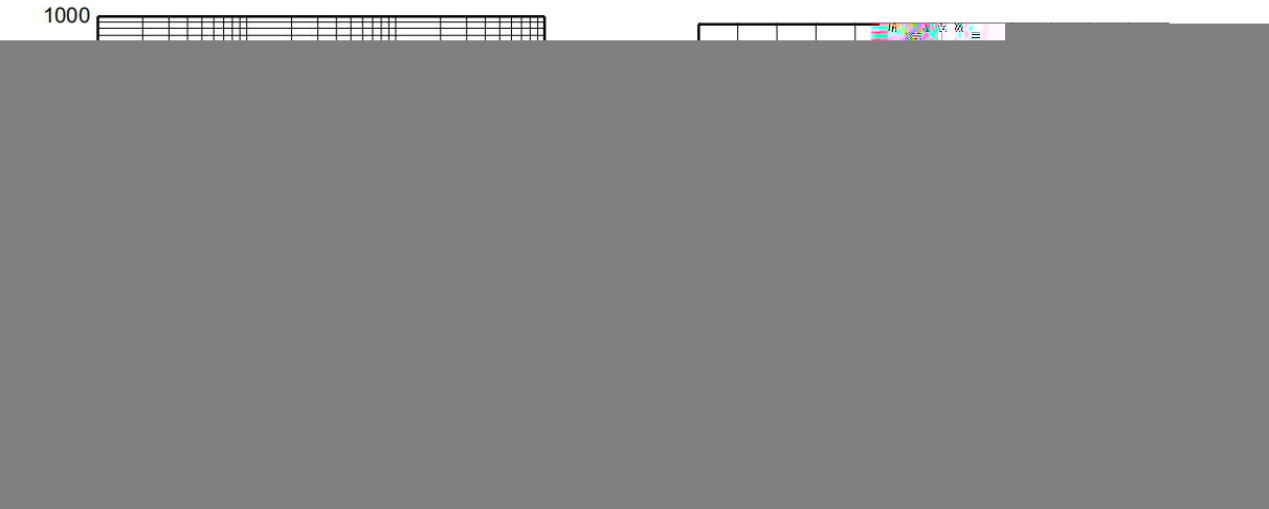
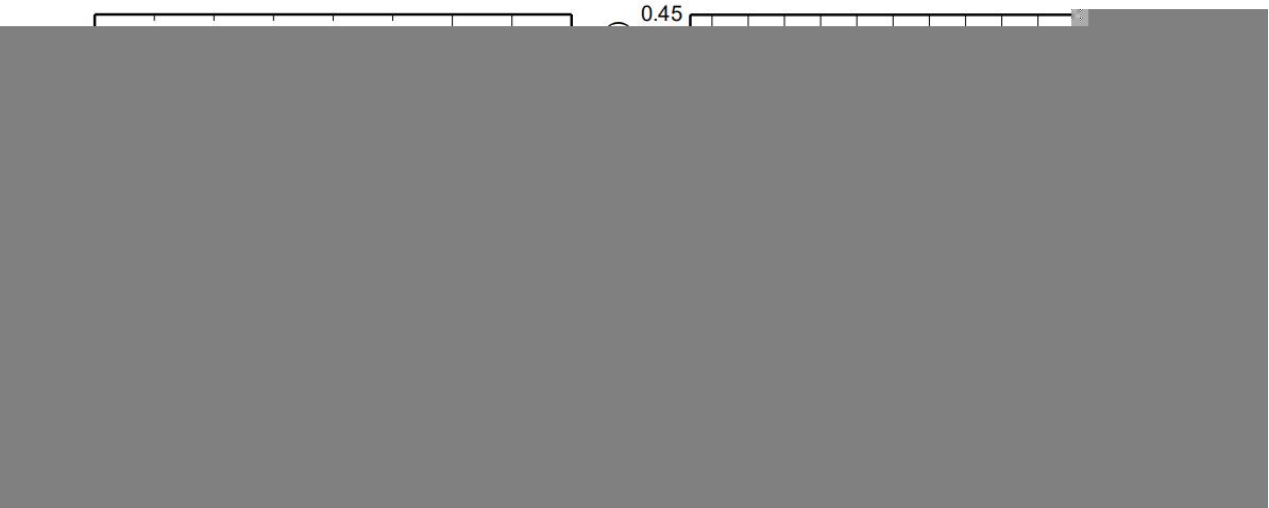
Notes:

1) TLP parameter: $Z_0 = 50\Omega$, $t_p = 100ns$, $t_r = 2ns$, averaging window from 60ns to 80ns. R_{DYN} is calculated from 4A to 16A.

2) Contact discharge mode, according to IEC61000-4-2.

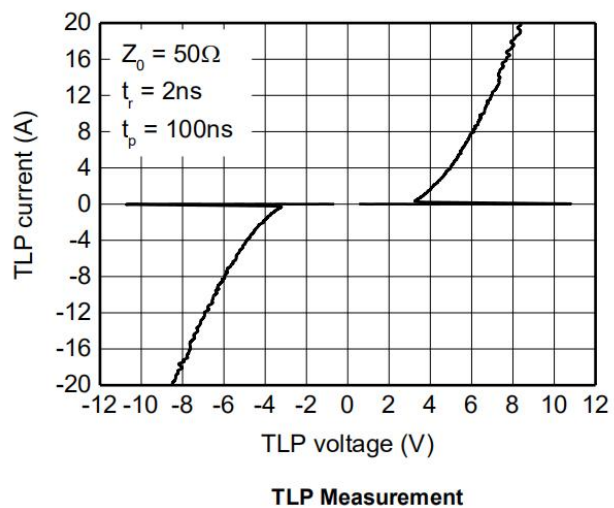
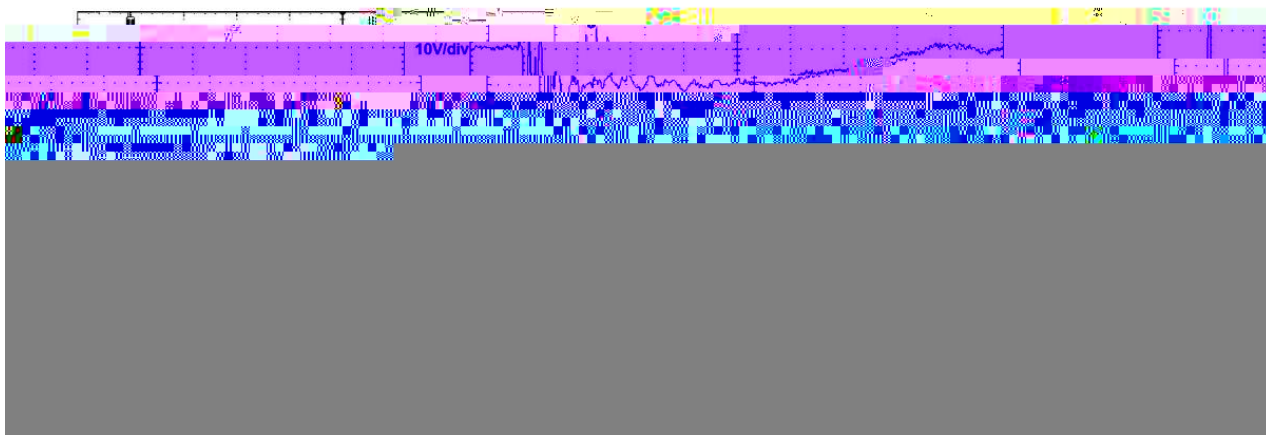
3) Non-repetitive current pulse, according to IEC61000-4-5.

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

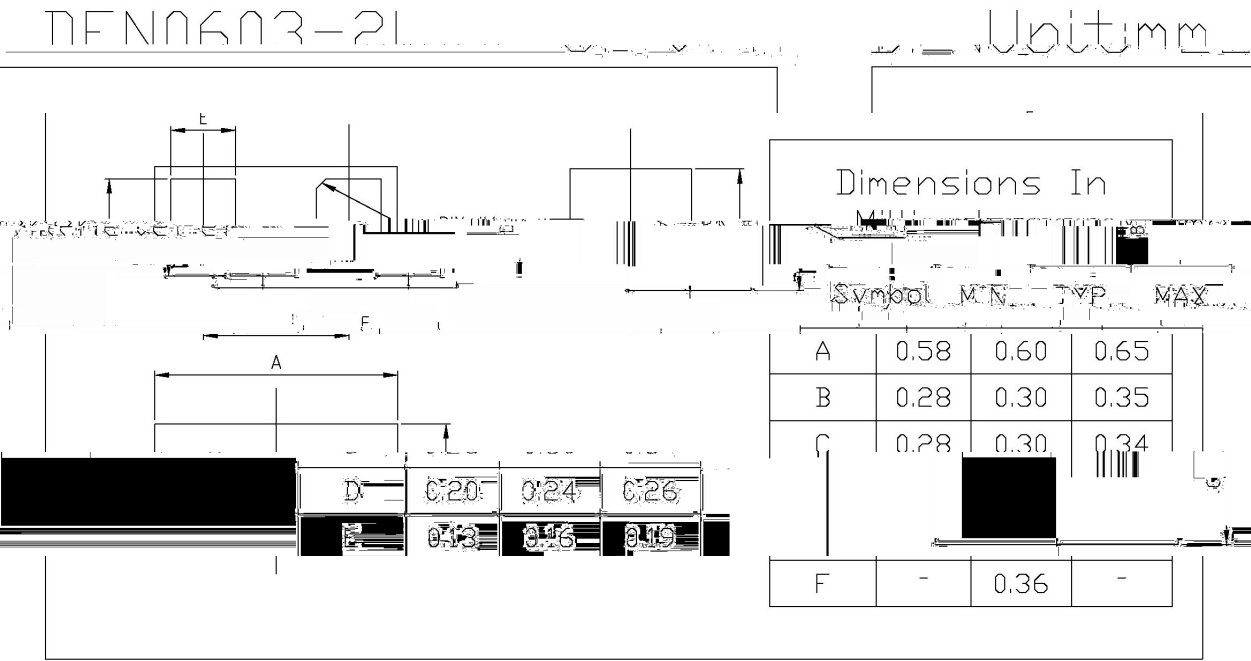




电参数曲线图 / Electrical Characteristic Curve(Ta=25°C)



外形尺寸图 / Package Dimensions



印章说明 / Marking Instructions



说明：

U3：为型号代码

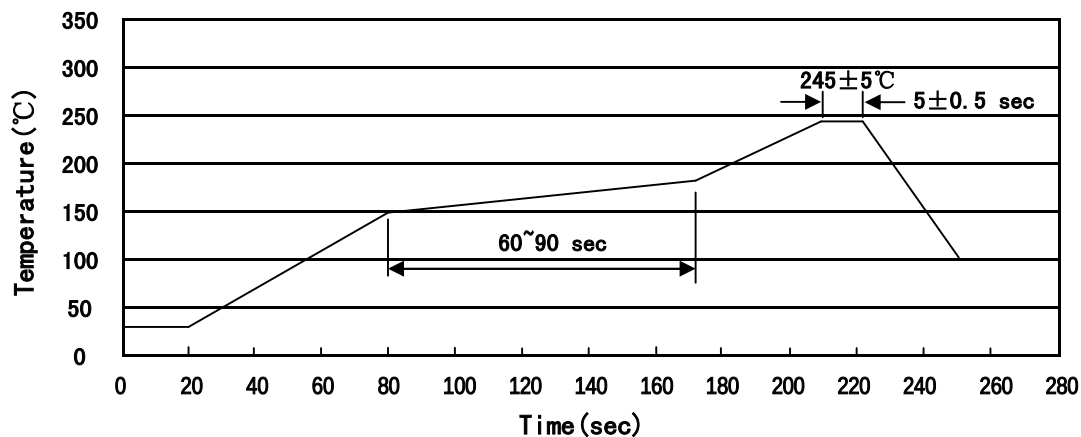
*：为生产批号代码，随生产批号变化

Note：

U3：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)



Note:

- | | | | | | |
|---|-------|-----|-----------|--------|--|
| 1 | 150 | 180 | 60 | 90sec; | 1.Preheating:150~180°C, Time:60~90sec. |
| 2 | 245±5 | | 5±0.5sec; | | 2.Peak Temp.:245±5°C, Duration:5±0.5sec. |
| 3 | | 2 | 10°C/sec. | | 3. Cooling Speed: 2~10°C/sec. |

耐焊接热试验条件 / Resistance to Soldering Heat Test Conditions

260±5°C

10±1 sec.

Temp.:260±5°C

Time:10±1 sec

包装规格 / Packaging SPEC.

/ REEL

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Reel /	Reels/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Reel	Inner Box 盒	Outer Box 箱
DFN0603-2L	10,000	10	100,000	6	600,000	7" ×8	180×120×180	390×385×205

使用说明 / Notices