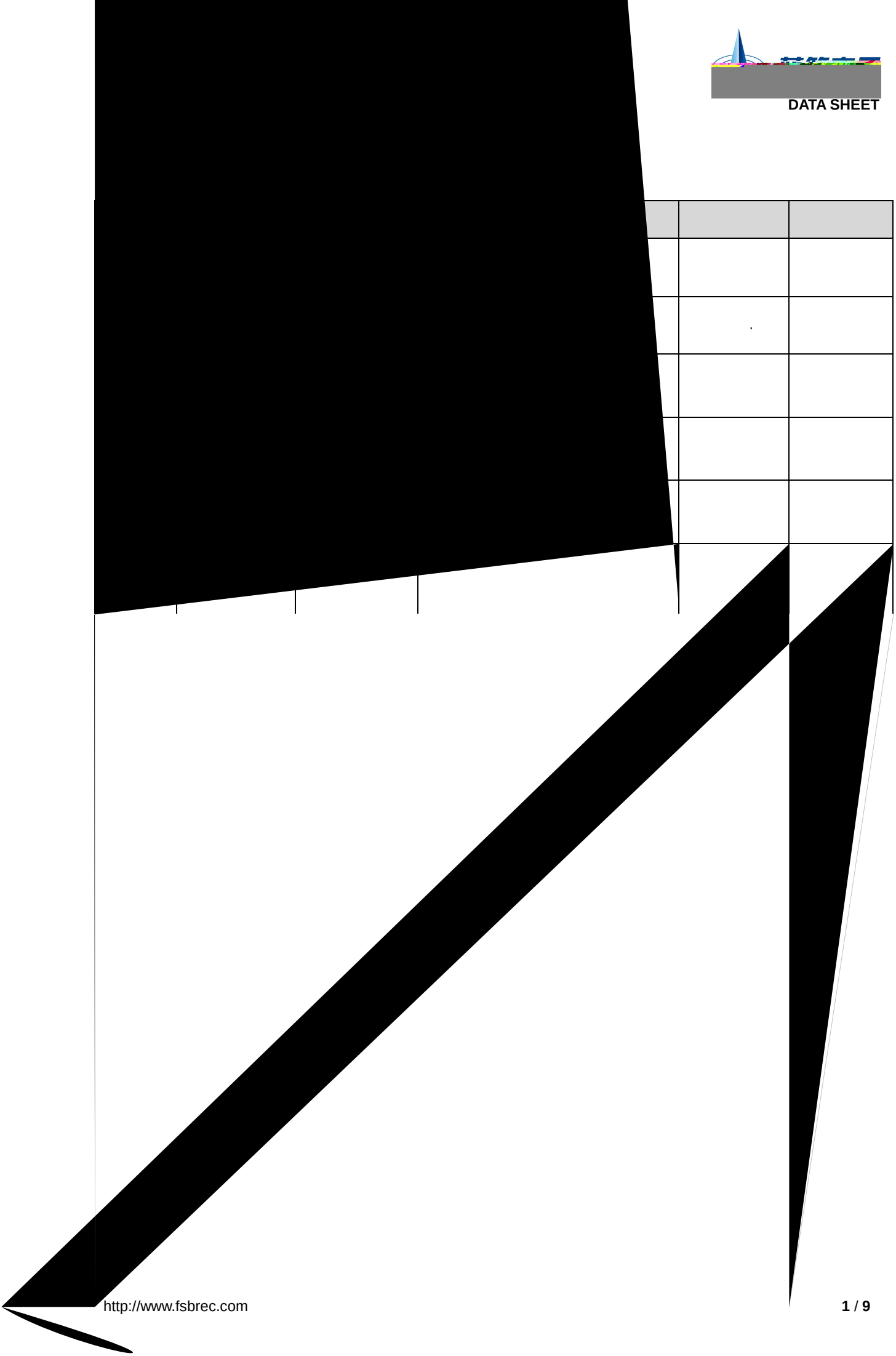


BRESD3V3X1C2ZA

Rev.B Oct.-2021

DATA SHEET

描述 / Descriptions

DFN0603 ESD

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

特征 / Features

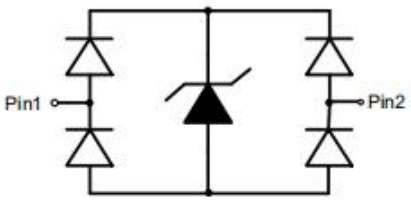
- Stand-off voltage: 5V Max.
- Transient protection for each line according to

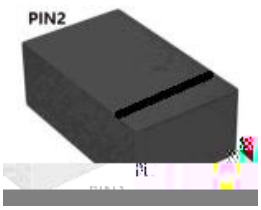
IEC61000-4-2(ESD): ±15kV (contact)

IEC61000-4-5(surge): 4A (8/20μs)

- Ultra-low capacitance: CJ = 0.4pF typ.
- Ultra-low leakage current: I_R < 1nA typ.
- Low clamping voltage: V_{CL} = 8.0V typ. @ IPP = 16A (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



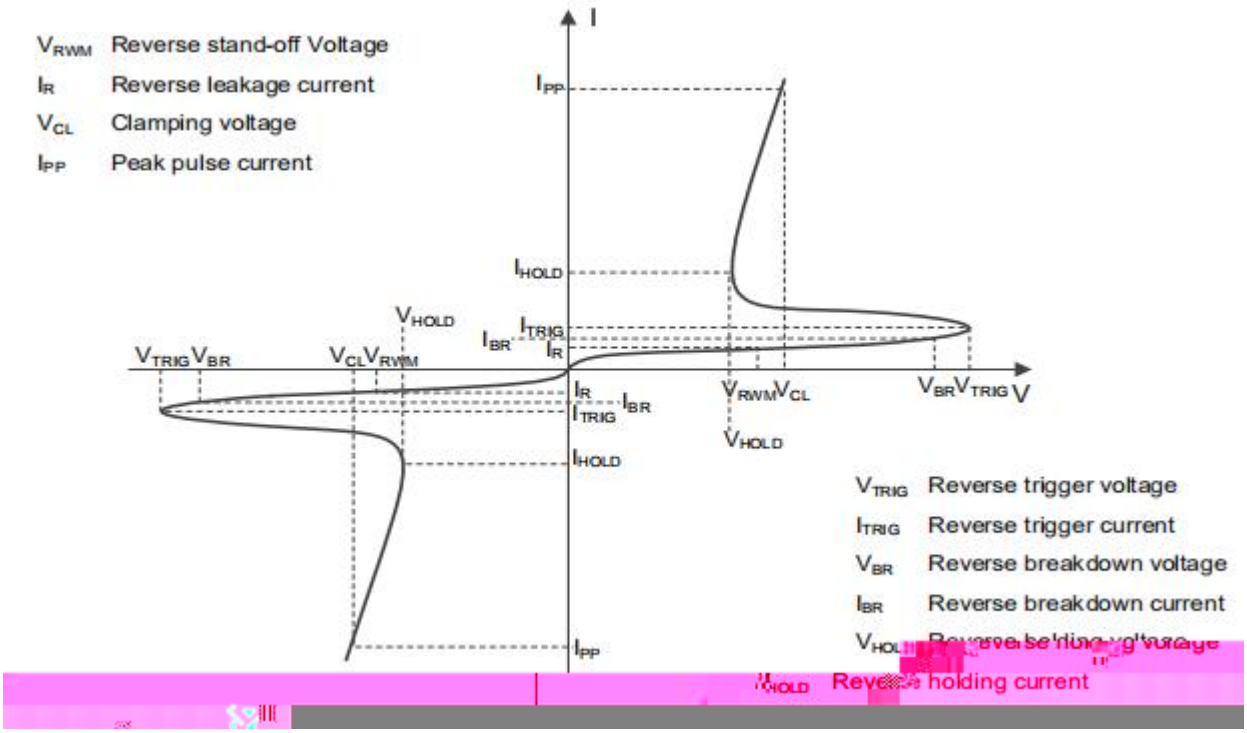


放大及印章代码 / h_{FE} Classifications & Marking

See Marking Instructions.

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Peak Pulse Power(t_p = 8/20μs)	P_{PK}	34	W
Peak Pulse Current(t_p = 8/20μs)	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℃)



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 = 8/20μs		4.5	5.5	V
		I_{PP} = 4A t_p = 8/20μs		7	8.5	V
Junction Capacitance	C_J	V_R = 0V f = 1MHz		0.4	0.55	pF

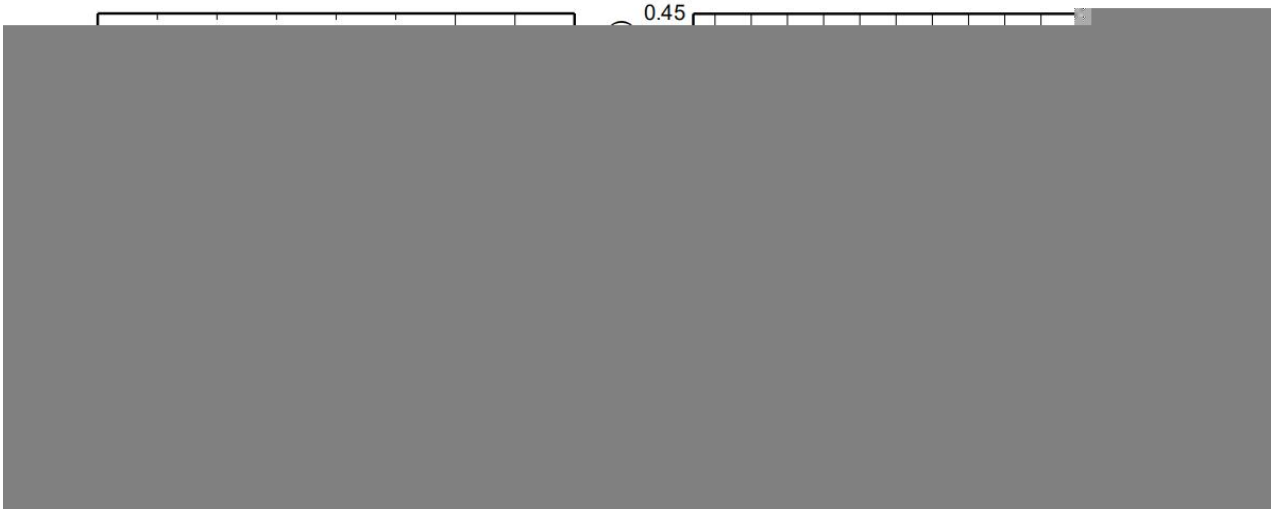
Notes:

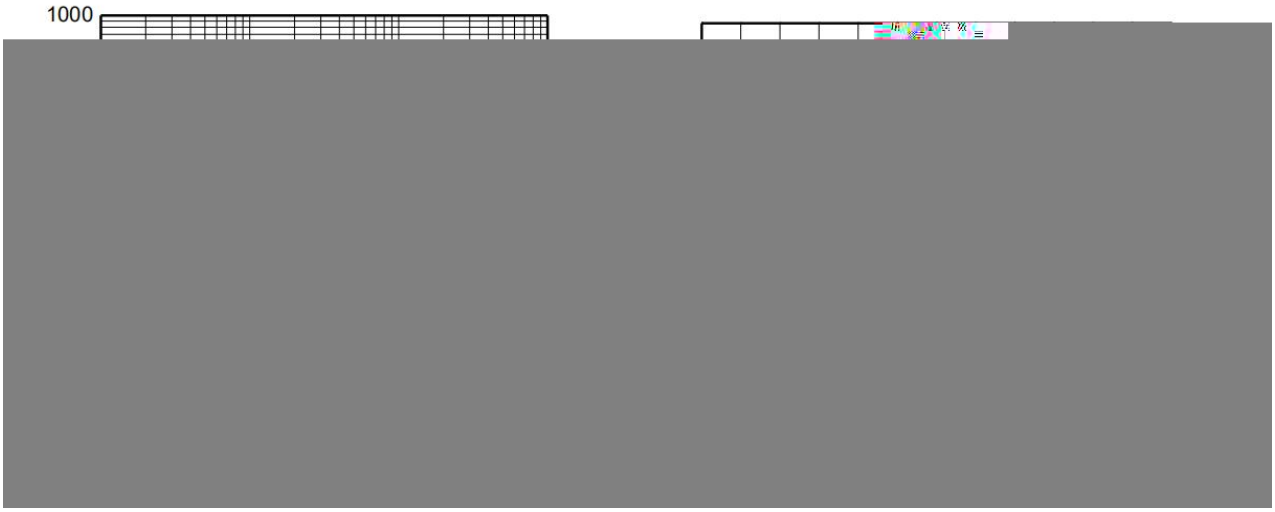
1) TLP parameter: Z0 = 50Ω, tp = 100ns, tr = 2ns, averaging window from 60ns to 80ns. RDYN is calculated from 4A to 16A.

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

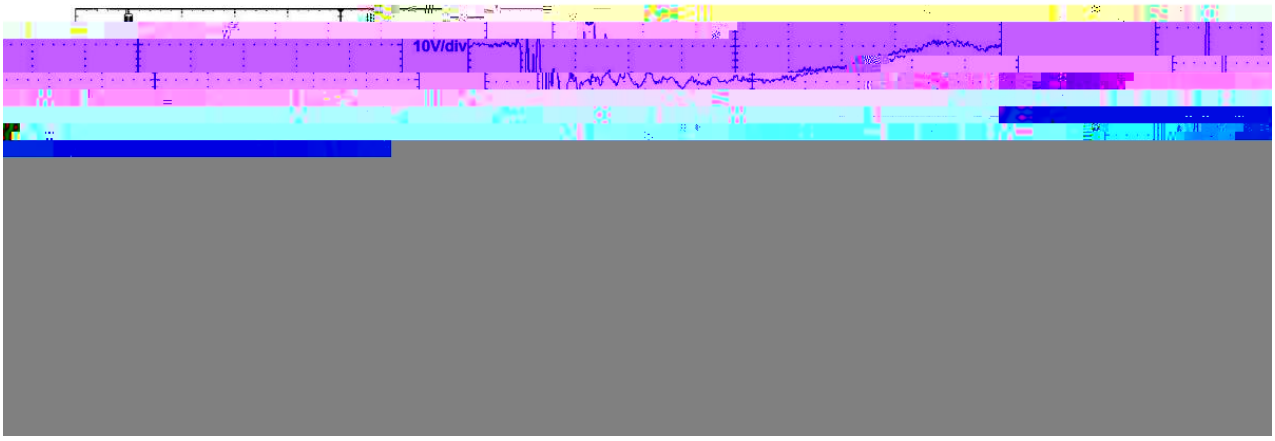
3) Non-repetitive current pulse, according to IEC61000-4-5.

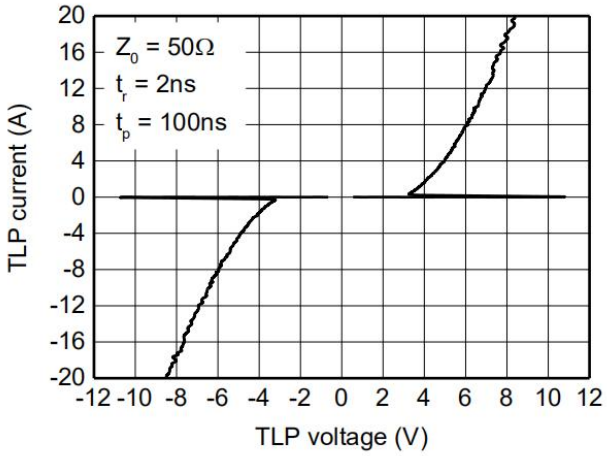
电参数曲线图 / Electrical Characteristic Curve(Ta=25℃)





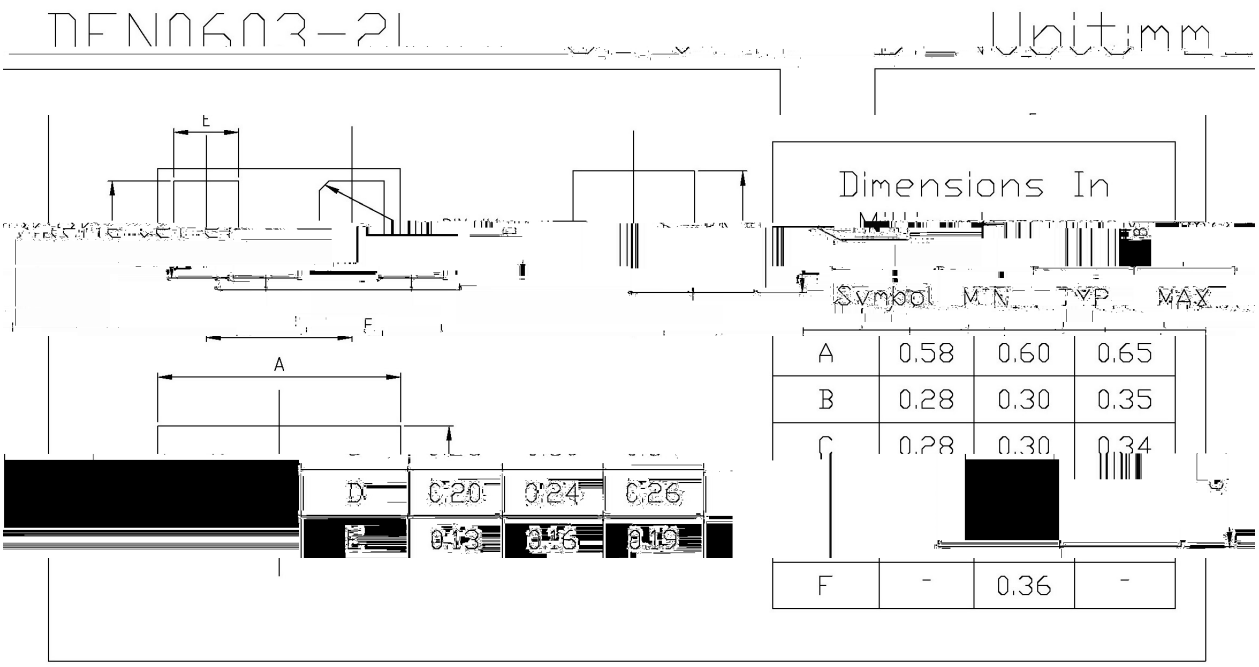
电参数曲线图 / Electrical Characteristic Curve(Ta=25℃)



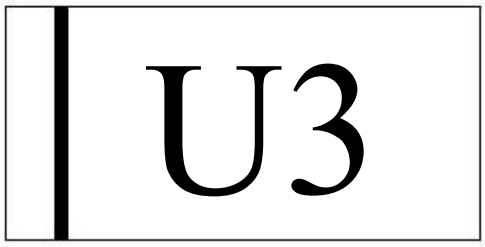


TLP Measurement

外形尺寸图 / Package Dimensions



印章说明 / Marking Instructions



说明：

U3： 为型号代码

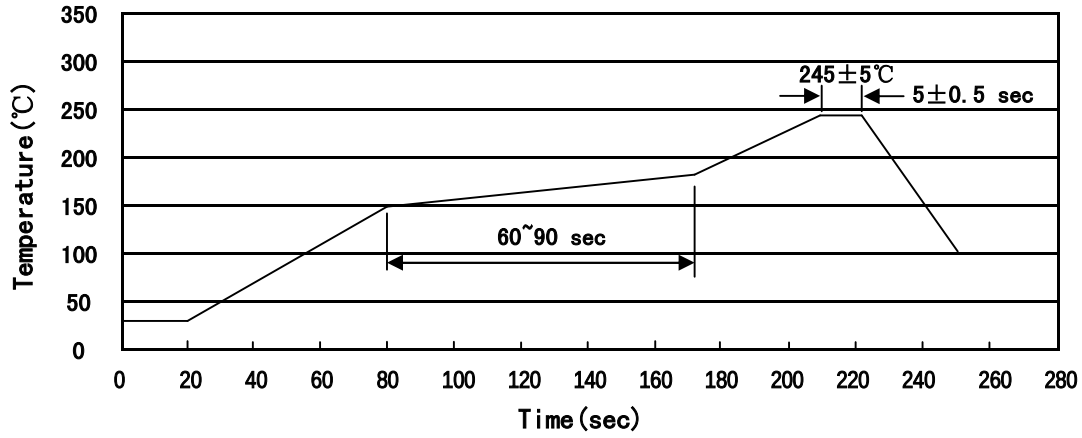
*： 为生产批号代码，随生产批号变化

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℃, Time:60~90sec.
2		245±5			5±0.5sec;	2.Peak Temp.:245±5℃, Duration:5±0.5sec.
3				2	10℃/sec.	3. Cooling Speed: 2~10℃/sec.

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

260±5℃	10±1 sec.	Temp.:260±5℃	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