

A	2020.09.15	ALL	LX LS3206V5-1N		
A	2021-6-28	ALL	DFN1006A-2L DFN1006-2L		

/ Descriptions

DFN1006-2L

ESD

DFN1006-2L Plastic Package 1-Line,Bi-directional , ESD Protection Diode.

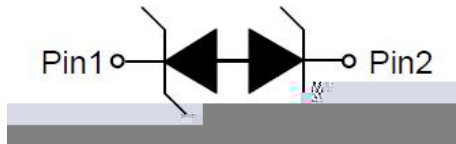
/ Features

- ◆ Stand-off voltage: $\pm 5V$ Max.
- ◆ Transient protection for each line according to
 - IEC61000-4-2(ESD): $\pm 30kV$ (contact)
 - IEC61000-4-4 (EFT): 80A (5/50ns)
 - IEC61000-4-5(surge): 20A (8/20 μs)
- ◆ Ultra-low capacitance: $C_J = 35pF$ typ.
- ◆ Low leakage current:
- ◆ Low clamping voltage: $V_{CL} = 7.8V$ typ. @ $I_{PP} = 16A$ (TLP)
- ◆ Solid-state silicon technology
- ◆ HF Product

/ Applications

- ◆ Battery Line Protection
- ◆ Audio Line Protection
- ◆ Microphone Line Protection
- ◆ GPIO Protection

/ Equivalent Circuit



/ Pinning



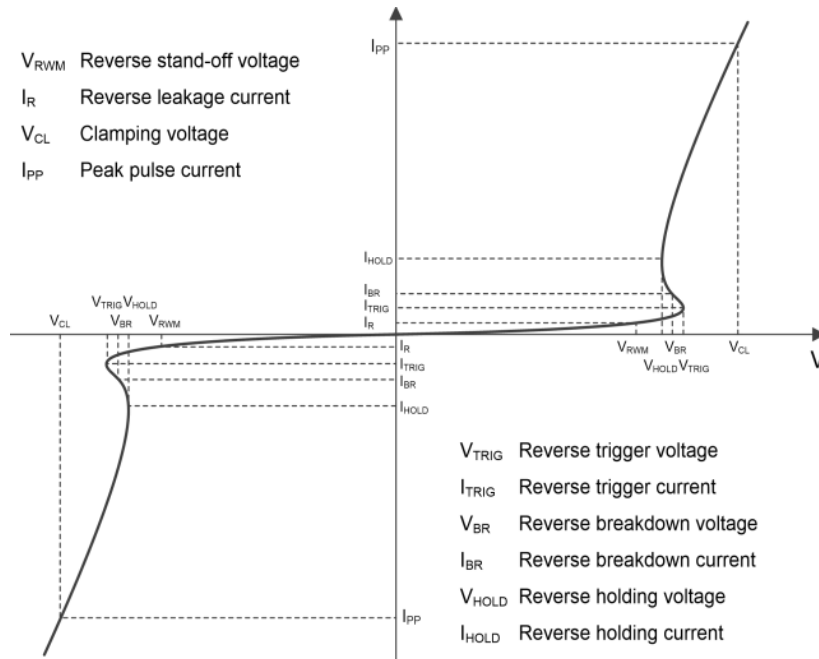
/ Marking

See Marking Instructions.

/ 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}	230	W
Peak Pulse Current($t_p = 8/20\mu s$)	I_{PP}	20	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	125	$^{\circ}C$
Operating temperature	T_{OP}	-40~85	$^{\circ}C$
Lead temperature	T_L	260	$^{\circ}C$
Storage Temperature	T_{STG}	-55~+150	$^{\circ}C$

/ Electrical Characteristics(Ta=25)



Definitions of electrical characteristics

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse maximum working voltage	V _{RWM}				±5.0	V
Reverse leakage current	I _R	V _{RWM} = 5.0V			100	nA
Reverse breakdown voltage	V _{BR}	I _{BR} =1mA	5.1			V
Reverse holding voltage	V _{HOLD}	I _{HOLD} =50mA	5.1			V
Clamping voltage ¹⁾	V _{CL}	I _{PP} =16A t _p =100ns		7.8		V
Dynamic resistance ¹⁾	R _{DYN}			0.1		Ω
Clamping voltage ²⁾	V _{CL}	V _{ESD} = 8kV		8.0		V
Clamping voltage ³⁾	V _{CL}	I _{PP} = 1A t _p = 8/20μs		6.2	8	V
		I _{PP} = 20A t _p = 8/20μs		9.5	11.5	V
Junction Capacitance	C _J	V _R =0V f = 1MHz		35	45	pF
	C _J	V _R = 5V f = 1MHz		25	35	pF

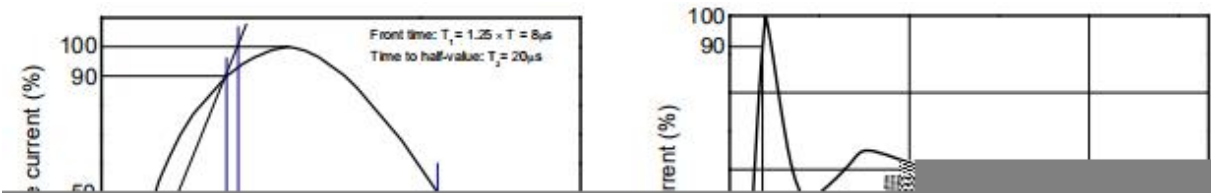
Notes:

1) TLP parameter: Z₀ = 50Ω, t_p = 100ns, t_r = 2ns, averaging window from 60ns to 80ns. R_{DYN} is calculated from 4A to 16A.

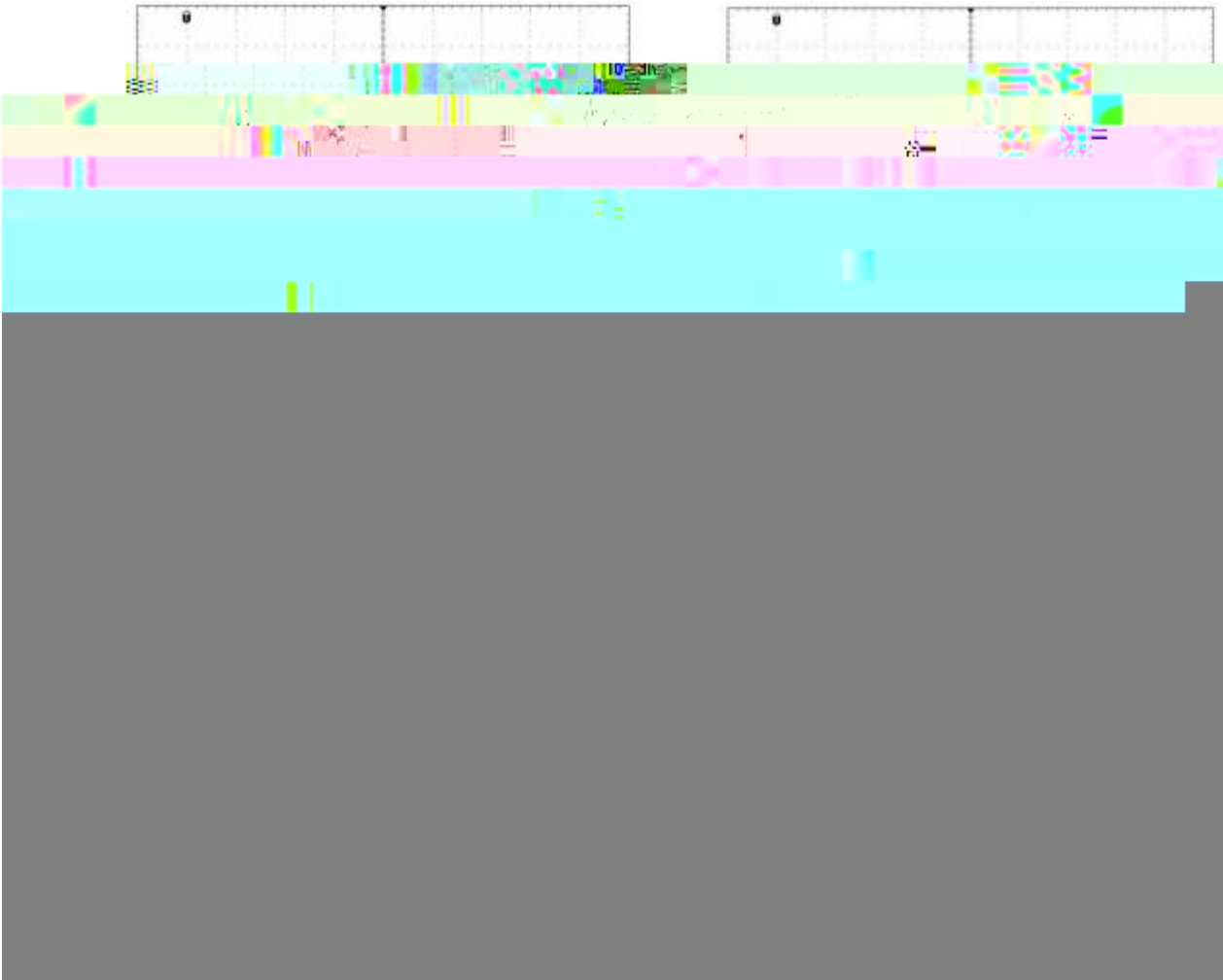
2) Contact discharge mode, according to IEC61000-4-2.

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

/ Electrical Characteristic Curve(Ta=25)



/ Electrical Characteristic Curve(Ta=25)



/ Package Dimensions

DFN1006-2L Unit:mm



/ Marking Instructions



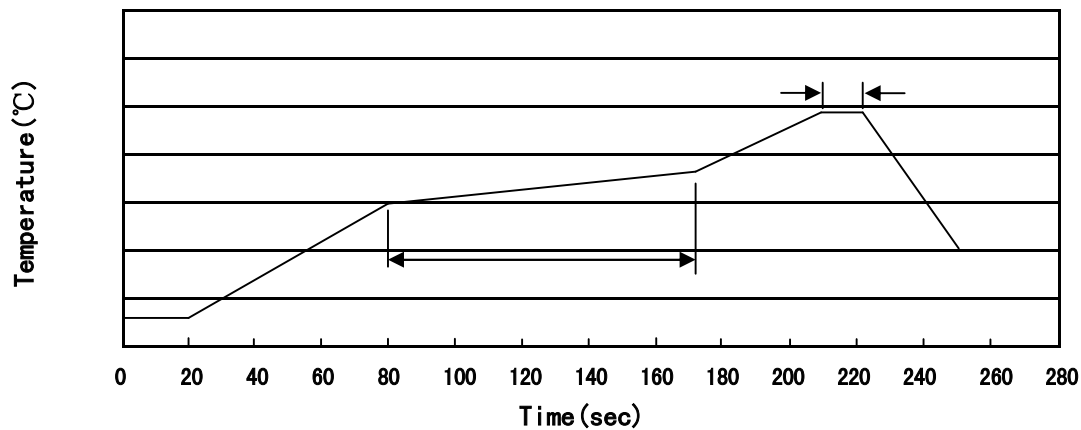
说明：

5B：为型号代码

Note：

5B：Product Type.

() / 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. |

/ Resistance to Soldering Heat Test Conditions

260 5 10 1 sec. Temp.:260±5℃ Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type	Units					Dimension (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	Outer Box
DFN1006-2L	10,000	10	100,000	6	600,000	7" ×8	180×120×180	390×385×205

/ Notices