

BRESD12VP1B2ZPQ

Rev.B Jul.-2024

/ Descriptions

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

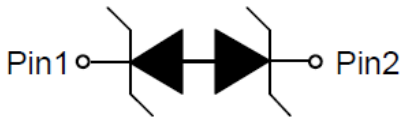
/ Features

Stand-off voltage: $\pm 12V$ Max
Transient protection for each line according to
IEC61000-4-2(ESD): $\pm 30kV$ (contact)
IEC61000-4-4 (EFT): 40A (5/50ns)
IEC61000-4-5(surge): 6A (8/20 μs)
Ultra-low capacitance: $C_J = 5pF$ typ
Low leakage current:
Low clamping voltage: $V_{CL} = 21.0V$ typ. @ $I_{PP} = 16A$ (TLP)
Solid-state silicon technology
Qualified to AEC-Q101 Standards for High Reliability
HF Product

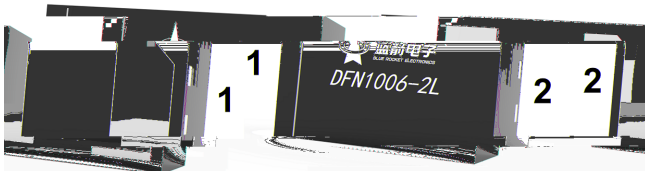
/ Applications

Computers and peripherals
Audio and video equipment
Communication systems
Portable electronics
Meet the stringent requirements of automotive applications

/ Equivalent Circuit



/ Pinning



/ Marking

See Marking Instructions.

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DATA SHEET

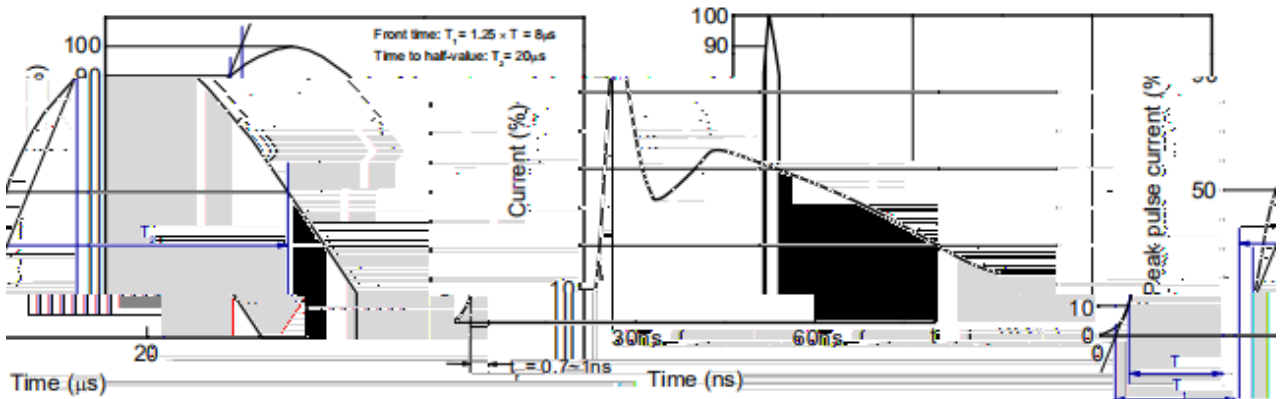
Parameter	Symbol	Rating	Unit
Peak Pulse Power($t_p = 8/20\mu s$)	P_{PK}	120	W
Peak Pulse Current($t_p = 8/20\mu s$)	I_{PP}	6	A
ESD according to IEC61000-4-2 air discharge	V_{ESD}	± 30	KV
ESD according to IEC61000-4-2 contact discharge		± 30	
Junction temperature	T_J	125	
Operating temperature	T_{OP}	-40~85	
Lead temperature	T_L	260	
Storage Temperature	T_{STG}	-55~+150	

2.49 -2 2525>Tj 0 -1.7066 1.0004 0 TD ()Tj -1.3891-

Definitions of electrical characteristics

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse maximum working voltage	V_{RWM}					

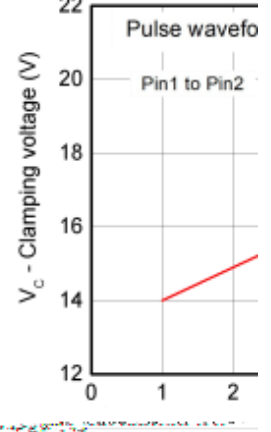
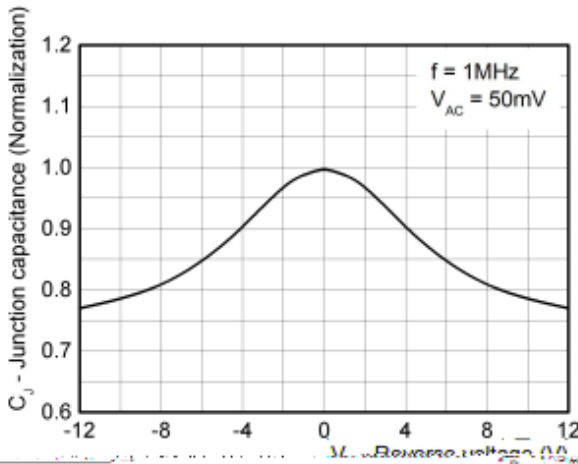
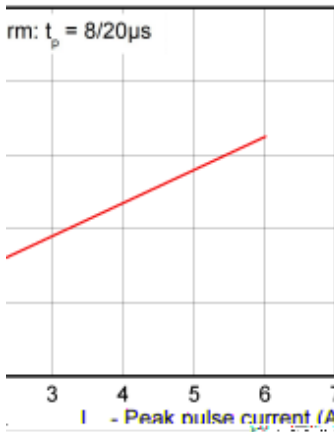
/ Electrical Characteristic Curve(Ta=25)



Waveform per IEC61000-4-5

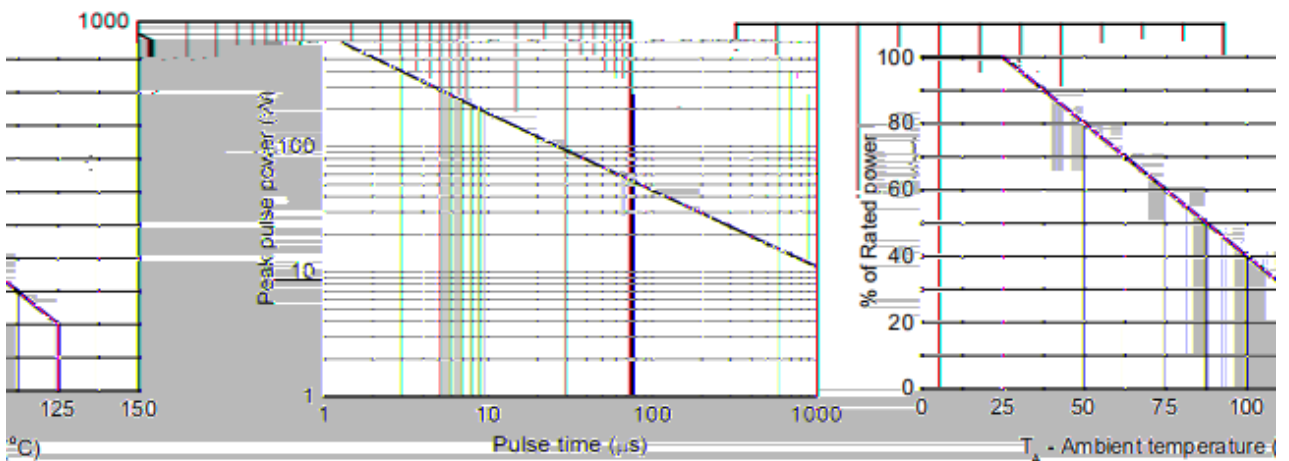
Contact discharge current waveform per IEC61000-4-2

8/20 μs waveform

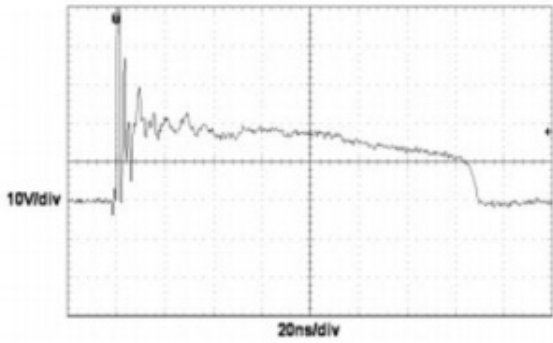


Clamping voltage vs. Peak pulse current

Capacitance vs. Reverse voltage

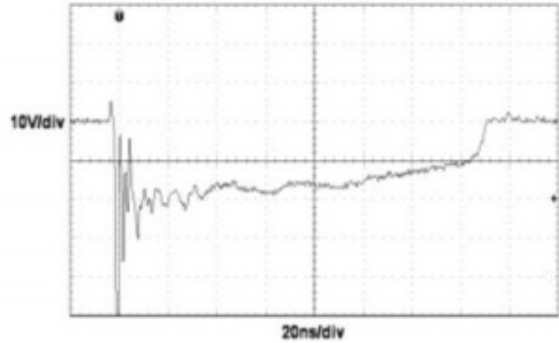


/ Electrical Characteristic Curve(Ta=25)



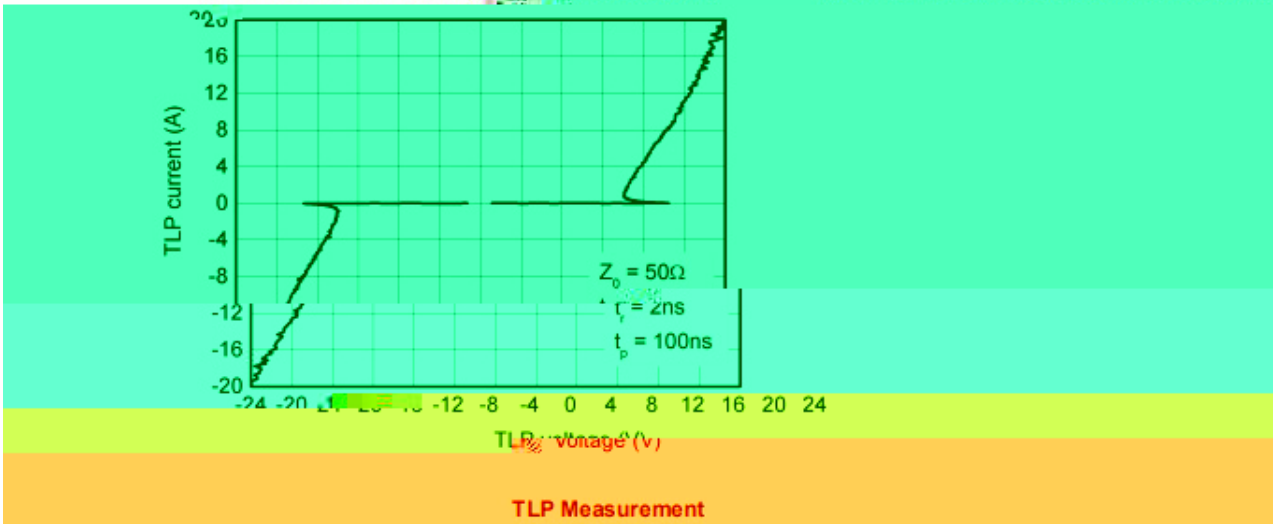
ESD clamping

(+8kV contact discharge per IEC61000-4-2)



ESD clamping

(-8kV contact discharge per IEC61000-4-2)



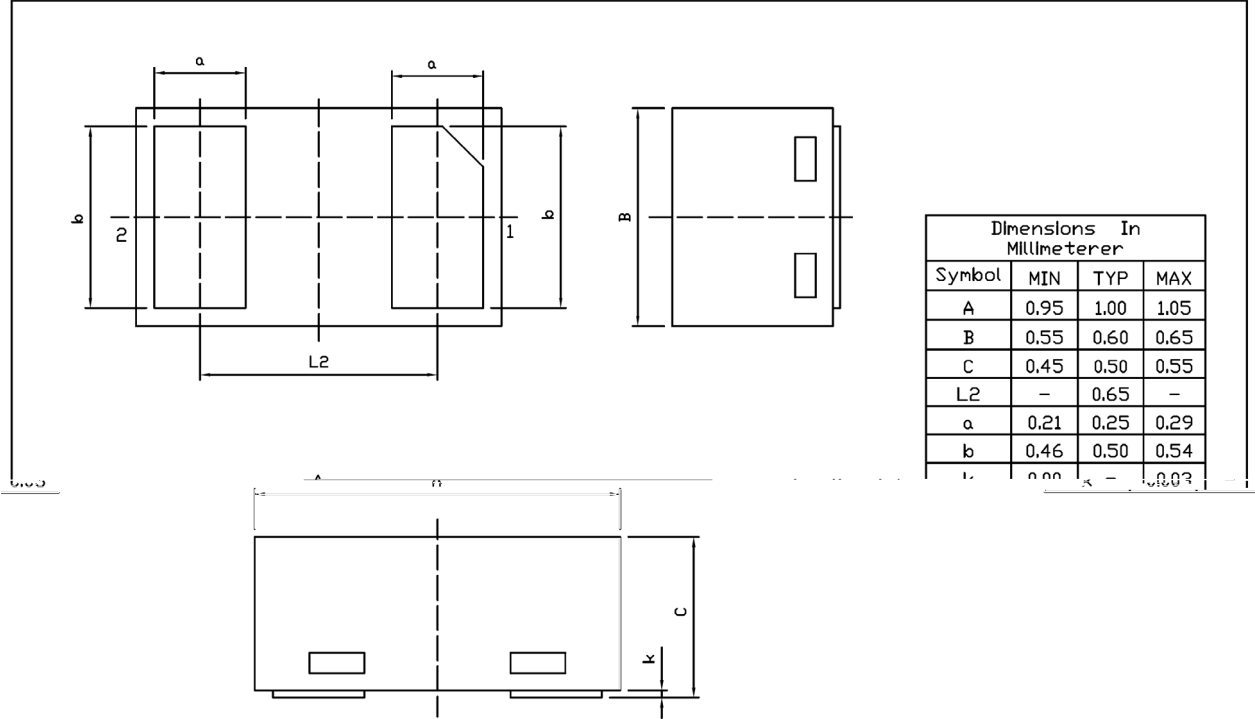
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/ Package Dimensions

DFN1006-2L

Unit:mm



Dimensions In Millimeter			
Symbol	MIN	TYP	MAX
A	0.95	1.00	1.05
B	0.55	0.60	0.65
C	0.45	0.50	0.55
L2	-	0.65	-
a	0.21	0.25	0.29
b	0.46	0.50	0.54
k	0.20	-	0.03

/ Marking Instructions



Q

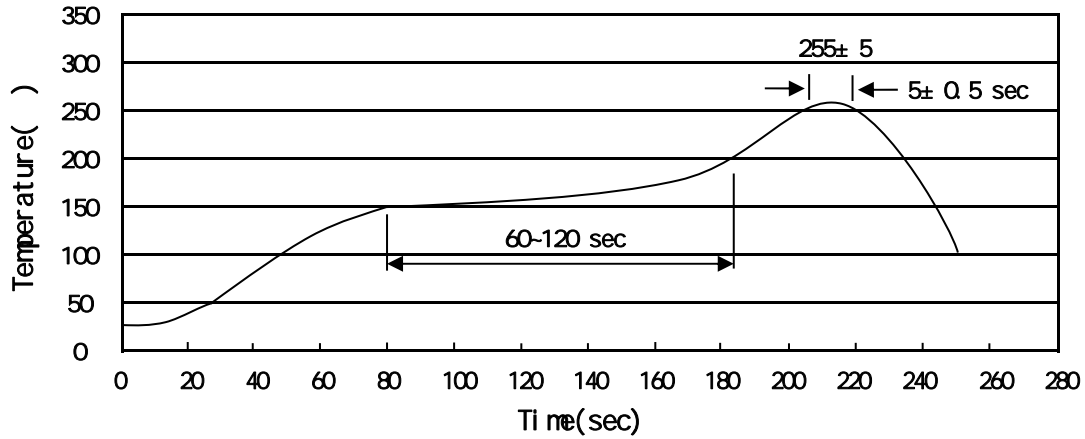
cD

Note

Q: Automobile halogen-free product Code

cD Product Type Code

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Note:

- 1 150 200 60 120sec; 1.Preheating:150~200 , Time:60~120sec.
- 2 255±5 5±0.5sec; 2.Peak Temp.:255±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 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
DFN1006-2L	10,000	10	100,000	6	600,000	7 x8	180x120x180	390x385x205

/ Notices