D24V0L1B2LPS-7B
ESD PROTECTION DIODE

Discription

Low capacitance bidirectional ElectroStatic Discharge (ESD) protection diode in a DFN1006(SOD-882) leadless ultra small Surface-Mounted Device (SMD) plastic package designed to protect one signal line from the damage caused by ESD and other transients.

DFN1006-2L

Features

- ★ BidirectionalESDprotectionofoneline
- ★ Low operating voltage:24V
- ★ Low clamping voltage VC = 50V @3A
- ★ Responsetimeistypically<1ns
- ★ UltraLowLeakage:nALevel
- ★ IEC 61000-4-2: level 4 (ESD)
- ★ IEC 61000-4-5 (surge): IPPMQ100 A

Circuit Diagram

Applications

- ★ Portable electronics
- ★ Computersandperipherals
- ★ Audio and video equipment
- ★ Cellular handsets and accessories
- ★ Communication systems
- ★ Power supplies

Orderingin formation

Product ID	Pack	Qty(PCS)
D24V0L1B2LPS-7B	DFN1006-2L	10000

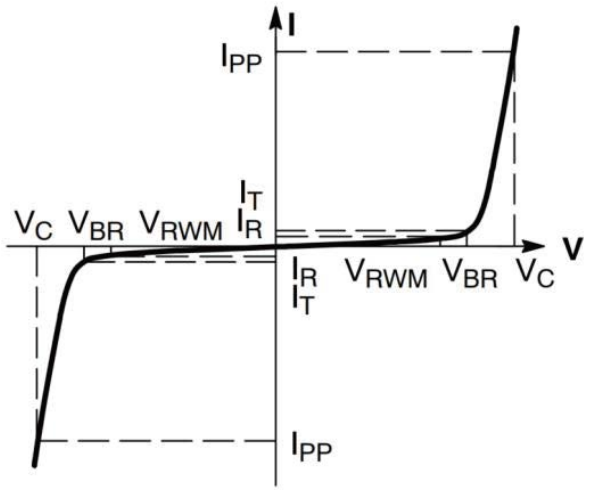
Absolute Ratings(Tamb = 25°C)

Parameter	Symbol	Value	Unit
Peak Pulse Power (tp = 8/20μs)	P_{PPM}	150	W
Maximum lead temperature for soldering during 10s	T_L	260	°C
Storage Temperature Range	T_{stg}	-55 to +150	°C
Operating Temperature Range	T_{OP}	-55 to +150	°C
Maximum junction temperature	T_j	150	°C
ESD voltage IEC 61000-4-2 (air discharge)	V_{ESD}	15	kV
ESD voltage IEC 61000-4-2 (contact discharge)	V_{ESD}	8	kV

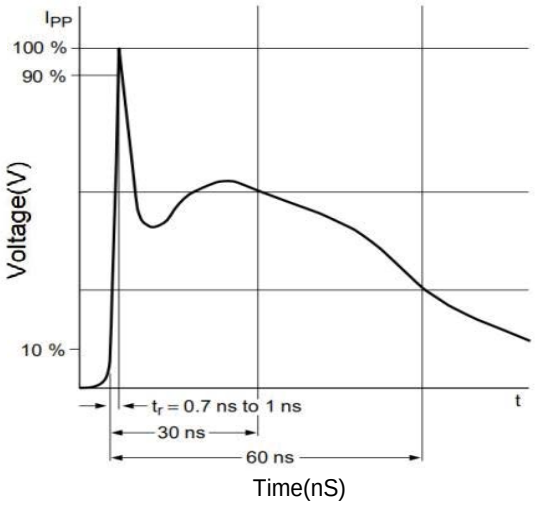
Electrical Characteristics

Parameter	Symbol	Min	Typ	Max	Unit	Condition
Reverse Working Voltage	V_{RWM}	--	--	24	V	
Breakdown Voltage	V_{BR}	26	--	32	V	I_T=1mA
Leakage Current ILeak	I_R	--	--	1.0	uA	V_{RWM}=5.0V
Clamping Voltage	V_C	--	--	40	V	I_{PP}=1A,Tp=8/20μs
Clamping Voltage	V_C	--	--	50	V	I_{PP}=3A,Tp=8/20μs
Junction Capacitance	C_J	--	8	15	pF	V_R=0V, f=1MHz

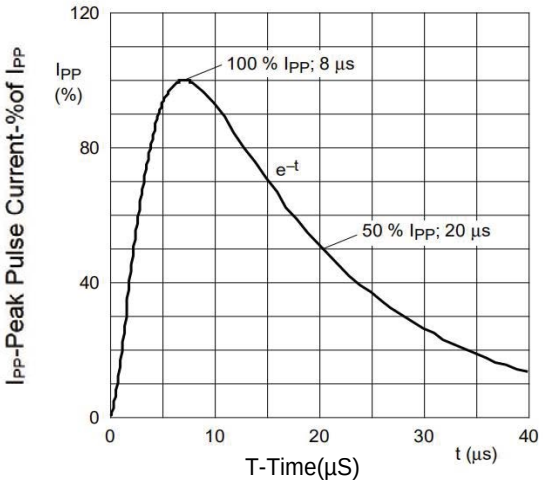
Symbol	Parameter
I_{PPM}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Reverse Leakage Current @ V_{RWM}
I_T	Test Current
V_{BR}	Breakdown Voltage @ I_T



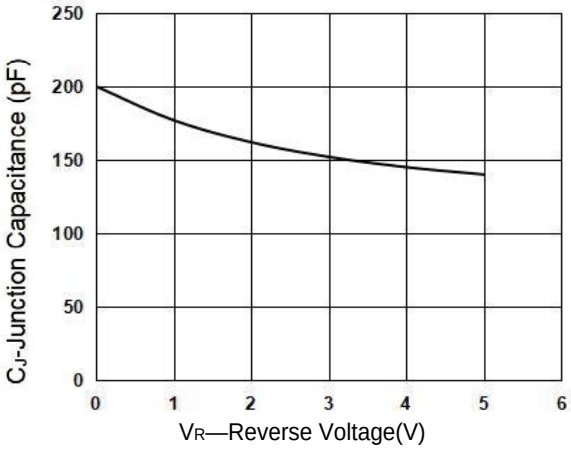
Typical Characteristics



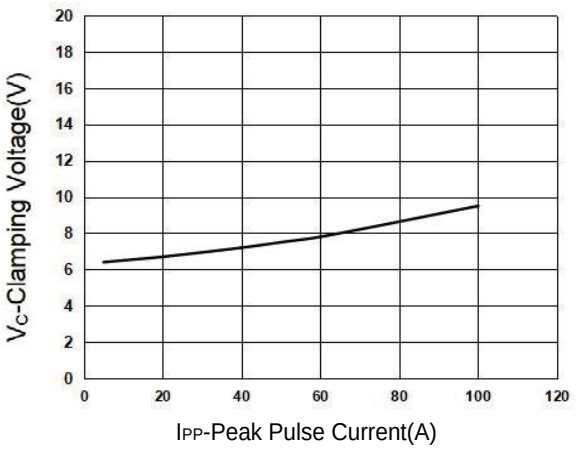
IEC61000−4−2 Pulse Waveform



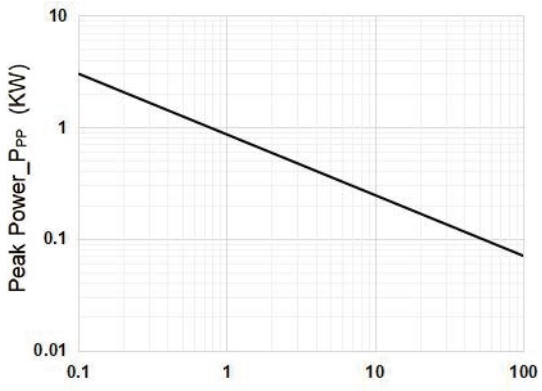
IEC61000−4−5 8X20µs Pulse Waveform



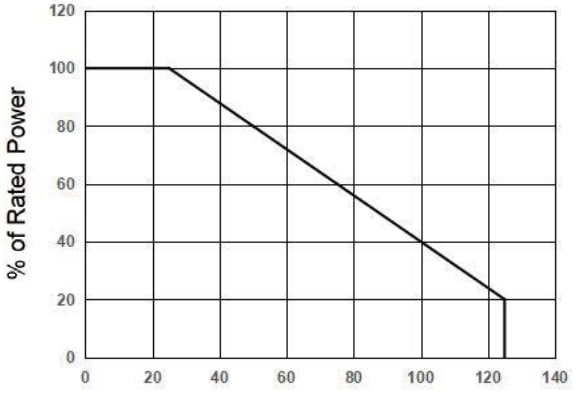
Junction Capacitance vs. Reverse Voltage



Clamping Voltage vs. Peak Pulse Current

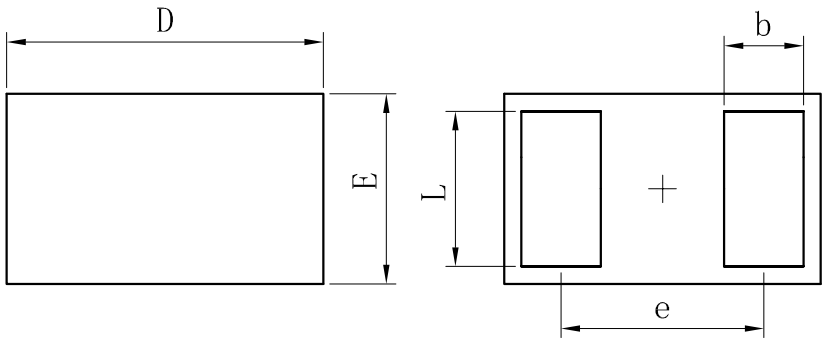


Peak Pulse Power vs. Pulse Time



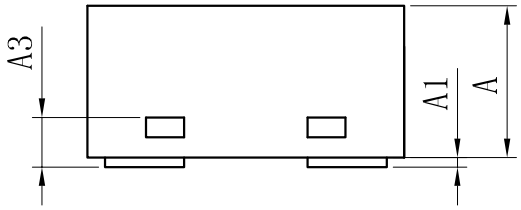
Power Derating Curve

OUTLINE AND DIMENSIONS



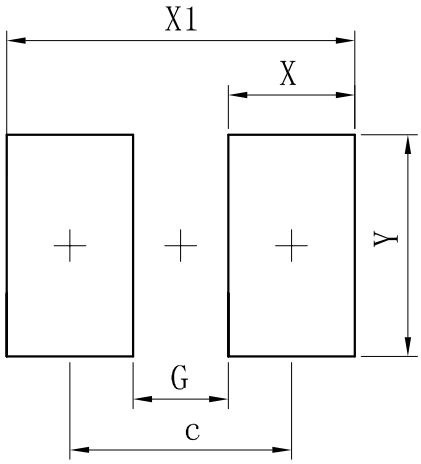
TOP VIEW BOTTOM VIEW

DFN1006-2L			
Dim	Min	Typ	Max
D	0.95	1.00	1.05
E	0.55	0.60	0.65
e	-	0.64	-
L	0.44	0.49	0.54
b	0.20	0.25	0.30
A	0.43	0.48	0.53
A1	0	-	0.05
A3	0.127REF.		
All Dimensions in mm			



SIDE VIEW

SOLDERING FOOTPRINT



Dimensions	(mm)
c	0.70
G	0.30
X	0.40
X1	1.10
Y	0.70

Attention

■ Any and all HUA XUAN YANG ELECTRONICS products described or contained herein do not have specifications that can handle applications that require extremely high levels of reliability, such as life-support systems, aircraft's control systems, or other applications whose failure can be reasonably expected to result in serious physical and/or material damage. Consult with your HUA XUAN YANG ELECTRONICS representative nearest you before using any HUA XUAN YANG ELECTRONICS products described or contained herein in such applications.

■ HUA XUAN YANG ELECTRONICS assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all HUA XUAN YANG ELECTRONICS products described or contained herein.

■ Specifications of any and all HUA XUAN YANG ELECTRONICS products described or contained herein stipulate the performance, characteristics, and functions of the described products in the independent state, and are not guarantees of the performance, characteristics, and functions of the described products as mounted in the customer's products or equipment. To verify symptoms and states that cannot be evaluated in an independent device, the customer should always evaluate and test devices mounted in the customer's products or equipment.

■ HUA XUAN YANG ELECTRONICS CO.,LTD. strives to supply high-quality high-reliability products. However, any and all semiconductor products fail with some probability. It is possible that these probabilistic failures could
give rise to accidents or events that could endanger human lives, that could give rise to smoke or fire, or that could cause damage to other property. When designing equipment, adopt safety measures so that these kinds of accidents or events cannot occur. Such measures include but are not limited to protective circuits and error prevention circuits for safe design, redundant design, and structural design.

■ In the event that any or all HUA XUAN YANG ELECTRONICS products(including technical data, services) described or contained herein are controlled under any of applicable local export control laws and regulations, such products must not be exported without obtaining the export license from the authorities concerned in accordance with the above law.

■ Information (including circuit diagrams and circuit parameters) herein is for example only ; it is not guaranteed for volume production. HUA XUAN YANG ELECTRONICS believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.

■ Any and all information described or contained herein are subject to change without notice due to product/technology improvement, etc. When designing equipment, refer to the "Delivery Specification" for the HUA XUAN YANG ELECTRONICS product that you intend to use.