

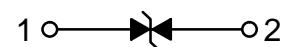


Description

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

- ★ Bidirectional ESD protection of one line
- ★ Low operating voltage: 5.0V
- ★ Low clamping voltage $VC = 10\text{ V}$ @ 100A
- ★ Response time is typically <1ns
- ★ Ultra Low Leakage: nA Level
- ★ IEC 61000-4-2: level 4 (ESD)
- ★ IEC 61000-4-5 (surge): IPPMQ100 A

Circuit Diagram

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

Ordering Information

Product ID	Pack	Qty(PCS)
PCLAMP0511ZVTFT	DFN1006-2L	10000



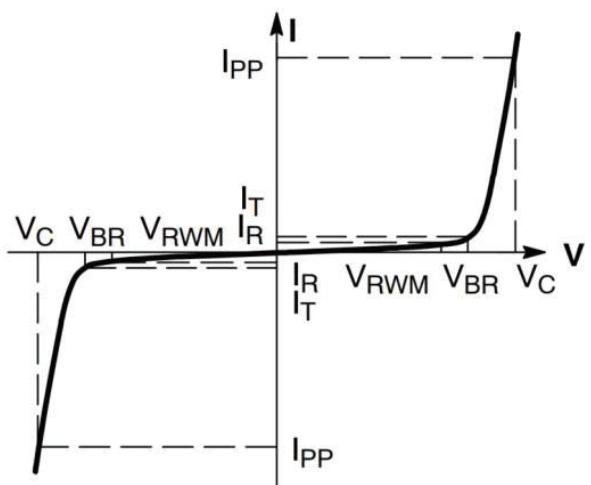
Absolute Ratings(Tamb = 25°C)

Parameter	Symbol	Value	Unit
Peak Pulse Power (tp = 8/20μs)	P _{PPM}	1000	W
Peak Pulse Current(tp = 8/20μs)	I _{PPM}	100	A
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}	-40 to +125	°C
Maximum junction temperature	T _j	150	°C
ESD voltage IEC 61000-4-2 (air discharge)	V _{ESD}	30	kV
ESD voltage IEC 61000-4-2 (contact discharge)	V _{ESD}	30	kV

Electrical Characteristics

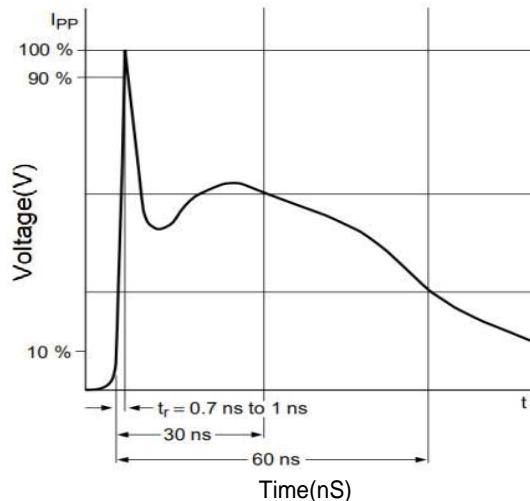
Parameter	Symbol	Min	Typ	Max	Unit	Condition
Reverse Working Voltage	V _{RWM}	--	--	5.0	V	
Breakdown Voltage	V _{BR}	5.8	--	7.0	V	I _T =1mA
Leakage Current I _{Leak}	I _R	--	--	100	nA	V _{RWM} =5.0V
Clamping Voltage	V _C	--	7.5	9.0	V	I _{PP} =50A,Tp=8/20μs
Clamping Voltage	V _C	--	9.0	10.5	V	I _{PP} =100A,Tp=8/20μs
Junction Capacitance	C _J	--	200	250	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

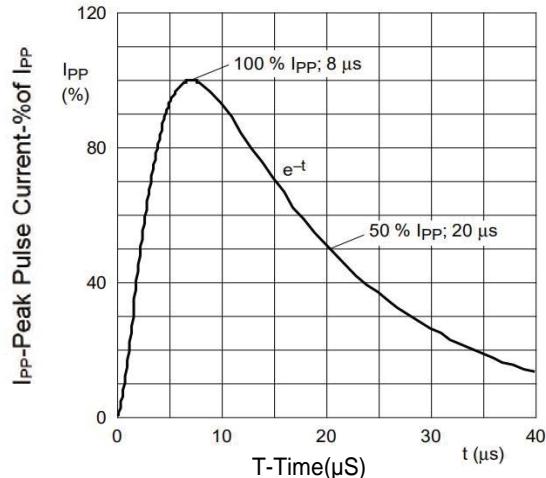




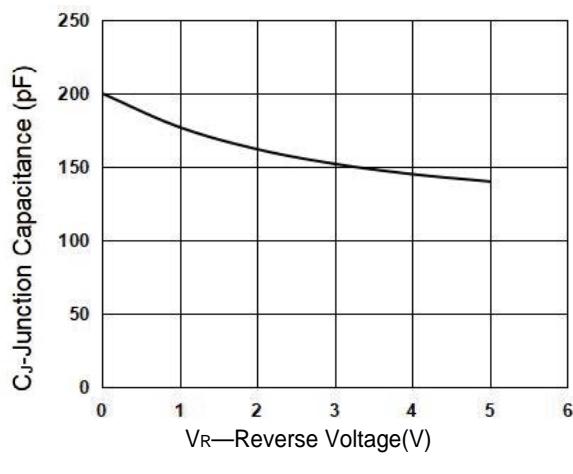
Typical Characteristics



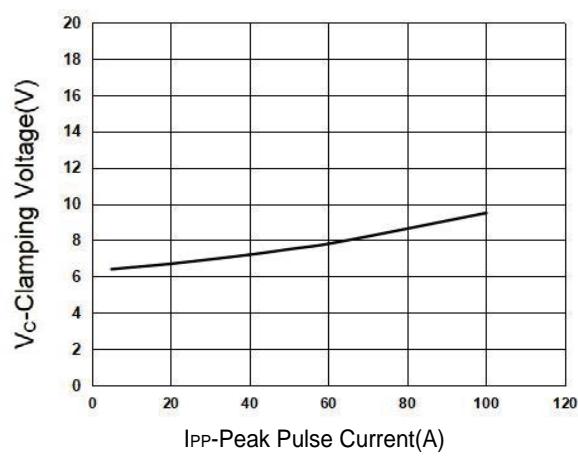
IEC61000-4-2 Pulse Waveform



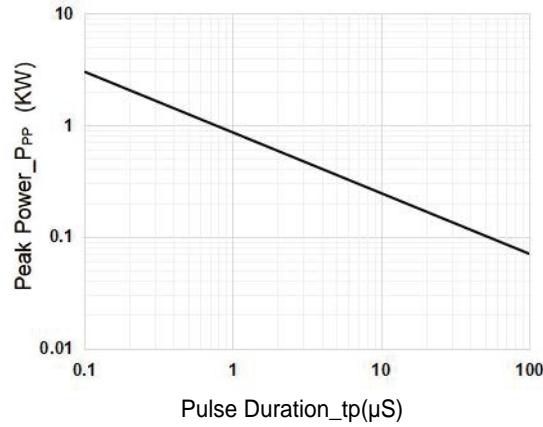
IEC61000-4-5 8X20μs Pulse Waveform



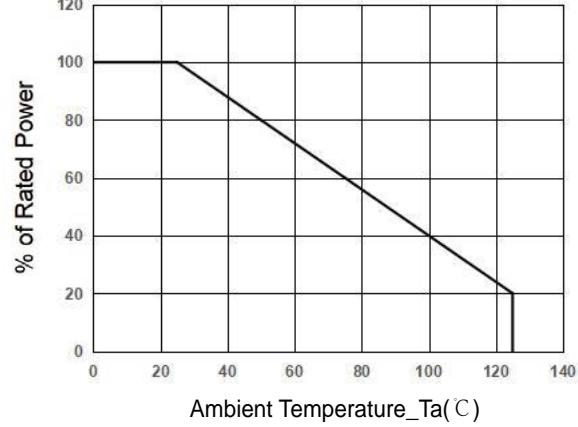
Junction Capacitance vs. Reverse Voltage



Clamping Voltage vs. Peak Pulse Current



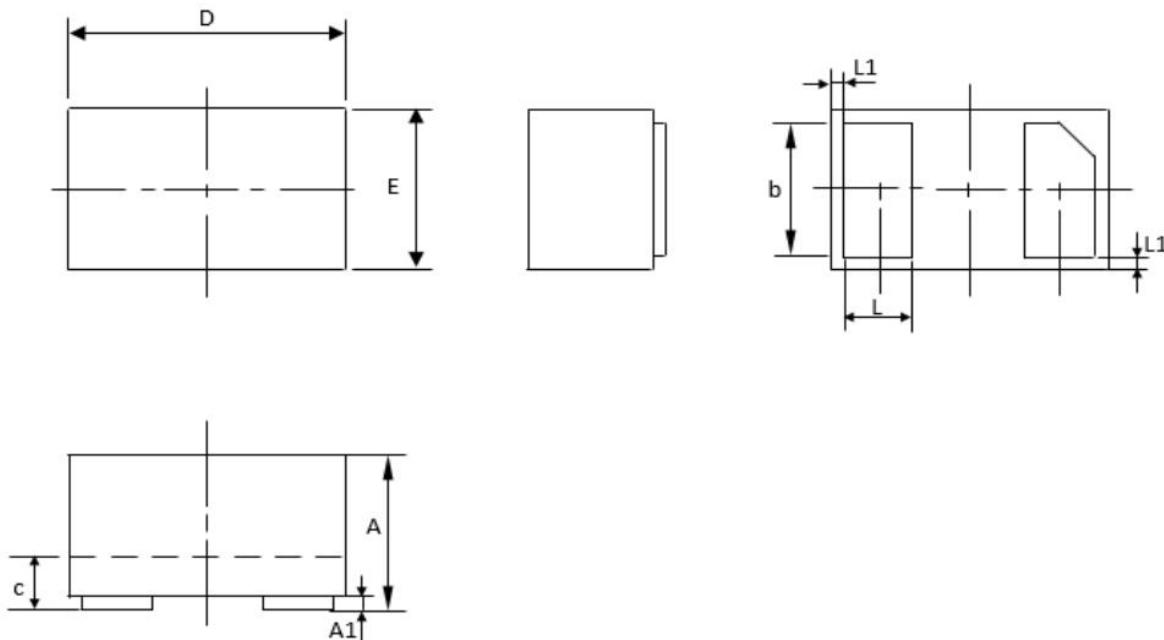
Peak Pulse Power vs. Pulse Time



Power Derating Curve



Outline And Dimensions



DFN1006-2L			
Dim	Min	Typ.	Max
A	0.46	0.48	0.50
A1	0	0.02	0.05
b	0.45	0.5	0.55
c	0.1	0.12	0.14
D	0.95	1.00	1.05
E	0.55	0.60	0.65
L	0.20	0.25	0.30
L1	0.035	0.05	0.065
h	0.07	0.12	0.17

All Dimensions in mm



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