BDFN2C031V
ESD PROTECTION DIODE

Discription

Low capacitance bidirectional ElectroStatic Discharge (ESD) protection diode in a DFN1006-2L(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
★ Femtofarad capacitance: Cj = 15pF (Typ)
★ Low clamping voltage VC = 11.0V @Max (Max)
★ Low leakage current: nA Level
★ ESD protection up to 30 kV
★ IEC 61000-4-2; level 4 (ESD)
★ IEC 61000-4-5 (surge); IPPM = 30 A

Circuit Diagram

Applications

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

Ordering Information

Product ID	Pack	Qty(PCS)
BDFN2C031V	DFN1006-2L	10000

Absolute Ratings(Tamb = 25°C)

Symbol	Parameter	Value	Units
P_{PP}	Peak Pulse Power (t_p = 8/20 μ s)	100	W
T_L	Maximum lead temperature for soldering during 10s	260	°C
T_{stg}	Storage Temperature Range	-55 to +150	°C
T_{op}	Operating Temperature Range	-55 to +150	°C
T_j	Maximum junction temperature	150	°C
	IEC61000-4-2 (ESD) air discharge contact discharge	±30 ±30	KV
	IEC61000-4-4 (EFT)	40	A

Electrical Characteristics

Symbol	Parameter	Test Condition	Min	Typ	Max	Units
V_{RWM}	Reverse Working Voltage				3.3	V
V_{BR}	Reverse Breakdown Voltage	I_T = 1mA	5.0		6.5	V
I_R	Reverse Leakage Current	V_{RWM} = 3.3V			0.05	uA
V_C	Clamping Voltage	I_{PP} =1A, t_p = 8/20μs			7.0	V
		I_{PP} =9A, t_p = 8/20μs			11.0	V
C_J	Junction Capacitance	V_R = 0V, f = 1MHz		15		pF

Typical Characteristics

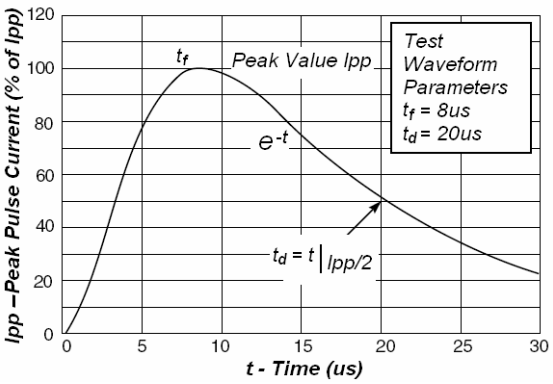


Fig1. Pulse Waveform

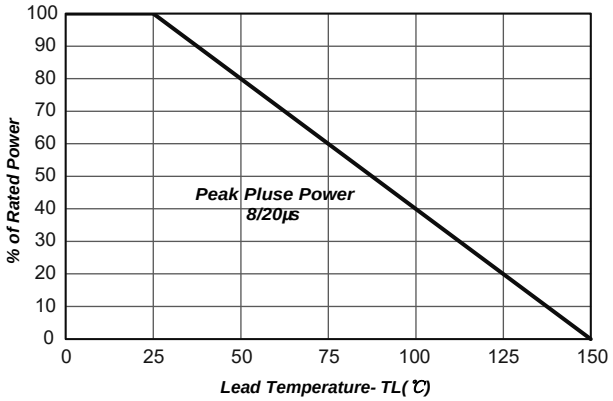


Fig2.Power Derating Curve

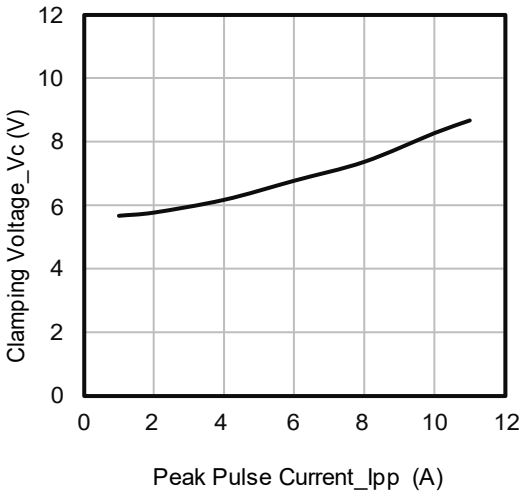


Fig3. Clamping Voltage vs. Peak Pulse Current

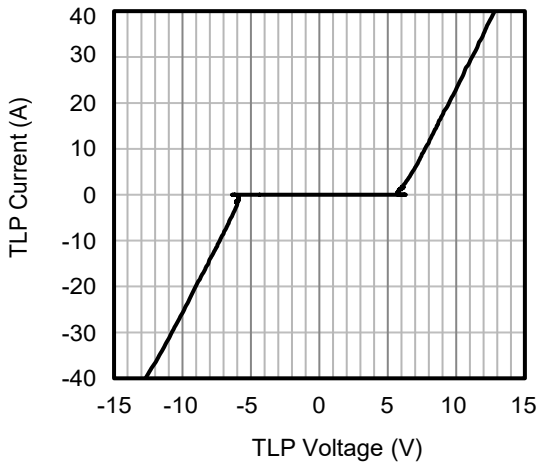
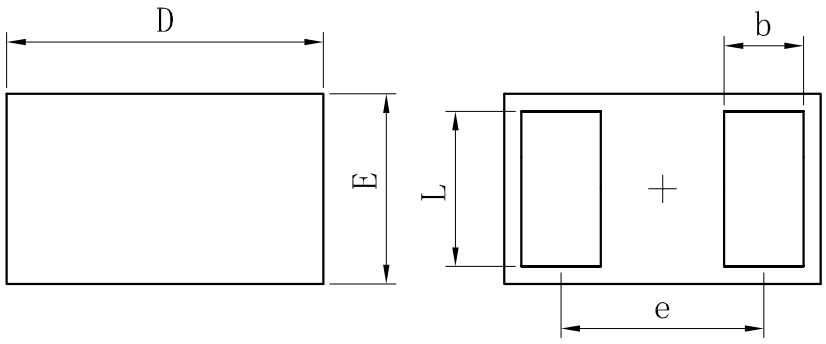
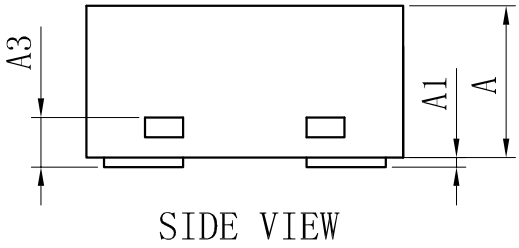


Fig4. TLP Measurement

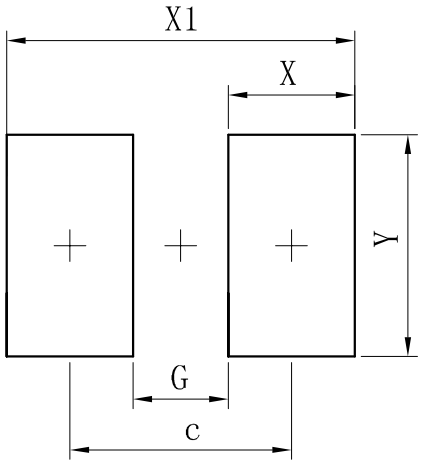
Outline And Dimensions





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			

Soldering Footprint



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

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