PESD12VV1BL,315
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



Circuit Diagram

Features

★ Bidirectional ESD protection of one line
★ Low operating voltage:12.0V
★ Low clamping voltage VC = 17V @8A
★ Response time is typically < 1 ns
★ Ultra Low Leakage: nA Level
★ IEC 61000-4-2; level 4 (ESD)
★ IEC 61000-4-5 (surge); IPPM = 8 A

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)
PESD12VV1BL,315	DFN1006-2L	10000

Absolute Ratings(Tamb = 25°C)

Symbol	Parameter	Value	Units
P_{PP}	Peak Pulse Power (t_p = 8/20 μ s)	140	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	±20 ±20	KV

Electrical Characteristics

Symbol	Parameter	Test Condition	Min	Typ	Max	Units
V_{RWM}	Reverse Working Voltage				12.0	V
V_{BR}	Reverse Breakdown Voltage	I_T = 1mA	13.3		16.0	V
I_R	Reverse Leakage Current	V_{RWM} = 5.0V			1.0	nA
V_C	Clamping Voltage	I_{PP} = 8A, t_p = 8/20μs			17.0	V
C_J	Junction Capacitance	V_R = 0V, f = 1MHz		8.0		pF

Typical Performance Characteristics (T_A=25°C unless otherwise Specified)

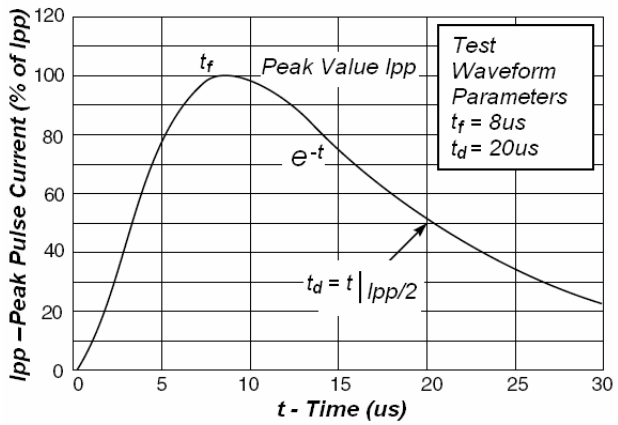


Fig1. Pulse Waveform

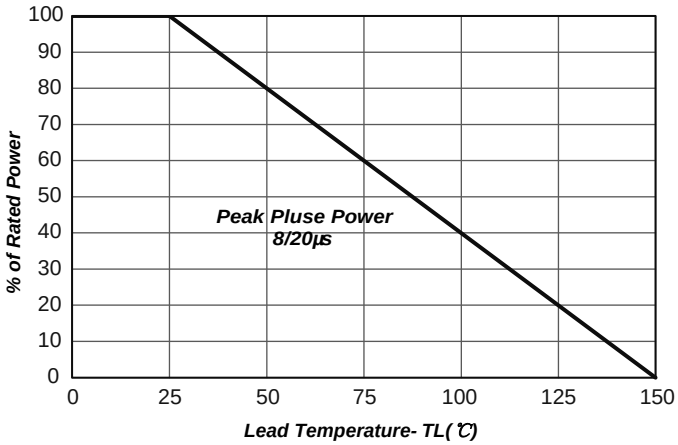


Fig2.Power Derating Curve

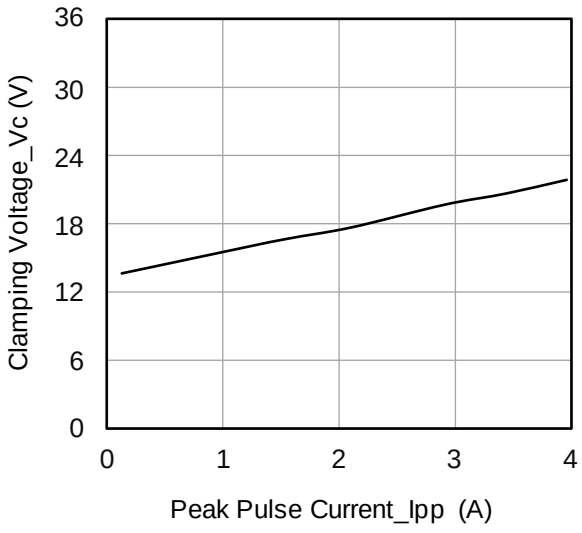
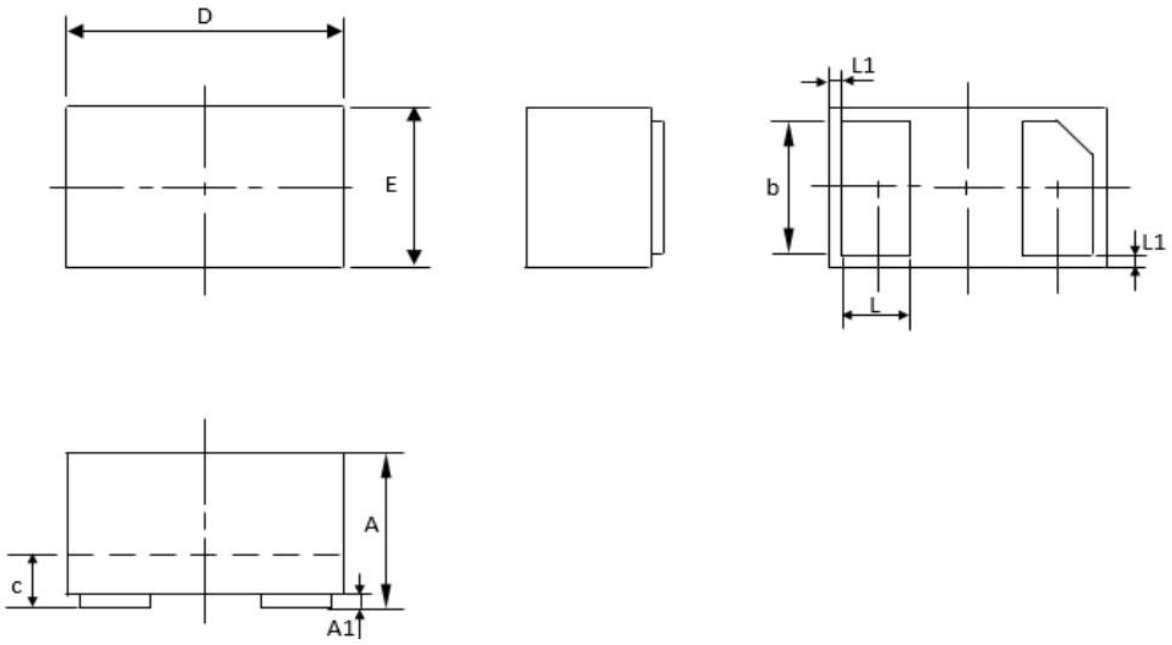


Fig 5.Clamping Voltage vs. Peak Pulse Current

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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HXY MOSFET:

TPSMB100CA-VR HT7540-1 HXY2300MI P6SMB200A SS1045 HC4D20120A IRLML6246PBF SQJA04EP-T1_BE3 SS10100 TPSMB28A-VR BZT52C13 HAD8542ARZ HC3D10170A MAX487ESA DTC143ZE HESDNC5VB1AF-B MMBT3904T HT7150 P6SMB33CA HXY8205ES SS510C US2M P6SMB36CA PESD5V0S1BB SS5150B BZT52C3V3S HMCP602-I/SN HOPA2340UA HXY2101EI SD15C