

Features

- Bi-directional ESD protection of one lines
- 40Watts peak pulse power ($t_p = 8/20\mu s$)
- Working voltage: 5V
- Junction Capacitance: 3.5pF(Typ)
- Low clamping voltage
- Low leakage current
- IEC 61000-4-2 $\pm 30kV$ contact $\pm 30kV$ air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 3.5A (8/20 μs)

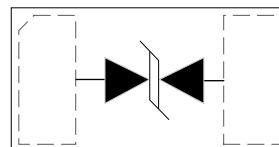
Mechanical Data

- Package: DFN1006-2L
- Molding compound flammability rating: UL 94V-0
- RoHS/WEEE Compliant

Applications

- Handsets and Accessories
- Microprocessor based equipment
- Personal Digital Assestants(PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation

Schematic & PIN Configuration



Ordering Information

Part Number	Package	Marking	Packing	Reel Size
ESD9B5VL	DFN1006-2L		10000 Tape & Reel	7 inches

Absolute Maximum Rating($T_A=25^{\circ}\text{C}$ unless otherwise Specified)

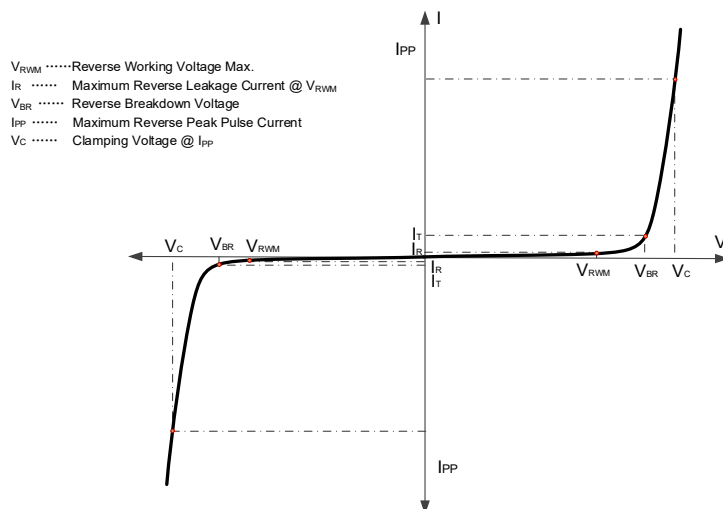
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	P_{pk}	40	W
Peak Pulse Current (8/20 μs)	I_{PP}	3.5	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	30 30	kV
Lead Soldering Temperature	T_L	260(10seconds)	$^{\circ}\text{C}$
Junction Temperature	T_J	-55 to +125	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	-55 to +125	$^{\circ}\text{C}$

Electrical Characteristics($T_A=25^{\circ}\text{C}$ unless otherwise Specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	VRWM				5	V
Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$	5.5	6.5		V
Reverse Leakage Current	I_R	VRWM=5V, $T=25^{\circ}\text{C}$			0.5	μA
Peak Pulse Current	I_{PP}	$t_p=8/20\mu\text{s}$			3.5	A
Clamping Voltage	V_C	IPP = 3.5A (8 x 20 μs pulse)			11	V
Junction Capacitance	C_J	VR = 0V, f = 1MHz		3.5	4.0	pF



Electrical Parameters ($T_A = 25^\circ\text{C}$ unless otherwise noted)



Note1: 8/20 μs pulse waveform.

Typical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise Specified)

Figure 1: Peak Pulse Power vs. Pulse Time

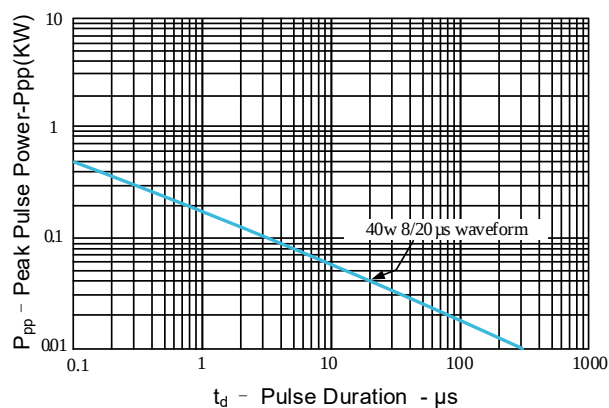


Figure 2: Power Derating Curve

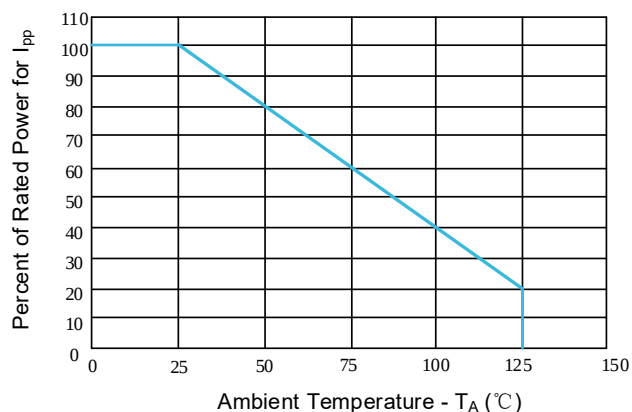


Figure3: 8/20 μs Pulse Waveform

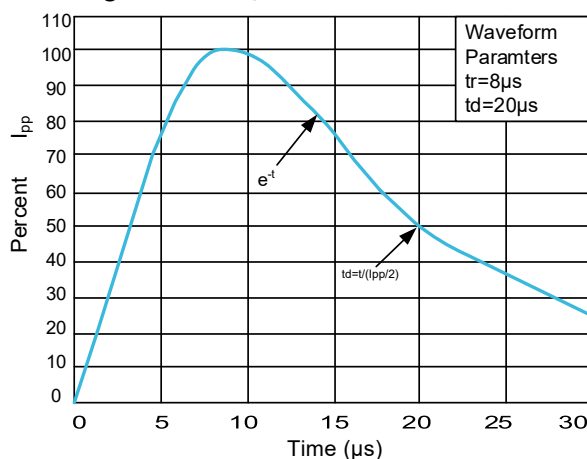


Figure 4: Clamping Voltage vs. I_{PP}

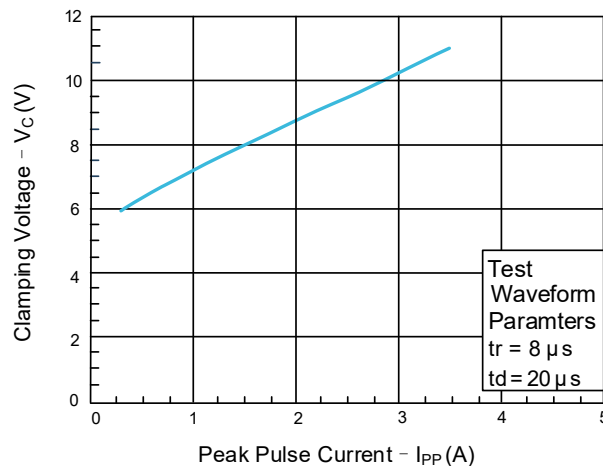




Figure5:IEC61000-4-2 +8 kV Contact ESD
Clamping Voltage

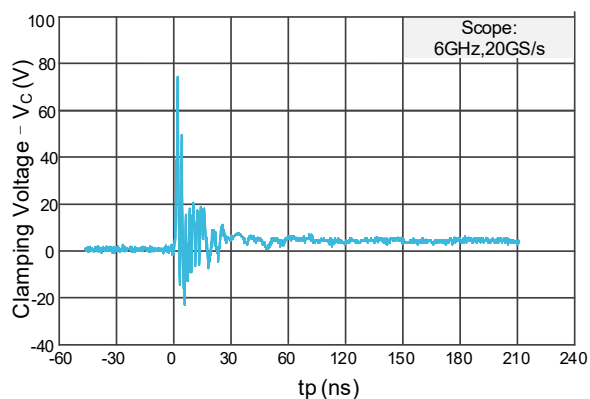
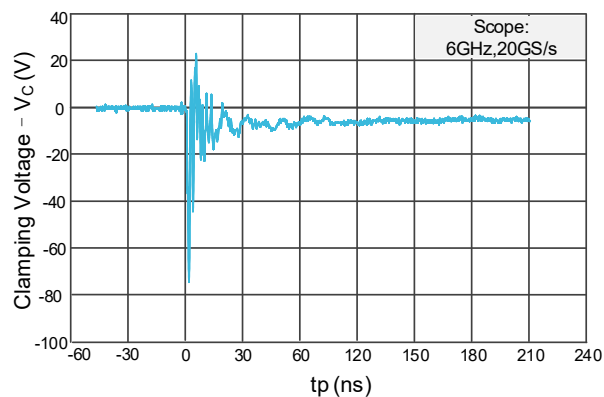
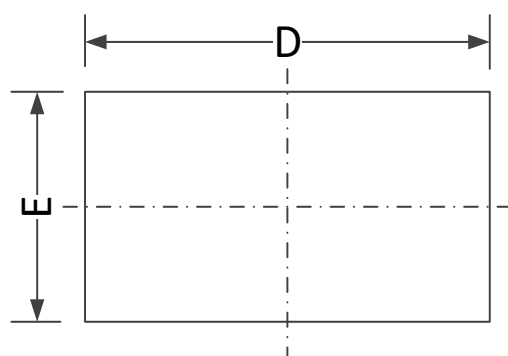


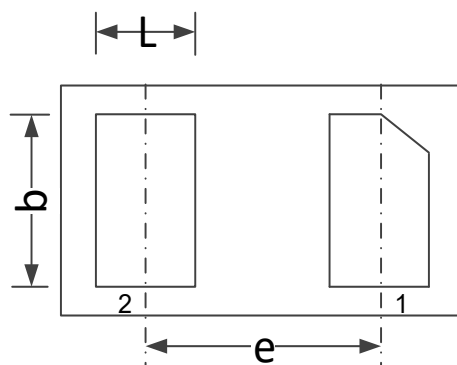
Figure6:IEC61000-4-2 -8 kV Contact ESD
Clamping Voltage



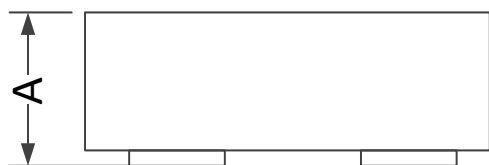
Outline Drawing – DFN1006-2L



TOP VIEW



BOTTOM VIEW



SIDE VIEW

COMMON DIMENSION (MM)			
PKG	DFN1006		
REF.	MIN.	NOM.	MAX.
A	0.40		0.55
b	0.45	0.50	0.55
D	0.95	1.00	1.05
e	0.65BSC		
E	0.55	0.60	0.65
L	0.20	0.25	0.30