

Features

- Protects one I/O or power line
- Completely Compatible with SOD923
- Low Clamping Voltage
- Working Voltage: 12V
- Low Leakage Current
- Response Time is Typically < 1 ns

IEC COMPATIBILITY (EN61000-4)

- IEC 61000-4-2 (ESD) $\pm 15\text{kV}$ (air), $\pm 8\text{kV}$ (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)

Mechanical Characteristics

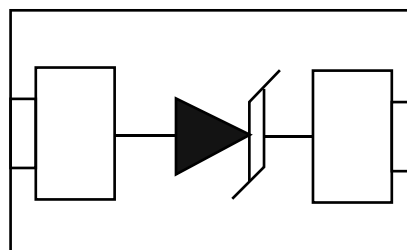
- DFN- 2L package (0402 size)
- Molding compound flammability rating:
UL 94V-0
- Marking: Marking Code
- Packaging: Tape and Reel per EIA481
- RoHS/WEEE Compliant

Applications

- Laptop Computers
- Cellular Phones
- Digital Cameras
- Personal Digital Assistants (PDAs)



Schematic & PIN Configuration

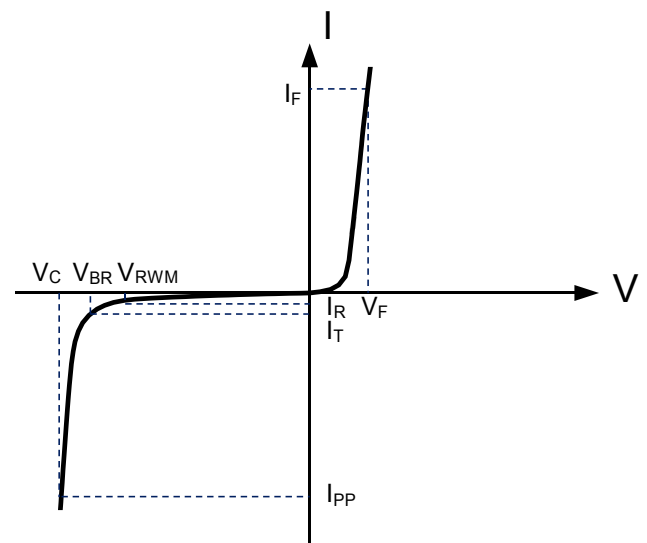


Unidirectional

Absolute Maximum Rating			
Rating	Symbol	Value	Units
Peak Pulse Power ($t_p=8/20\mu s$)	P_{PP}	100	Watts
Electrostatic discharge Voltage (See Note1 ,2)	V_{ESD}	8KV (contact)	Volts
		15KV (air)	
Operating Temperature	T_J	-55 to + 150	°C
Storage Temperature	T_{STG}	-55 to +150	°C

Electrical Parameters (T=25°C)

Symbol	Parameter
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_F	Forward Current
V_F	Forward Voltage @ I_F



Electrical Characteristics

BDFN2A121V						
Parameter	Symbol	Conditions	Minimum	Typical	Maximum	Units
Reverse Stand-Off Voltage	V_{RWM}				12	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	13.3			V
Reverse Leakage Current	I_R	$V_{RWM}=5V, T=25^\circ C$			0.5	μA
Peak Pulse Current	I_{PP}	$t_p=8/20\mu s$			5	A
Clamping Voltage	V_C	$I_{PP}=1A, t_p=8/20\mu s$			20	V
Clamping Voltage	V_C	$I_{PP}=5 A, t_p=8/20\mu s$			26	V
Junction Capacitance	C_j	$V_R=0V, f=1MHz$		50		pF

Note1: ESD Pulse Waveform according to IEC 61000-4-2, see Table1 and Figure1

Note2: ESD Clamping Voltage see Figure2 and3.

Note3: The clamping Voltage data is taken with a 100x attenuator.

Typical Characteristics

Table 1: IEC 61000-4-2 Discharge Parameters

Level	First Peak Current (A)	Peak Current at 30 ns (A)	Peak Current at 60 ns (A)	Test Voltage (Contact Discharge) (kV)	Test Voltage (Air Discharge) (kV)
1	7.5	4	2	2	2
2	15	8	4	4	4
3	22.5	12	6	6	8
4	30	16	8	8	15

Figure 1: IEC 61000-4-2 Waveform

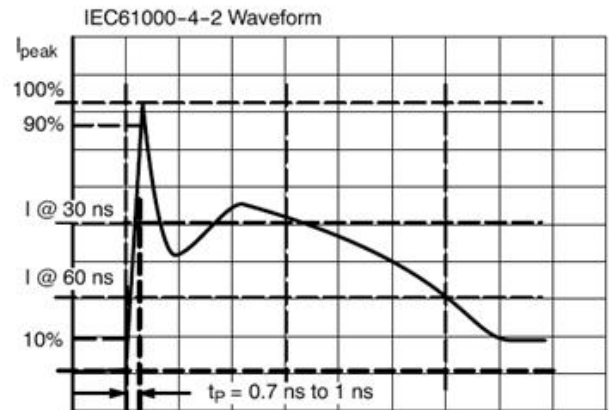


Figure 2 ESD Clamping Voltage Screenshot Positive 8 kV contact per IEC 61000-4-2

Tek Run: 2.50GS/s Sample

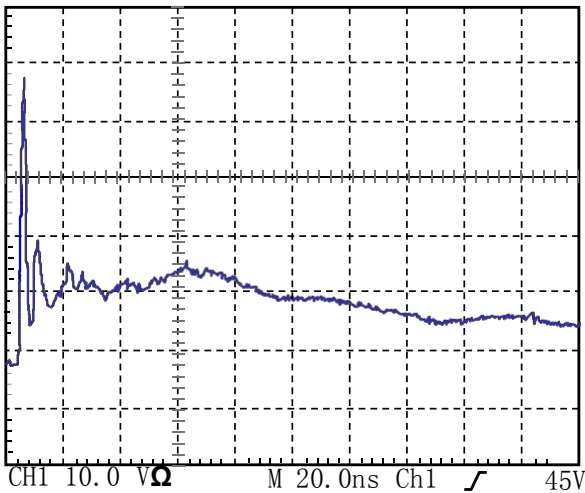
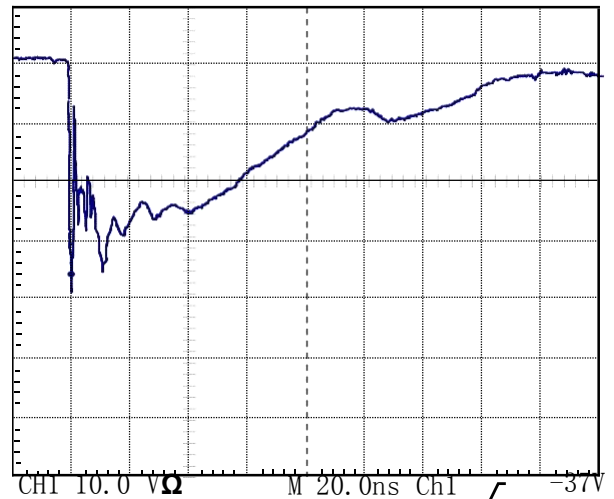
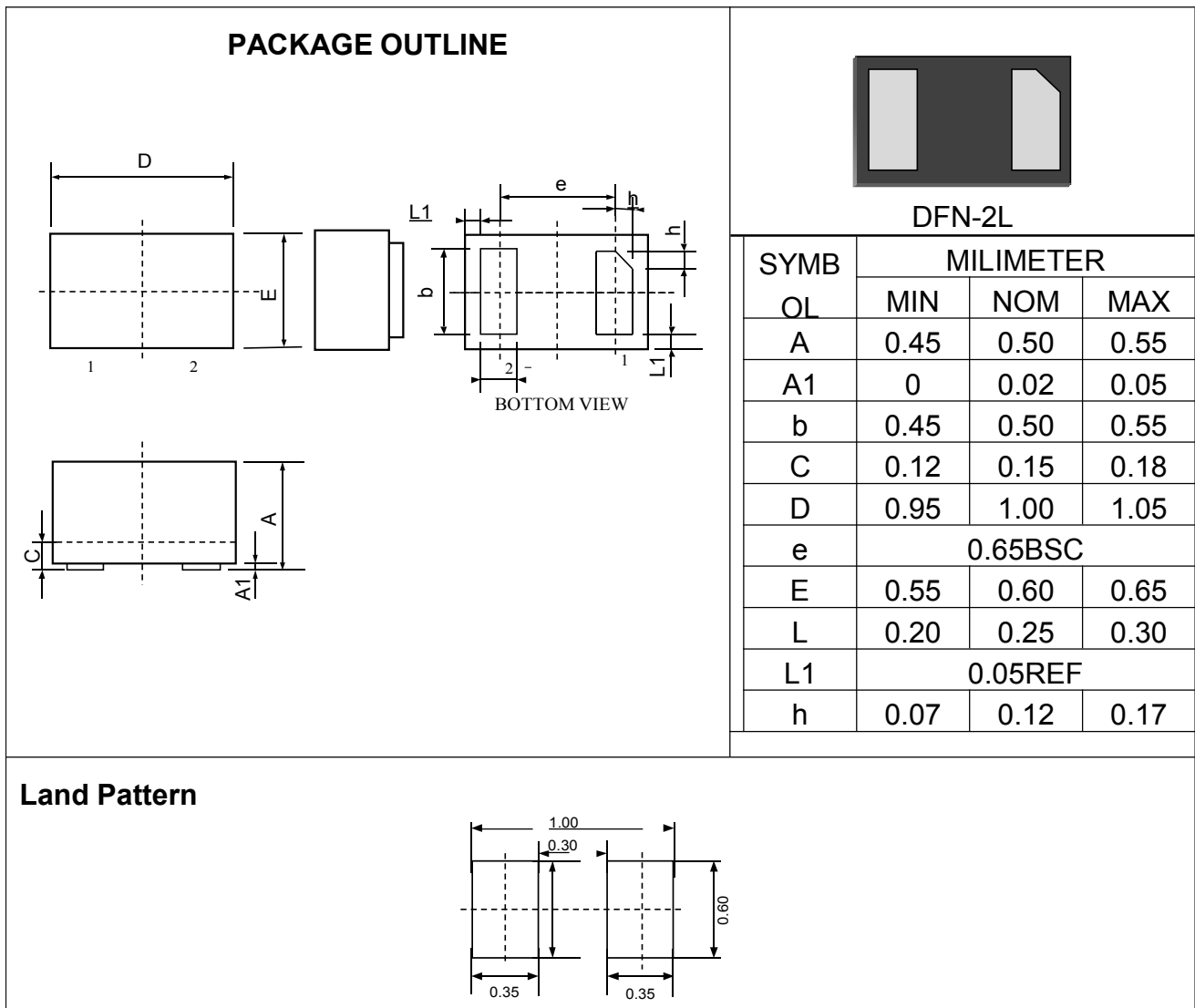


Figure 3 ESD Clamping Voltage Screenshot Negative 8 kV contact per IEC 61000-4-2

Tek Run: 2.50GS/s Sample



Outline Drawing – DFN-2L



Marking Codes

Part Number	Marking Code
BDFN2A121V	PA

Package Information

Qty: 10k/Reel