



DWESD2502CW ESD Protection Diode

Feature

- Bi-directional ESD protection of four lines
- 270Watts peak pulse power ($t_p = 8/20\mu s$)
- Working voltage: 2.5V
- Junction Capacitance: 0.8pF(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) 15A (8/20 μs)

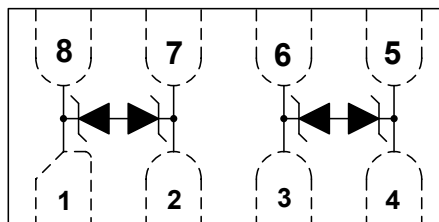
Application

- 10/100/1000M Ethernet Ports
- WAN/LAN Equipment
- Desktops, Servers and Notebooks
- Cellular Phones
- Switching Systems
- Audio/Video Inputs

Mechanical Data

- Package: DFN2010-8L
- Molding compound flammability rating: UL 94V-0
- RoHS/WEEE Compliant

Schematic & PIN Configuration



Ordering Information

Part Number	Package	Marking	Packing	Reel Size
DWESD2502CW	DFN2010-8L	2502CW	3000 Tape & Reel	7 inches



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

Parameter	Symbol	Value	Unit
Peak Pulse Power ($t_p=8/20\mu\text{s}$)	P_{PP}	270	W
Peak Pulse Current (8/20 μs)	I_{PP}	15	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)	$^{\circ}\text{C}$
Operating Temperature	T_{OPT}	-55 to + 150	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-55 to + 150	$^{\circ}\text{C}$

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

Symbol	Parameter	Test Condition	Min	Typ	Max	Units
V_{RWM}	Reverse Working Voltage				2.5	V
I_R	Reverse Leakage Current	$V_{RWM} = 2.5\text{V}$			100	nA
V_B	Reverse Breakdown Voltage	$I_R = 1\text{mA}$	3.5			V
V_{C1}	Clamping Voltage 1	$I_{PP} = 1\text{A}$, $t_p = 8/20\mu\text{s}$ Pin 1, 8 to Pin 2, 7 & Pin 3, 6 to Pin 4, 5			6.5	V
V_{C2}	Clamping Voltage 2	$I_{PP} = 10\text{A}$, $t_p = 8/20\mu\text{s}$ Pin 1, 8 to Pin 2, 7 & Pin 3, 6 to Pin 4, 5			12	V
V_{C3}	Clamping Voltage 3	$I_{PP} = 15\text{A}$, $t_p = 8/20\mu\text{s}$ Pin 1, 8 to Pin 2, 7 & Pin 3, 6 to Pin 4, 5			18	V
C_J	Junction Capacitance	$V_R = 0\text{V}$, $f = 1\text{MHz}$ Pin 1, 8 to Pin 2, 7 & Pin 3, 6 to Pin 4, 5		0.8		pF



Typical Characteristics

Fig 1 8/20 μ s Waveform per IEC61000-4-5

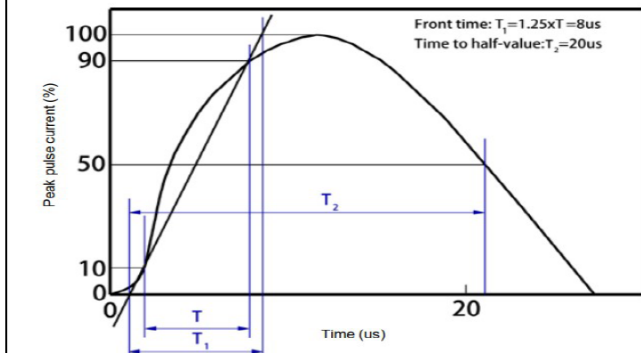


Fig 2 Contact Discharge Current Waveform per IEC 61000-4-2

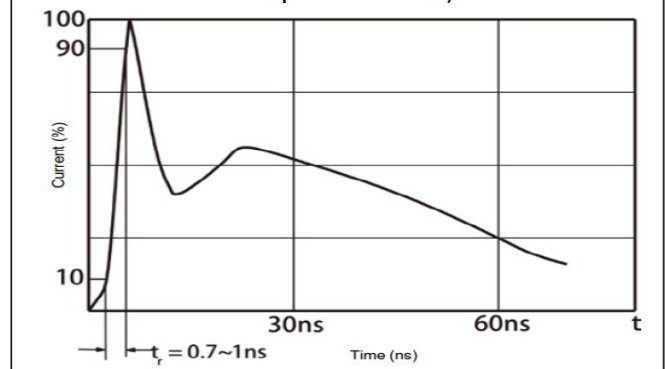


Fig 3 Voltage vs Capacitance

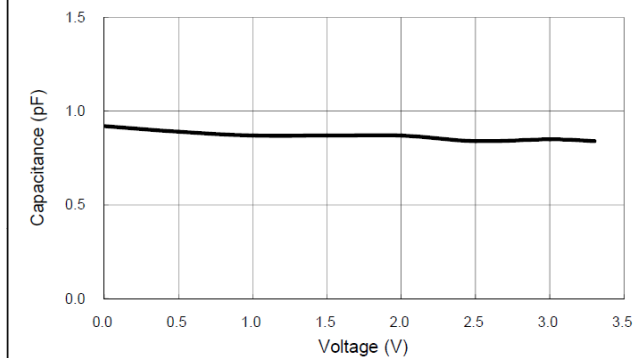
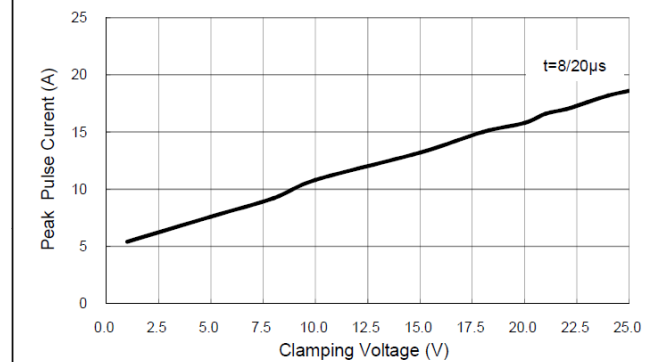
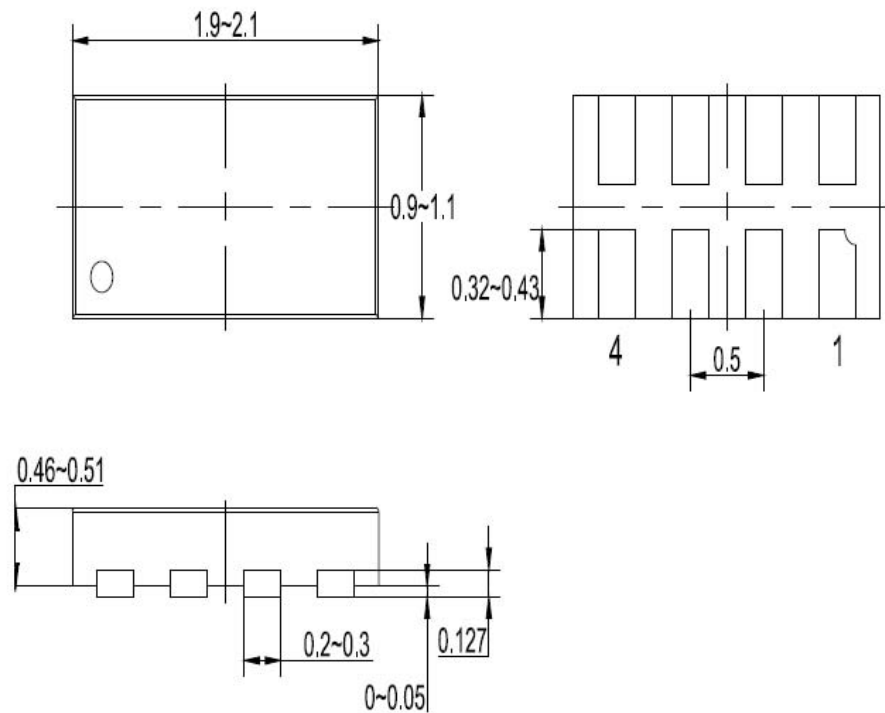


Fig 4 Clamping Voltage vs Peak Pulse Current





DFN2010-8L Outline Drawing



Recommended Soldering Footprint

