



DWU2512PT ESD Protection Diode

Feature

- Bi-directional ESD protection of two lines
- 100Watts peak pulse power ($t_p = 8/20\mu s$)
- Ultra low operating voltage: 2.5V
- Junction capacitance: 1.3pF(Typ)
- Ultra low leakage current
- Ultra low clamping voltage
- IEC 61000-4-2 $\pm 30kV$ contact $\pm 30kV$ air
- IEC 61000-4-5 (Lightning) 10A (8/20 μs)

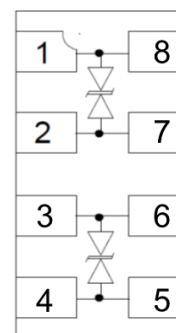
Application

- LAN/WAN Equipment
- 10/100/1000 Ethernet
- RJ-45 connectors
- Industrial Controls
- Security Cameras
- Notebooks & Desktop Computers

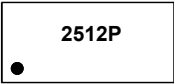
Mechanical Data

- 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
DWU2512PT	DFN2010-8L		3000 Tape & Reel	7 inches



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

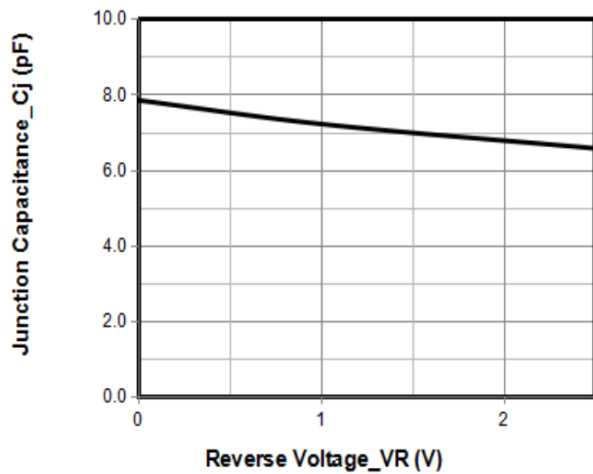
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	Ppk	100	W
Peak Pulse Current (8/20 μs)	I _{PP}	10	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V _{ESD}	± 30 ± 30	kV
Operating Temperature Range	T _J	-40 to +85	$^{\circ}\text{C}$
Storage Temperature Range	T _{stg}	-55 to +150	$^{\circ}\text{C}$

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

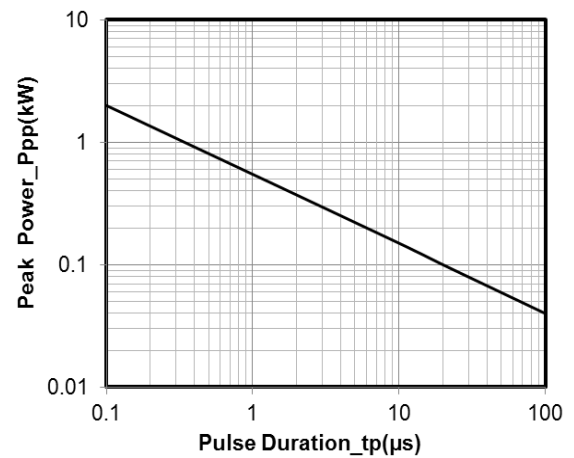
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V _{RWM}			2.5	V	
Punch-Through Voltage	V _{PT}	2.7			V	I _T = 2 μA
Snap-Back Voltage	V _{SB}	2.8			V	I _T = 50mA
Reverse Leakage Current	I _R			0.2	μA	V _{RWM} = 2.5V
Clamping Voltage	V _C			5	V	I _{PP} = 1A (8 x 20 μs pulse)
Clamping Voltage	V _C			10	V	I _{PP} = 10A (8 x 20 μs pulse)
Junction Capacitance	C _J			8	pF	Pins 1, 8 to 2, 7 and pins 3, 6 to 4, 5 V _R = 2.5V, f = 1MHz
Variation in Capacitance with Reverse Bias*			1.3		pF	Pins 1, 8 to 2, 7 and pins 3, 6 to 4, 5 V _R = 0 to 2.5V f = 1MHz



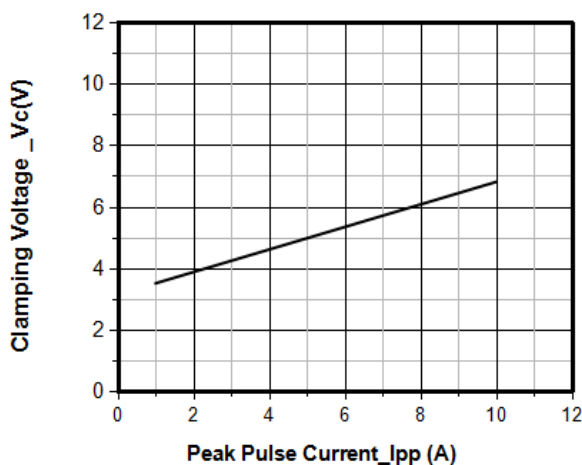
Typical Characteristics



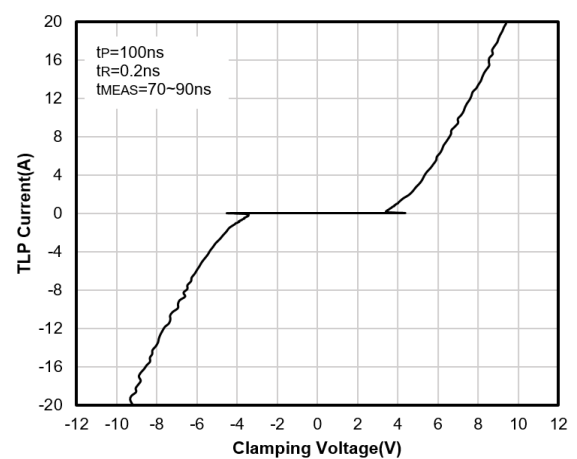
Junction Capacitance vs. Reverse Voltage



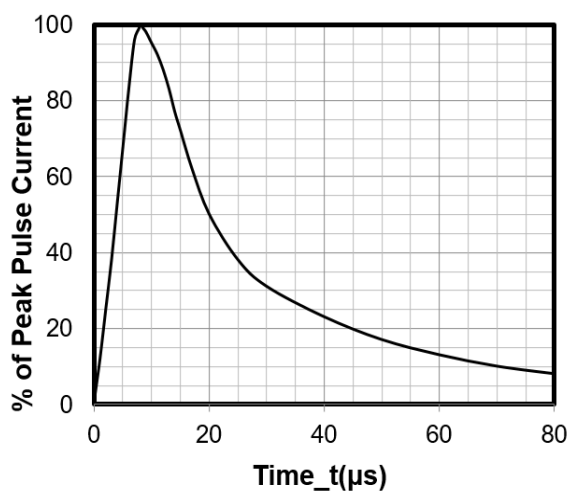
Peak Pulse Power vs. Pulse Time



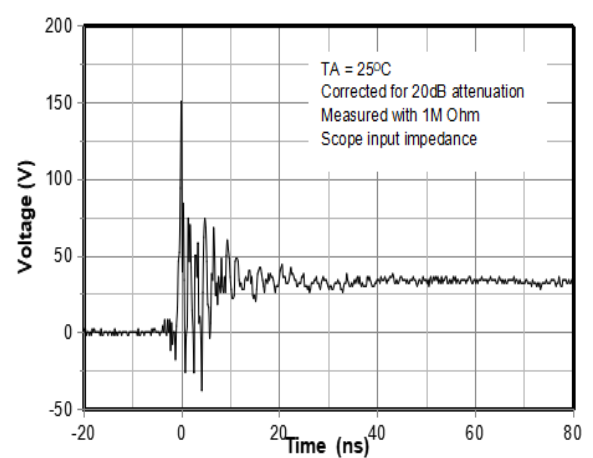
Clamping Voltage vs. Peak Pulse Current



TLP Curve



8 X 20 μ s Pulse Waveform

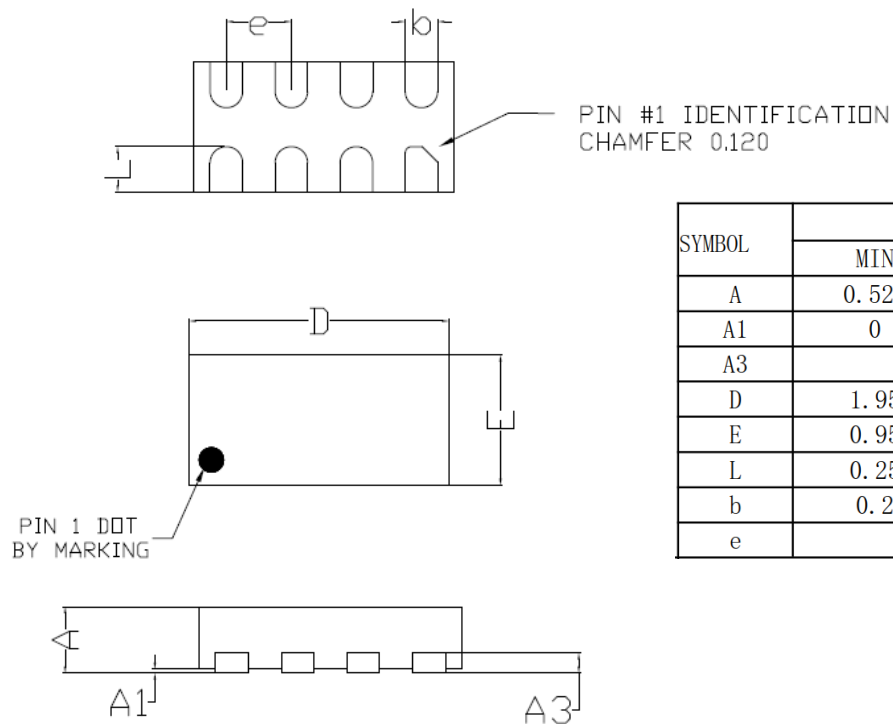


ESD Clamping Voltage

8 kV Contact per IEC61000-4-2

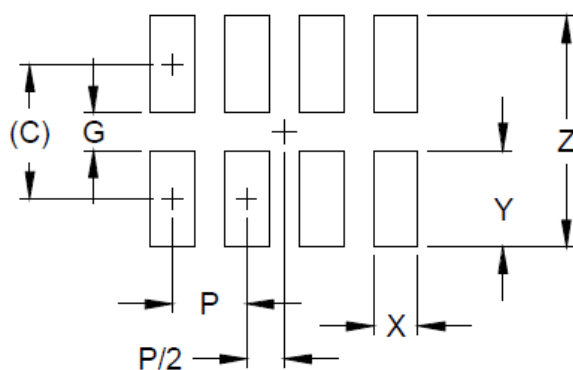


DFN2010-8L Outline Drawing



SYMBOL	MILLIMETER(mm)		
	MIN	NOM	MAX
A	0.527	0.55	0.57
A1	0	-	0.05
A3	0.125REF		
D	1.95	2	2.05
E	0.95	1	1.05
L	0.25	0.35	0.45
b	0.2	0.25	0.3
e	0.50Bsc		

Suggested Land Pattern



DIMENSIONS	
DIM	MILLIMETERS
C	(0.90)
G	0.25
P	0.50
X	0.30
Y	0.65
Z	1.55