

STANDARD CAPACITANCE TVS COMPONENT

APPLICATIONS

- ✓ Ethernet - 10/100/1000 Base T
- ✓ Cellular Phones
- ✓ Personal Digital Assistant (PDA)
- ✓ USB Interfaces

IEC COMPATIBILITY (EN61000-4)

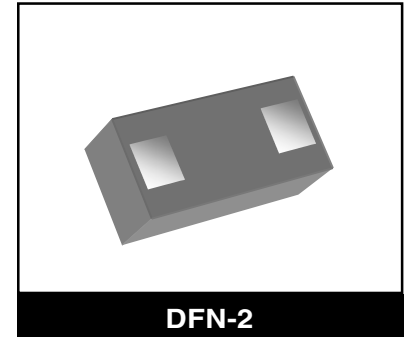
- ✓ 61000-4-2 (ESD): Air - 15kV, Contact - 8kV
- ✓ 61000-4-4 (EFT): 40A - 5/50ns

FEATURES

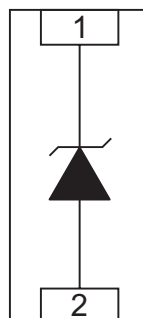
- ✓ 150 Watts Peak Pulse Power per Line (tp = 8/20μs)
- ✓ ESD Protection > 25 kilovolts
- ✓ Cable Discharge Event (CDE) Protection
- ✓ Unidirectional Configuration
- ✓ Provides One Line of Protection
- ✓ RoHS Compliant

MECHANICAL CHARACTERISTICS

- ✓ Molded DFN-2 Package
- ✓ Weight 0.8 milligrams (Approximate)
- ✓ Available in Lead-Free Pure-Tin Plating (Annealed)
- ✓ Solder Reflow Temperature:
Pure-Tin - Sn, 100: 260-270°C
- ✓ Consult Factory for Leaded Device Availability
- ✓ Flammability Rating UL 94V-0
- ✓ 8mm Tape and Reel Per EIA Standard 481
- ✓ Marking: Marking Code & Polarity Band



PIN CONFIGURATION



PLW0501D

DEVICE CHARACTERISTICS

MAXIMUM RATINGS @ 25°C Unless Otherwise Specified			
PARAMETER	SYMBOL	VALUE	UNITS
Operating Temperature	T_A	-55 to 150	°C
Storage Temperature	T_{STG}	-55 to 150	°C
Peak Pulse Power ($t_p = 8/20\mu s$) - See Figure 1	P_{PP}	150	Watts
Peak Pulse Current ($t_p = 8/20\mu s$)	I_{PP}	10	A
Soldering Temperature for 10 seconds	T_L	265	°C
Typical Forward Voltage @10mA	V_F	0.8	V

ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified						
PART NUMBER	DEVICE MARKING CODE	RATED STAND-OFF VOLTAGE	MINIMUM BREAKDOWN VOLTAGE	MAXIMUM CLAMPING VOLTAGE (See Fig. 2)	MAXIMUM LEAKAGE CURRENT	TYPICAL CAPACITANCE
		V_{WM} VOLTS	@ 1mA $V_{(BR)}$ VOLTS	$I_p @ 1A$ V_C VOLTS	@ V_{WM} I_b μA	@ 0V, 1 MHz C pF
PLW0501D	4	5.0	6.0	9.8	1.0	70

Note 1: Measured between I/O pins and ground.

FIGURE 1
PEAK PULSE POWER VS PULSE TIME

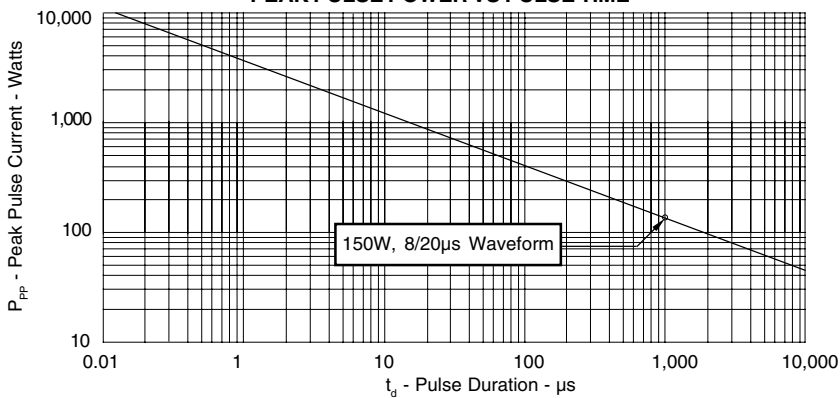
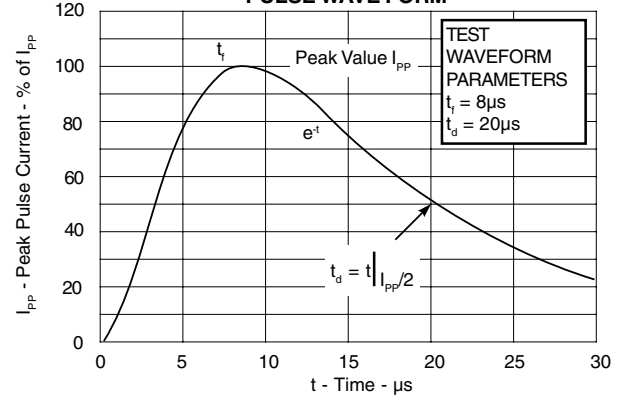


FIGURE 2
PULSE WAVE FORM



PLW0501D

DFN-2 PACKAGE OUTLINE & DIMENSIONS

PACKAGE OUTLINE			PACKAGE DIMENSIONS			
	INCHES			MILLIMETERS		
	DIM	MIN	NOR	MAX	MIN	NOR
A	0.023	0.024	0.025	0.58	0.61	0.64
B	0.038	0.040	0.042	0.97	1.02	1.07
C	0.018	0.020	0.022	0.46	0.51	0.56
D	0.010	0.012	0.014	0.25	0.30	0.36
E	0.012	0.014	0.016	0.30	0.36	0.41
F	0.010	0.012	0.014	0.25	0.30	0.36
H	0.011	0.012	0.013	0.28	0.30	0.33

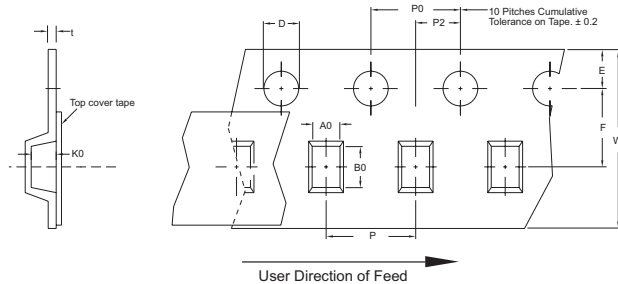
MOUNTING PAD			PAD DIMENSIONS	
DIM	MILLIMETERS	INCHES		
A	0.762 ± 0.025	0.030 ± 0.001		
B	0.356 ± 0.025	0.014 ± 0.001		
C	0.381 ± 0.025	0.015 ± 0.001		
E	1.473 ± 0.050	0.058 ± 0.002		
F	0.559 ± 0.025	0.022 ± 0.001		

Tape & Reel Specifications (Dimensions in millimeters)												
Reel Dia.	Tape Width	A0	B0	K0	D	E	F	W	P0	P2	P	tmax
178mm (7")/330mm(13")	8mm	0.80±0.10	1.20±0.10	0.70 ± 0.10	1.50 ± 0.10	1.75 ± 0.10	3.50 ± 0.05	8.00 ± 0.30	4.00 ± 0.10	2.00 ± 0.05	2.00 ± 0.10	0.25

TAPE & REEL ORIENTATION		
<p>NOTE</p> <p>1. Top view of tape. Solder PADS face down in tape package.</p> <p style="text-align: right;">Outline & Dimensions: Rev 1 - 9/05, 0659</p>		

TAPE & REEL ORDERING NOMENCLATURE

- Surface mount product is taped and reeled in accordance with EIA-481.
- Suffix-T75 = 7 Inch Reel - 5,000 pieces per 8mm tape, i.e., *PLW0501D-T75*.
- Suffix-LF = Lead-Free, Pure-Tin Plating, i.e., *PLW0501D-LF-T75*.



COPYRIGHT © ProTek Devices 2007

SPECIFICATIONS: ProTek reserves the right to change the electrical and or mechanical characteristics described herein without notice (except JEDEC).

DESIGN CHANGES: ProTek reserves the right to discontinue product lines without notice, and that the final judgement concerning selection and specifications is the buyer's and that in furnishing engineering and technical assistance, ProTek assumes no responsibility with respect to the selection or specifications of such products.

ProTek Devices

2929 South Fair Lane, Tempe, AZ 85282
 Tel: 602-431-8101 Fax: 602-431-2288
 E-Mail: sales@protekdevices.com
 Web Site: www.protekdevices.com