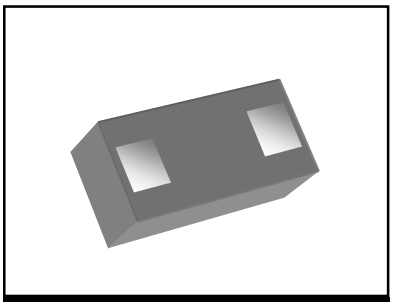
PROTEK DEVICES

PLW0501D

STANDARD CAPACITANCE TVS COMPONENT

APPLICATIONS

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



DFN-2

IEC COMPATIBILITY (EN61000-4)

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

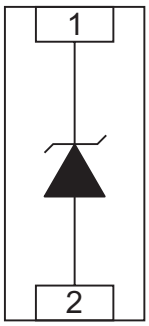
FEATURES

- ✔ 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



DEVICE CHARACTERISTICS

MAXIMUM RATINGS @ 25°C Unless Otherwise Specified			
PARAMETER	**SYMBOL**	**VALUE**	**UNITS**
Operating Temperature	T_A	-55 to 150	℃
Storage Temperature	T_{STG}	-55 to 150	℃
Peak Pulse Power (tp = 8/20μs) - See Figure 1	P_{PP}	150	Watts
Peak Pulse Current (tp = 8/20μ)	I_{PP}	10	A
Soldering Temperature for 10 seconds	T_L	265	℃
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 V_{WM} VOLTS	MINIMUM BREAKDOWN VOLTAGE @ 1mA $V_{(BR)}$ VOLTS	MAXIMUM CLAMPING VOLTAGE (See Fig. 2) I_P @ 1A V_C VOLTS	MAXIMUM LEAKAGE CURRENT @V_{WM} I_D μA	TYPICAL CAPACITANCE @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

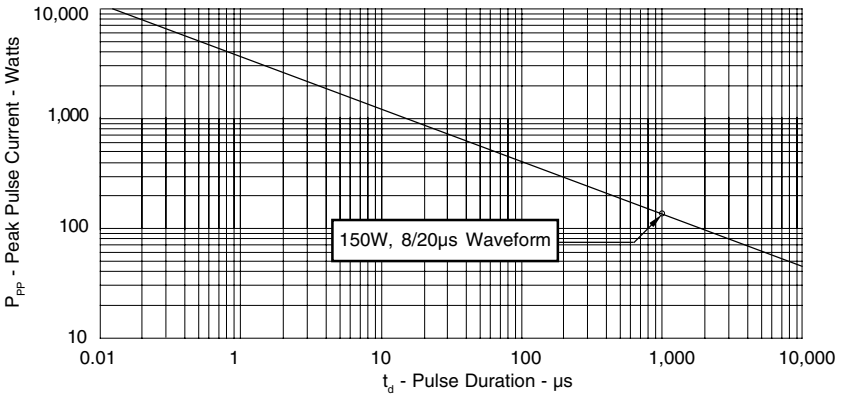
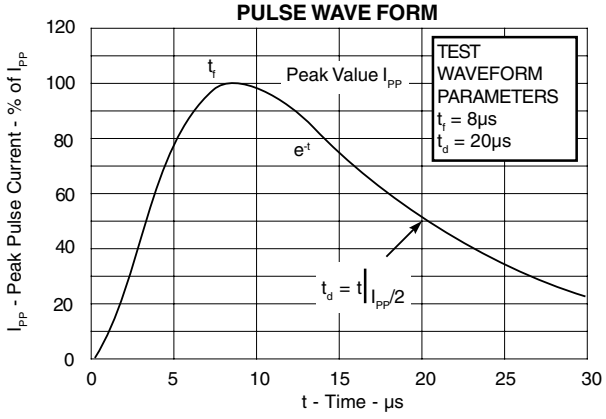
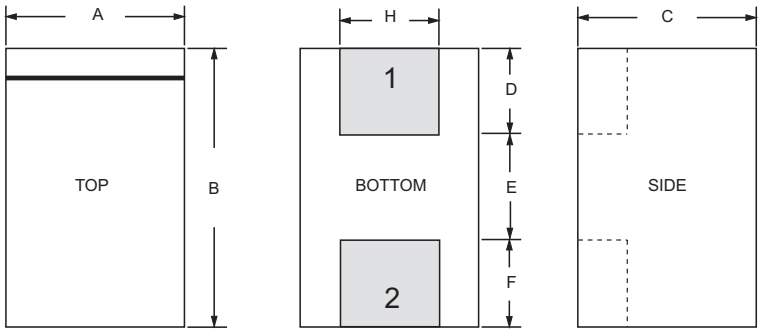


FIGURE 2
PULSE WAVE FORM



DFN-2 PACKAGE OUTLINE & DIMENSIONS

PACKAGE OUTLINE



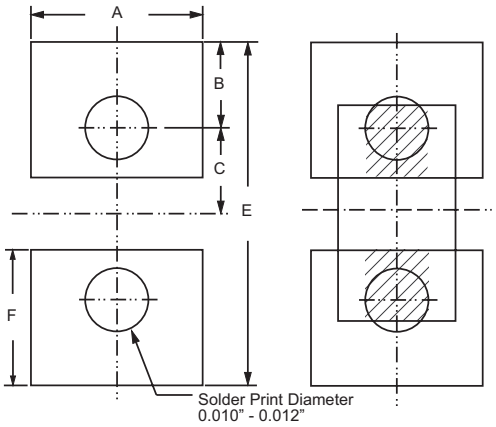
PACKAGE DIMENSIONS

DIM	INCHES			MILLIMETERS		
	MIN	NOR	MAX	MIN	NOR	MAX
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

NOTES

1. Controlling dimensions in inches.
2. Decimal tolerances for mounting pad : ± 0.003" (±0.08mm).
3. Maximum size: 0.052" (1.321mm) by 0.036" (0.914mm).

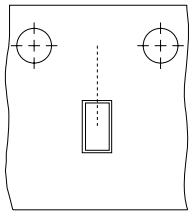
MOUNTING PAD



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 ORIENTATION



NOTE

1. Top view of tape. Solder PADS face down in tape package.

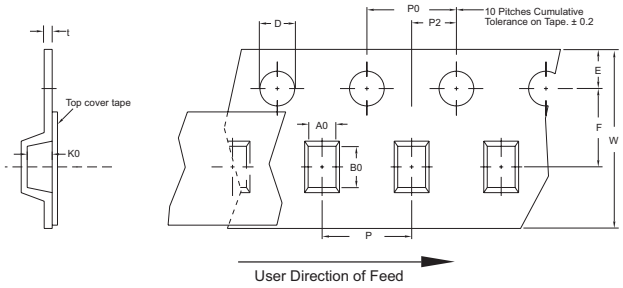
Outline & Dimensions: Rev 1 - 9/05, 0659

TAPE & REEL ORDERING NOMENCLATURE

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

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



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