

**200 WATT TVS COMPONENT****DESCRIPTION**

The PLW1201H is a transient voltage suppressor array designed to protect applications such as wireless telecommunication devices, PCMCIA cards and portable electronics. This device is available in a unidirectional configuration with a working voltage of 12.0V and a minimum breakdown voltage of 13.3V. The PLW1201H is rated at 200W peak pulse power (8/20 $\mu$ s), which is sufficient protection for tertiary type lightning threats at key interface locations.

The PLW1201H is ideally suited to protect data I/O ports against ESD and EFT. This device meets the requirements of IEC 61000-2 and IEC 61000-4-4. Packaged in a SC-79 configuration, this device can be substituted for similar 0803 outlines.

**FEATURES**

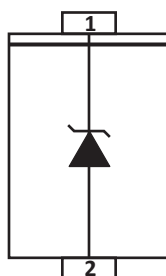
- Compatible with IEC 61000-4-2 (ESD): Air - 15kV, Contact - 8kV
- Compatible with IEC 61000-4-4 (EFT): 40A, 5/50ns
- 200 Watts Peak Pulse Power per Line (tp = 8/20 $\mu$ s)
- Cable Discharge Event (CDE) Protection
- Replacement for MLV (0803)
- One Unidirectional Line of Protection
- Unidirectional Configuration
- RoHS Compliant
- REACH Compliant

**APPLICATIONS**

- Ethernet - 10/100/1000 Base T
- SMART Phones
- Portable Electronics

**MECHANICAL CHARACTERISTICS**

- Molded JEDEC SC-79 Package
- Approximate Weight: 2 milligrams
- Lead-Free Pure-Tin Plating (Annealed)
- Solder Reflow Temperature:  
Pure-Tin - Sn, 100: 260-270°C
- 8mm Tape and Reel Per EIA Standard 481
- Flammability Rating UL 94V-0

**PIN CONFIGURATION**

## TYPICAL DEVICE CHARACTERISTICS

### MAXIMUM RATINGS @ 25°C Unless Otherwise Specified

| PARAMETER                                     | SYMBOL           | VALUE      | UNITS |
|-----------------------------------------------|------------------|------------|-------|
| Peak Pulse Power (tp = 8/20μs) - See Figure 1 | P <sub>PP</sub>  | 200        | Watts |
| Peak Pulse Current (tp = 8/20μs)              | I <sub>PP</sub>  | 10         | Amps  |
| Operating Temperature                         | T <sub>A</sub>   | -55 to 150 | °C    |
| Storage Temperature                           | T <sub>STG</sub> | -55 to 150 | °C    |
| Soldering Temperature for 10 seconds          | T <sub>L</sub>   | 265        | °C    |

### ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified

| PART NUMBER | DEVICE MARKING | RATED STAND-OFF VOLTAGE<br><br>V <sub>WM</sub><br>VOLTS | MINIMUM BREAKDOWN VOLTAGE<br><br>@ 1mA<br>V <sub>(BR)</sub><br>VOLTS | TYPICAL FORWARD VOLTAGE<br><br>@ 10mA<br>V <sub>F</sub><br>VOLTS | MAXIMUM CLAMPING VOLTAGE (Fig. 2)<br><br>@ I <sub>P</sub> = 1A<br>V <sub>C</sub><br>VOLTS | MAXIMUM CLAMPING VOLTAGE (Fig. 2)<br><br>@ I <sub>P</sub> = 5A<br>V <sub>C</sub><br>VOLTS | MAXIMUM LEAKAGE CURRENT<br><br>@V <sub>WM</sub><br>I <sub>D</sub><br>μA | TYPICAL CAPACITANCE<br><br>@0V, 1MHz<br>C<br>pF |
|-------------|----------------|---------------------------------------------------------|----------------------------------------------------------------------|------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|-------------------------------------------------|
| PLW1201H    | 12             | 12.0                                                    | 13.3                                                                 | 0.8                                                              | 19.0                                                                                      | 24.0                                                                                      | 1                                                                       | 50                                              |

## TYPICAL DEVICE CHARACTERISTICS

FIGURE 1  
PEAK PULSE POWER VS PULSE TIME

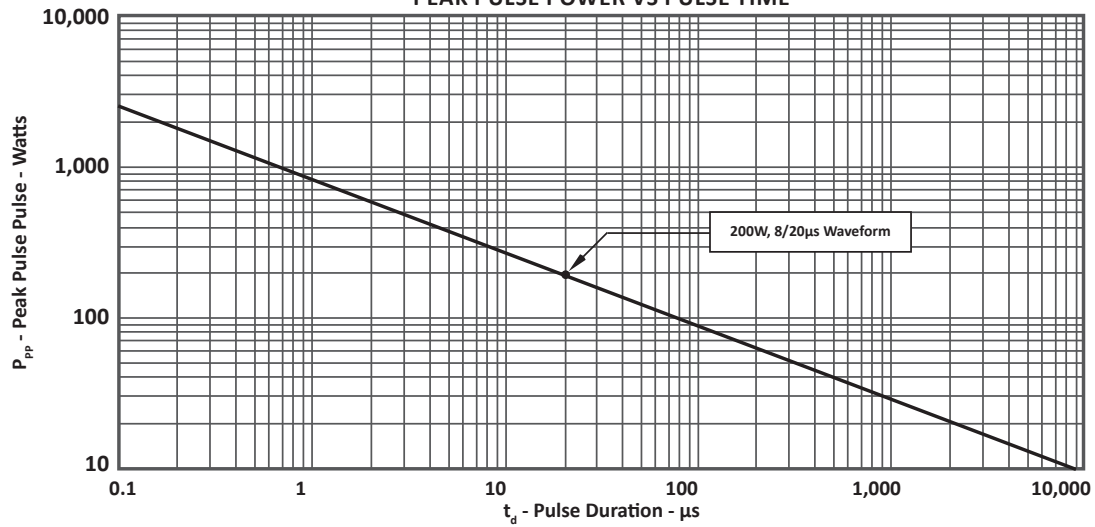
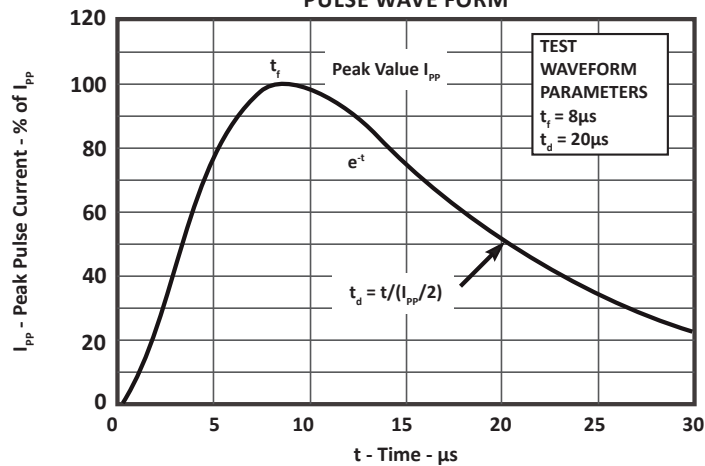


FIGURE 2  
PULSE WAVE FORM

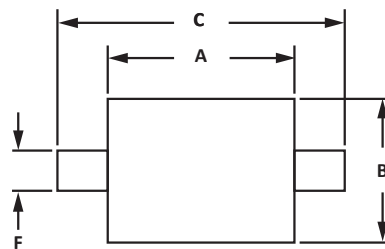
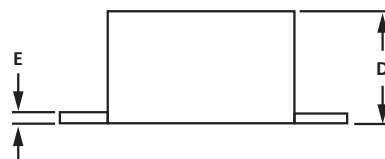


**SC-79 PACKAGE INFORMATION**
**OUTLINE DIMENSIONS**

| DIM | MILLIMETERS |      | INCHES    |       |
|-----|-------------|------|-----------|-------|
|     | MIN         | MAX  | MIN       | MAX   |
| A   | 1.10        | 1.30 | 0.043     | 0.049 |
| B   | 0.70        | 0.90 | 0.028     | 0.035 |
| C   | 1.50        | 1.70 | 0.059     | 0.066 |
| D   | 0.50        | 0.70 | 0.020     | 0.028 |
| E   | 0.08        | 0.20 | 0.003     | 0.008 |
| F   | 0.30 BSE    |      | 0.012 BSE |       |

**NOTES**

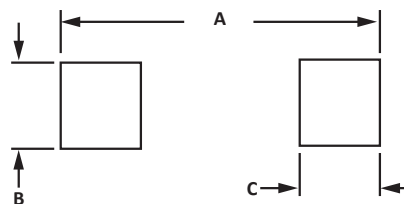
1. Dimensioning and tolerances per ANSI Y14.M, 1985.
2. Controlling dimension: millimeters.
3. Dimensions are exclusive of mold flash and metal burrs.


**PAD LAYOUT DIMENSIONS**

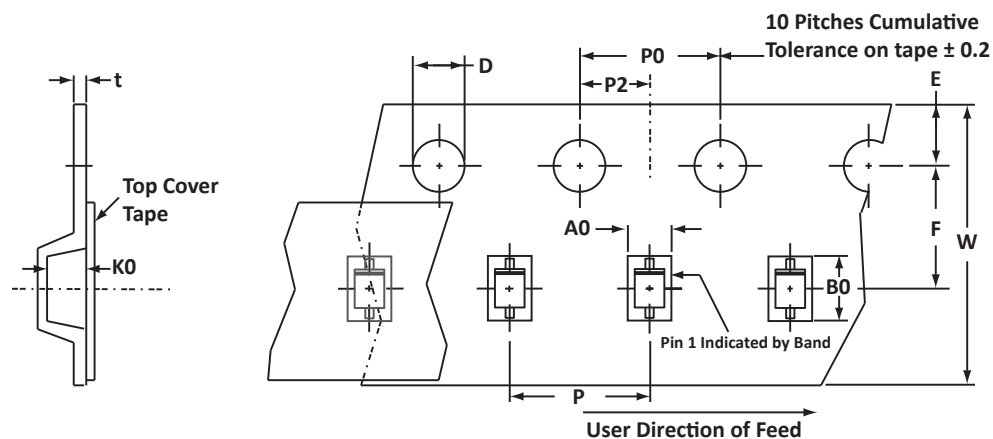
| DIM | MILLIMETERS |      | INCHES |       |
|-----|-------------|------|--------|-------|
|     | MIN         | MAX  | MIN    | MAX   |
| A   | 1.85        | 2.03 | 0.070  | 0.080 |
| B   | 0.38        | 0.64 | 0.015  | 0.025 |
| C   | 0.25        | 0.51 | 0.010  | 0.020 |

**NOTES**

1. Controlling dimension: millimeters



## TAPE AND REEL



## SPECIFICATIONS

| REEL DIA.  | TAPE WIDTH | A0              | B0              | K0               | D               | E               | F               | W               | P0              | P2              | P               | tmax |
|------------|------------|-----------------|-----------------|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------|
| 178mm (7") | 8mm        | $1.00 \pm 0.10$ | $1.95 \pm 0.05$ | $0.075 \pm 0.05$ | $1.50 \pm 0.10$ | $1.75 \pm 0.10$ | $3.50 \pm 0.05$ | $8.00 \pm 0.30$ | $4.00 \pm 0.10$ | $2.00 \pm 0.05$ | $4.00 \pm 0.10$ | 0.25 |

## NOTES

1. Dimensions are in millimeters.
2. Surface mount product is taped and reeled in accordance with EIA-481.
3. Empty pocket between sprocket holes.
4. Suffix - T74 = 7" Reel - 4,000 pieces per 8mm tape.
5. Marking on Part - marking code (see page 2), polarity band and date code.

Package outline, pad layout and tape specifications per document number 06037.R3 8/10.

## ORDERING INFORMATION

| BASE PART NUMBER | LEADFREE SUFFIX | TAPE SUFFIX | QTY/REEL | REEL SIZE | TUBE QTY |
|------------------|-----------------|-------------|----------|-----------|----------|
| PLW1201H         | -n/a            | -T74        | 4,000    | 7"        | n/a      |

This device is only available in a Lead-Free configuration.

## COMPANY INFORMATION

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### COMPANY PROFILE

In business more than 20 years, ProTek Devices™ is a privately-held company located in Tempe, Arizona, that offers a product line of transient voltage suppressors (TVS); avalanche breakdown diodes; steering diode TVS arrays and other surge suppressor component products. These TVS devices protect electronic systems from the effects of lightning, electrostatic discharge (ESD), nuclear electromagnetic pulses (NEMP), inductive switching and EMI / RFI. ProTek Devices also offers high performance interface and linear products that include analog switches; multiplexers; LED drivers; audio control ICs; RF and related high frequency products. The analog devices work in a host of consumer; industrial; automotive and other applications.

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