

**POWER BUS VOLTAGE SUPPRESSOR****APPLICATIONS**

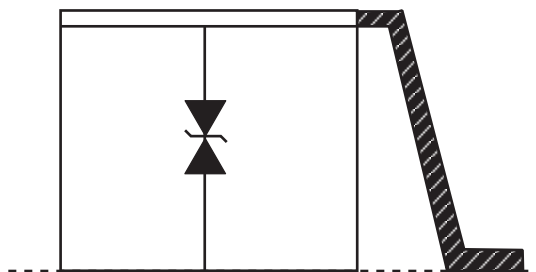
- Power Protection

**FEATURES**

- 2250 kilowatts Peak Pulse Power per Line ( $t_p = 8/20\mu s$ )
- 78 Volts Bidirectional
- 15kA ( $8/20\mu s$ )
- RoHS Complaint (Exemption #7A - High Power Device)

**MECHANICAL CHARACTERISTICS**

- Lead-Free Silver Plating
- 32mm Tape and Reel Per EIA Standard 481
- Approximate Weight: 9.8 grams
- Flammability Rating UL 94V-0
- Co-planarity < 0.10mm

**CIRCUIT DIAGRAM**

## TYPICAL DEVICE CHARACTERISTICS

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

| PARAMETER                      | SYMBOL              | VALUE       | UNITS     |
|--------------------------------|---------------------|-------------|-----------|
| Peak Pulse Power (tp = 8/20μs) | P <sub>PP</sub>     | 2250        | kilowatts |
| Storage Temperature            | T <sub>STG</sub>    | -55 to +150 | °C        |
| Operating Temperature          | T <sub>L</sub>      | -40 to +125 | °C        |
| Peak Pulse Current (tp=8/20μs) | I <sub>PP MAX</sub> | 15          | kA        |

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

| PART NUMBER | MARKING CODE | RATED STAND-OFF VOLTAGE<br><br>V <sub>WM</sub><br>VOLTS | MINIMUM BREAKDOWN VOLTAGE<br><br>@5mA<br>V <sub>(BR)</sub><br>VOLTS | MAXIMUM CLAMPING VOLTAGE (Fig. 2)<br><br>@ I <sub>PP</sub><br>V <sub>C</sub><br>VOLTS | MAXIMUM LEAKAGE CURRENT<br><br>@V <sub>WM</sub><br>I <sub>D</sub><br>μA | PEAK PULSE CURRENT (Fig. 2)<br><br>I <sub>PPM</sub><br>kAMPS |
|-------------|--------------|---------------------------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------|--------------------------------------------------------------|
| 2700SM78CAN | 78CA         | 78                                                      | 86                                                                  | 150                                                                                   | 10                                                                      | 15                                                           |

## TYPICAL DEVICE CHARACTERISTICS

FIGURE 1  
PEAK PULSE POWER VS PULSE TIME

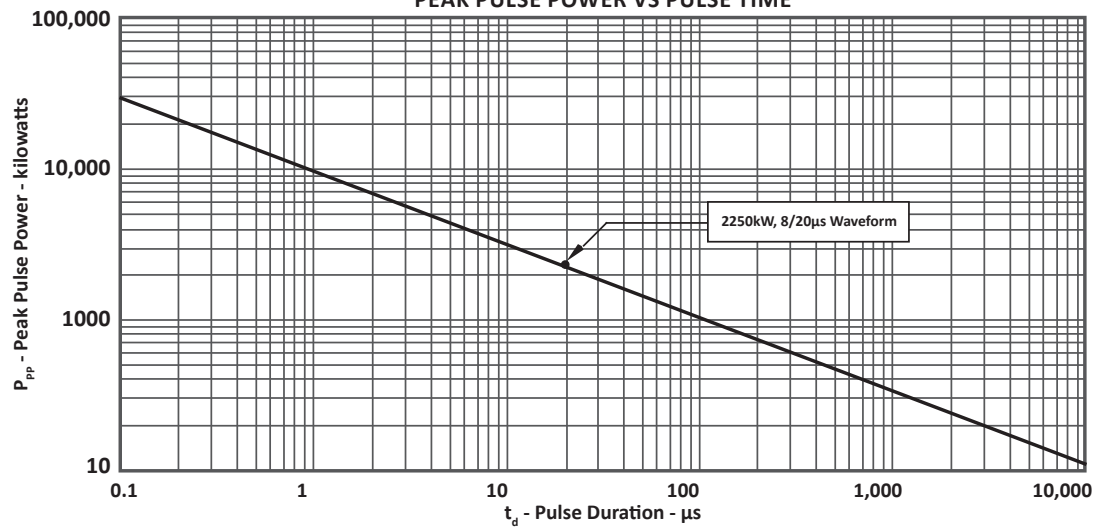


FIGURE 2  
PULSE WAVE FORM

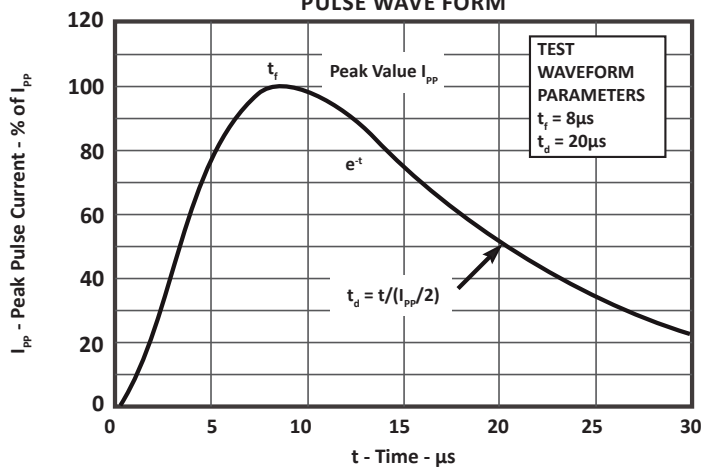
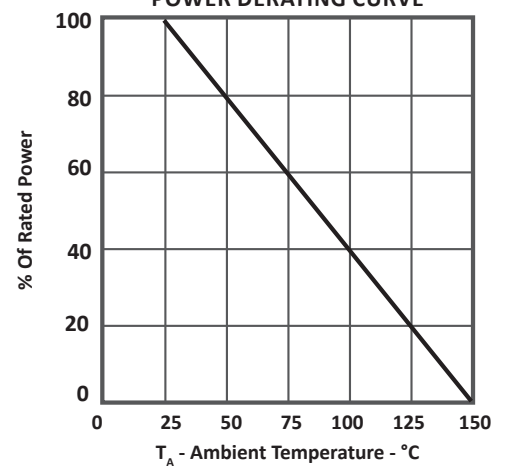


FIGURE 3  
POWER DERATING CURVE

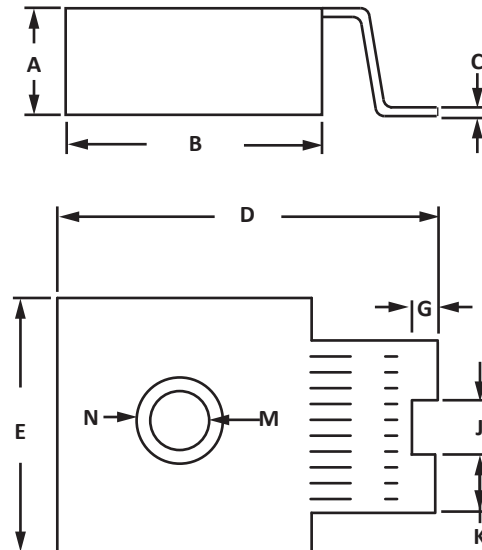


**PACKAGE INFORMATION**
**OUTLINE DIMENSIONS**

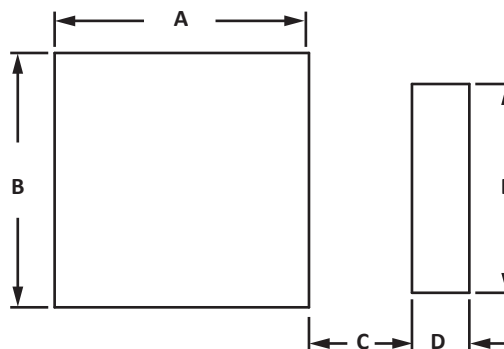
| DIM | MILLIMETERS |       | INCHES |       |
|-----|-------------|-------|--------|-------|
|     | MIN         | MAX   | MIN    | MAX   |
| A   | 7.80        | 8.20  | 0.307  | 0.323 |
| B   | 12.75       | 13.25 | 0.502  | 0.522 |
| C   | 0.48        | 0.52  | 0.019  | 0.021 |
| D   | 18.75       | 19.50 | 0.738  | 0.768 |
| E   | 12.75       | 13.25 | 0.502  | 0.522 |
| G   | 1.23        | 1.31  | 0.048  | 0.052 |
| J   | 2.75        | 2.85  | 0.108  | 0.112 |
| K   | 3.90        | 3.98  | 0.154  | 0.156 |
| M   | 1.48        | 1.56  | 0.058  | 0.062 |
| N   | 2.49        | 2.59  | 0.098  | 0.102 |

**NOTES**

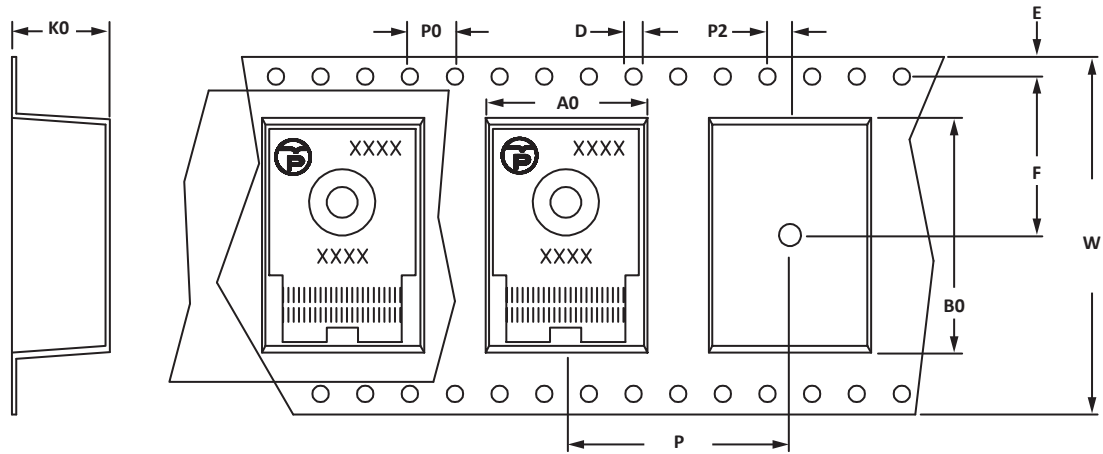
- Controlling dimensions in millimeters.


**PAD LAYOUT**

| DIM | MILLIMETERS |       | INCHES |       |
|-----|-------------|-------|--------|-------|
|     | MIN         | MAX   | MIN    | MAX   |
| A   | 13.45       | 13.72 | 0.530  | 0.540 |
| B   | 13.45       | 13.72 | 0.530  | 0.540 |
| C   | 2.44        | 2.59  | 0.096  | 0.102 |
| D   | 3.50        | 3.62  | 0.138  | 0.142 |
| E   | 11.16       | 11.43 | 0.440  | 0.450 |



## TAPE AND REEL



## SPECIFICATIONS

| REEL DIA.   | TAPE WIDTH | A0           | B0           | K0          | D           | E           | F            | W            | P0          | P2          | P            |
|-------------|------------|--------------|--------------|-------------|-------------|-------------|--------------|--------------|-------------|-------------|--------------|
| 330mm (13") | 32mm       | 13.89 ± 0.01 | 19.81 ± 0.01 | 8.38 ± 0.01 | 1.50 ± 0.01 | 1.75 ± 0.01 | 14.20 ± 0.01 | 32.00 ± 0.01 | 4.00 ± 0.01 | 2.00 ± 0.01 | 20.00 ± 0.01 |

## NOTES

1. Dimensions are in millimeters.
2. Surface mount product is taped and reeled in accordance with EIA-481.
3. Suffix - T13 = 13" Reel - 250 pieces per 32mm tape.
4. Marking on Part - marking code, logo and date code.

## ORDERING INFORMATION

| BASE PART NUMBER | LEADFREE SUFFIX | TAPE SUFFIX | QTY/REEL | REEL SIZE | TUBE QTY |
|------------------|-----------------|-------------|----------|-----------|----------|
| 2700SM78CAN      | N/A             | -T13        | 250      | 13"       | 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 semiconductor company. The company offers a product line of overvoltage protection and overcurrent protection components. These include transient voltage suppressor array (TVS arrays) avalanche breakdown diode, steering diode TVS array and electronics SMD chip fuses. These components deliver circuit protection in electronic systems from numerous overvoltage and overcurrent events. They include lightning; electrostatic discharge (ESD); nuclear electromagnetic pulses (NEMP); inductive switching; and electromagnetic interference (EMI) / radio frequency interference (RFI). ProTek Devices also offers high performance interface and linear products. They include analog switches; multiplexers; LED drivers; LED wafer die for ESD protection; audio control ICs; RF and related high frequency products.

### CONTACT US

#### Corporate Headquarters

2929 South Fair Lane  
Tempe, Arizona 85282  
USA

#### By Telephone

General: 602-431-8101  
Sales: & Marketing: 602-414-5109  
Customer Service: 602-414-5114  
Product Technical Support: 602-414-5107

#### By Fax

General: 602-431-2288

#### By E-mail:

Asia Sales: [asiasales@protekdevices.com](mailto:asiasales@protekdevices.com)  
Europe Sales: [europesales@protekdevices.com](mailto:europesales@protekdevices.com)  
U.S. Sales: [ussales@protekdevices.com](mailto:ussales@protekdevices.com)  
Distributor Sales: [distysales@protekdevices.com](mailto:distysales@protekdevices.com)  
Customer Service: [service@protekdevices.com](mailto:service@protekdevices.com)  
Technical Support: [support@protekdevices.com](mailto:support@protekdevices.com)

#### ProTek Devices (Asia Pacific) Pte. Ltd.

8 Ubi Road 2, #06-19  
Zervex  
Singapore - 408538  
Tel: +65-67488312  
Fax: +65-67488313

#### Web

[www.protekdevices.com](http://www.protekdevices.com)

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