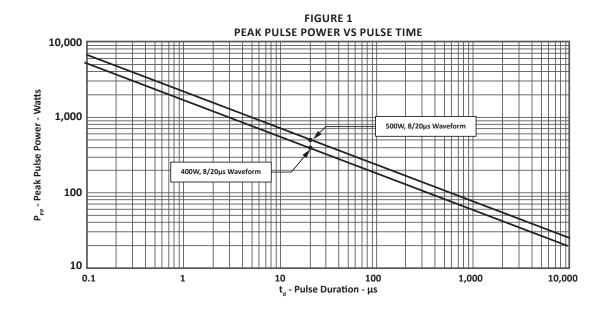


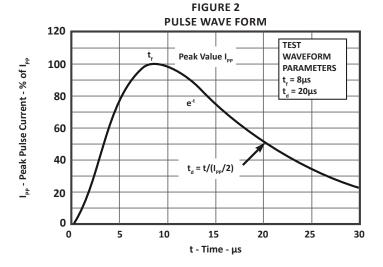
| MAXIMUM RATINGS @ 25°C Unless Otherwise Specified | | | | | | | | |
|---|------------------|------------|-------|--|--|--|--|--|
| PARAMETER SYMBOL VALUE UNITS | | | | | | | | |
| Unidirectional: Peak Pulse Power (tp = 8/20μs) - See Figure 1 | P _{pp} | 500 | Watts | | | | | |
| Bidirectional: Peak Pulse Power (tp = 8/20μs) - See Figure 1 | P _{pp} | 400 | Watts | | | | | |
| Operating Temperature | T _L | -55 to 150 | °C | | | | | |
| Storage Temperature | T _{stg} | -55 to 150 | °C | | | | | |

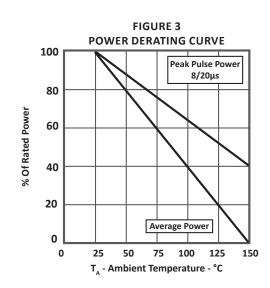
| ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified | | | | | | | | |
|---|-------------------|---|--|--|---|--|--|--|
| PART NUMBER (Note 1) | DEVICE MARKING | RATED STAND-OFF VOLTAGE V _{WM} VOLTS | MINIMUM BREAKDOWN VOLTAGE @ 1mA V _(BR) VOLTS | MAXIMUM CLAMPING VOLTAGE (Fig. 2) @ IP = 1A V _C VOLTS | MAXIMUM LEAKAGE CURRENT @V _{wM} Ι _D μΑ | TYPICAL CAPACITANCE @0V, 1MHz C pF | | |
| PSD03 | А | 3.3 | 4.0 | 6.5 | 125 | 500 | | |
| PSD03C | G | 3.3 | 4.0 | 7.0 | 125 | 200 | | |
| PSD05 | В | 5.0 | 6.0 | 9.8 | 10 | 350 | | |
| PSD05C | Н | 5.0 | 6.0 | 9.8 | 10 | 175 | | |
| PSD08 | С | 8.0 | 8.5 | 13.4 | 10 | 250 | | |
| PSD08C | J | 8.0 | 8.5 | 13.4 | 10 | 150 | | |
| PSD12 | D | 12.0 | 13.3 | 19.0 | 1 | 150 | | |
| PSD12C | К | 12.0 | 13.3 | 19.0 | 1 | 50 | | |
| PSD15 | E | 15.0 | 16.7 | 24.0 | 1 | 100 | | |
| PSD15C | L | 15.0 | 16.7 | 24.0 | 1 | 40 | | |
| PSD18 | 18 | 18.0 | 20.0 | 29.0 | 1 | 90 | | |
| PSD18C | N | 18.0 | 20.0 | 29.0 | 1 | 40 | | |
| PSD24 | F | 24.0 | 26.7 | 43.0 | 1 | 88 | | |
| PSD24C | М | 24.0 | 26.7 | 43.0 | 1 | 40 | | |
| PSD36 | R | 36.0 | 40.0 | 60.0 | 1 | 75 | | |
| PSD36C | Т | 36.0 | 40.0 | 60.0 | 1 | 35 | | |

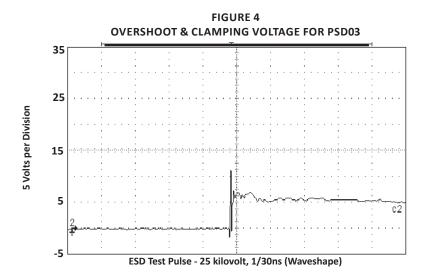
NOTES

^{1.} Part numbers with an additional "C" suffix are bidirectional devices, i.e., PSD05<u>C</u>.









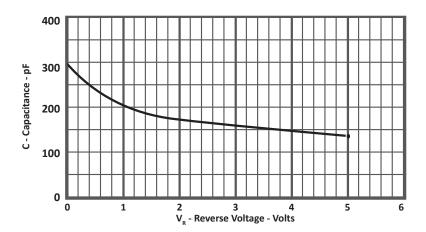


FIGURE 6
PSD03 FORWARD TLP
Leakage Current @ Pulse (I) - μA
Leakage Test Voltage = 0.5V
1E-5 1E-4 1E-3

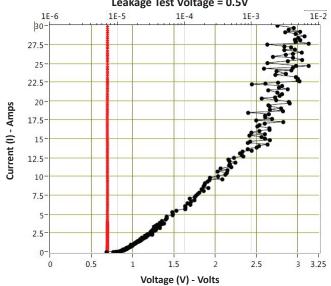
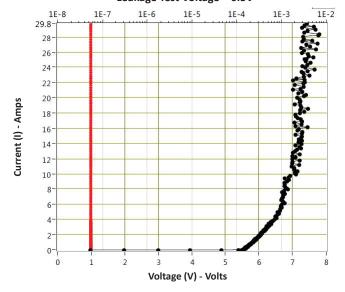
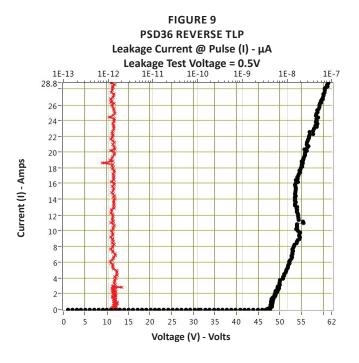


FIGURE 7
PSD03 REVERSE TLP
Leakage Current @ Pulse (I) - μA
Leakage Test Voltage = 0.5V



Note: Indicative TLP performance- for reference only

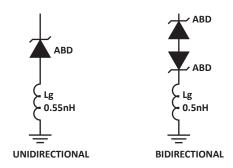
FIGURE 8 PSD36 FORWARD TLP Leakage Current @ Pulse (I) - μA Leakage Test Voltage = 0.5V 1E-6 1E-7 29.9-28 26 24-22-20-Current (I) - Amps 18 16-14-12-10-8-6-4-0.5 Voltage (V) - Volts



Note: Indicative TLP performance- for reference only

SPICE MODEL

FIGURE 1 SPICE MODEL FOR



ABD - Avalanche Breakdown Diode (TVS) Lg - Lead Inductance

| TABLE 1 - SPICE PARAMETERS | | | | | | | |
|----------------------------|----------------|-------------|--|--|--|--|--|
| PARAMETER | PARAMETER UNIT | | | | | | |
| BV | V | See Table 2 | | | | | |
| IBV | μΑ | 1 | | | | | |
| C _{jo} | pF See Table 2 | | | | | | |
| I _s | А | See Table 2 | | | | | |
| Vj | V | 0.6 | | | | | |
| М | - | 0.33 | | | | | |
| N | - | 1 | | | | | |
| R _s | Ohms | See Table 2 | | | | | |
| TT | S | 1E-8 | | | | | |
| EG | eV | 1.11 | | | | | |

| TABLE 2 - ABD SPECIFIC SPICE PARAMETERS | | | | | | | | |
|---|------------------------------------|-----|-----------------------|----------|--|--|--|--|
| PART NUMBER | PART NUMBER B _v (VOLTS) | | I _s (AMPS) | Rs(OHMS) | | | | |
| PSD03 | 4.0 | 438 | 1E-11 | 0.21 | | | | |
| PSD05 | 6.0 | 284 | 1E-11 | 0.14 | | | | |
| PSD08 | 8.5 | 146 | 1E-11 | 0.28 | | | | |
| PSD12 | 13.3 | 123 | 1E-13 | 0.40 | | | | |
| PSD15 | 16.7 | 102 | 1E-13 | 0.52 | | | | |
| PSD24 | 26.7 | 61 | 1E-13 | 1.54 | | | | |
| PSD03C | 4.5 | 219 | 1E-11 | 0.21 | | | | |
| PSD05C | 6.0 | 142 | 1E-11 | 0.14 | | | | |
| PSD08C | 8.5 | 73 | 1E-11 | 0.28 | | | | |
| PSD12C | 13.3 | 62 | 1E-13 | 0.40 | | | | |
| PSD15C | 16.7 | 51 | 1E-13 | 0.52 | | | | |
| PSD24C | 26.7 | 30 | 1E-13 | 1.54 | | | | |



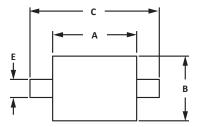


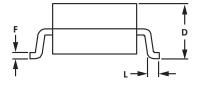
SOD-323 PACKAGE INFORMATION

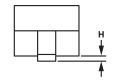
| OUTLINE DIMENSIONS | | | | | | | | |
|--------------------|--------|--------|--------|-------|--|--|--|--|
| DIM | MILLIN | IETERS | INCHES | | | | | |
| | MIN | MAX | MIN | MAX | | | | |
| А | 1.60 | 1.90 | 0.063 | 0.075 | | | | |
| В | 1.15 | 1.45 | 0.045 | 0.057 | | | | |
| С | 2.39 | 2.70 | 0.094 | 0.106 | | | | |
| D | 0.80 | 1.10 | 0.031 | 0.043 | | | | |
| E | 0.25 | 0.40 | 0.010 | 0.016 | | | | |
| F | 0.10 | 0.20 | 0.004 | 0.008 | | | | |
| Н | - | 0.10 | - | 0.004 | | | | |
| L | 0.20 | - | 0.008 | - | | | | |

NOTES

- 1. Controlling dimension: millimeters.
- 2. Dimensioning and tolerances per ANSI Y14.5M, 1985.
- 3. Dimensions are exclusive of mold flash and metal burrs.



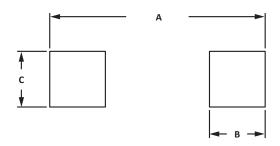




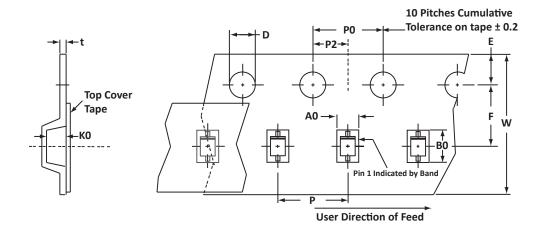
| PAD LAYOUT DIMENSIONS | | | | | | | | |
|-----------------------|----------------------|---|---|--|--|--|--|--|
| MILLIN | IETERS | INCHES | | | | | | |
| MIN | MAX | MIN | MAX | | | | | |
| 2.87 | 3.12 | 0.113 | 0.123 | | | | | |
| 0.66 | 0.91 | 0.026 | 0.036 | | | | | |
| 0.66 | 0.91 | 0.026 | 0.036 | | | | | |
| | MILLIN MIN 2.87 0.66 | MILLIMETERS MIN MAX 2.87 3.12 0.66 0.91 | MILLIMETERS INC MIN MAX MIN 2.87 3.12 0.113 0.66 0.91 0.026 | | | | | |

NOTES

1. Controlling dimension: millimeters.



TAPE AND REEL



| SPECIFICATIONS | | | | | | | | | | | | |
|----------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------|
| REEL DIA. | TAPE WIDTH | Α0 | В0 | КО | D | E | F | W | P0 | P2 | Р | tmax |
| 178mm (7") | 8mm | 1.55 ± 0.10 | 2.90 ± 0.10 | 1.35 ± 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 | 4.00 ± 0.10 | 0.25 |

NOTES

- 1. Dimensions are in millimeters.
- 2. Surface mount product is taped and reeled in accordance with EIA-481.
- 3. Suffix T7 = 7" Reel 3,000 pieces per 8mm tape.
- 4. Marking on Part marking code (see page 2), polarity band (Unidirectional Only).

| ORDERING INFORMATION | | | | | | | | |
|---|---|-----|-------|----|-----|--|--|--|
| BASE PART NUMBER (xx = Voltage) | I I FADEREF SIJEFIX I TAPE SIJEFIX I OTV/REFI I REFI SIZE I TIJRE OTV | | | | | | | |
| PSDxx/PSDxxC | -LF | -T7 | 3,000 | 7" | n/a | | | |
| This device is only available in a Lead-Free configuration. | | | | | | | | |

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COMPANY INFORMATION

COMPANY PROFILE

In business more than 25 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 LED wafer die for ESD protection and related high frequency products. ProTek Devices is ISO 9001:2015 certified.

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