

## STEERING DIODE/TVS ARRAY COMBO

## APPLICATIONS

- ✓ Ethernet - 10/100/1000 Base T
- ✓ FireWire
- ✓ Serial ATA Ports & PCI Express Ports
- ✓ USB Ports
- ✓ DVI Ports & HDMI Ports
- ✓ High-speed Data Line ESD Protection

## IEC COMPATIBILITY (EN61000-4)

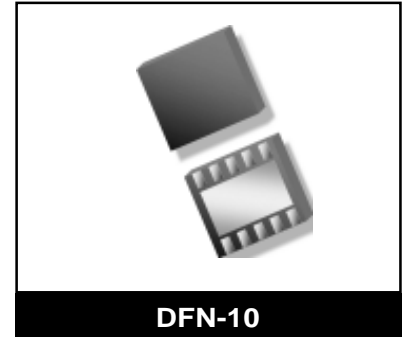
- ✓ 61000-4-2 (ESD): Air - 15kV, Contact - 8kV
- ✓ 61000-4-4 (EFT): 40A - 5/50ns

## FEATURES

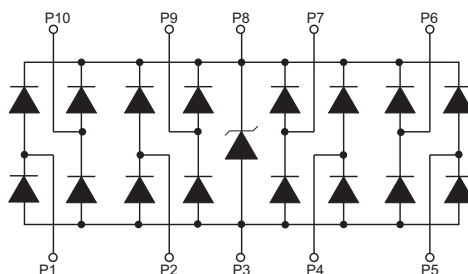
- ✓ 200 Watts Peak Pulse Power per Line ( $t_p = 8/20\mu s$ )
- ✓ ESD Protection > 40 kilovolts
- ✓ Low Clamping Voltage
- ✓ Protects Eight (8) Lines
- ✓ Protects 4 I/O Ports & Power Supply
- ✓ Ultra-Low Capacitance: 1.6pF (I/O - I/O)
- ✓ RoHS Compliant

## MECHANICAL CHARACTERISTICS

- ✓ DFN-10 Package
- ✓ Weight 7 milligrams (Approximate)
- ✓ Available in Lead-Free Nickel-Paladium-Gold Plating
- ✓ Solder Reflow Temperature:  
Nickel-Paladium-Gold (Ni/Pd/Au) - Sn/Ag/Cu, 96/3.5/0.5: 260-270°C
- ✓ Consult Factory for Leaded Device Availability
- ✓ Flammability Rating UL 94V-0
- ✓ Device Marking: Marking Code
- ✓ 8mm Tape and Reel Per EIA Standard 481



## PIN CONFIGURATION



## DEVICE CHARACTERISTICS

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

PARAMETER	SYMBOL	VALUE	UNITS
Peak Pulse Power (tp = 8/20µs) - See Figure 1	$P_{PP}$	200	Watts
Operating Temperature	$T_L$	-55 to 150	°C
Storage Temperature	$T_{STG}$	-55 to 150	°C

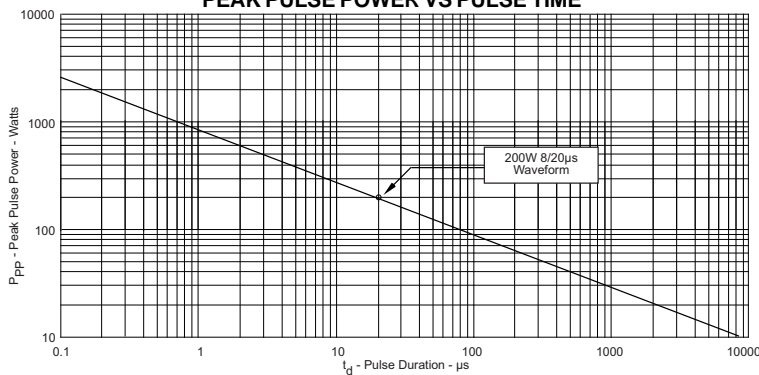
### ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified

PART NUMBER	DEVICE MARKING	RATED STAND-OFF VOLTAGE	MINIMUM BREAKDOWN VOLTAGE	MAXIMUM CLAMPING VOLTAGE (See Fig. 2) (See Note 2)	MAXIMUM CLAMPING VOLTAGE (See Fig. 2) (See Note 2)	MAXIMUM LEAKAGE CURRENT	TYPICAL CAPACITANCE (See Note 1)
		$V_{WM}$ VOLTS	@ 1mA $V_{(BR)}$ VOLTS	@ $I_P = 1A$ $V_C$ VOLTS	@ $I_P = 5A$ $V_C$ VOLTS	@ $V_{WM}$ $I_b$ µA	@ 0V, 1 MHz $C_{J(SD)}$ pF
PLR0508	508	5.0	6.0	9.8	13.0	1	1.6

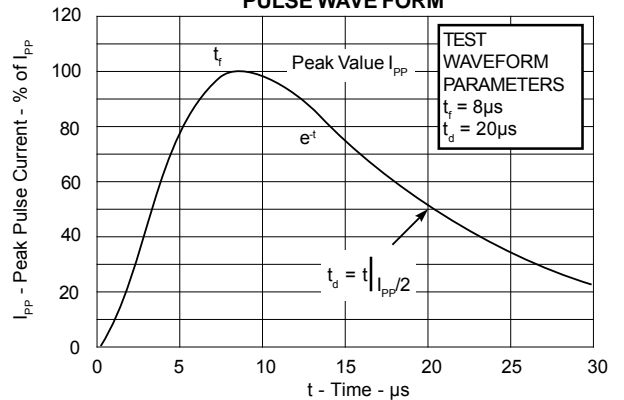
**Note 1:** From I/O Pin to I/O.

**Note 2:** Across TVS only (Pin 3 to 8).

**FIGURE 1**  
PEAK PULSE POWER VS PULSE TIME

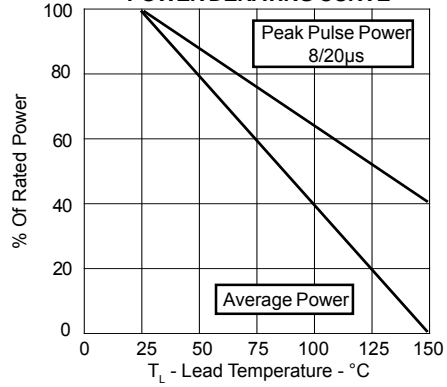


**FIGURE 2**  
PULSE WAVE FORM

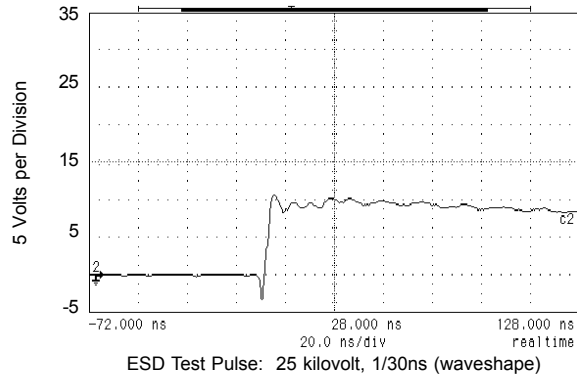


## GRAPHS

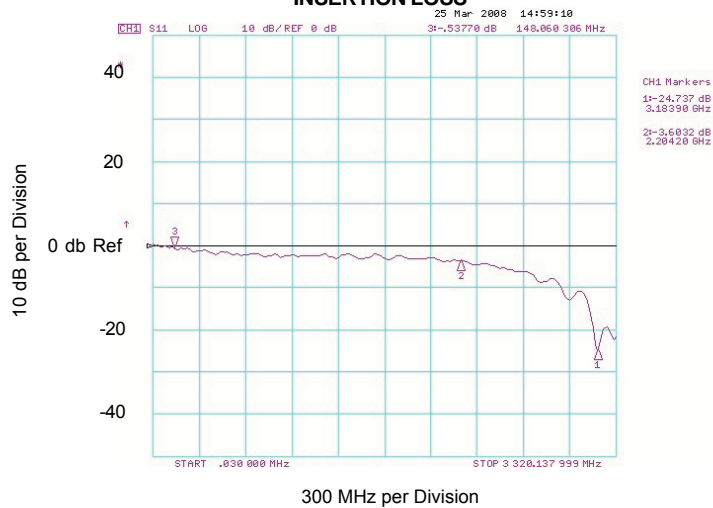
**FIGURE 3  
POWER DERATING CURVE**



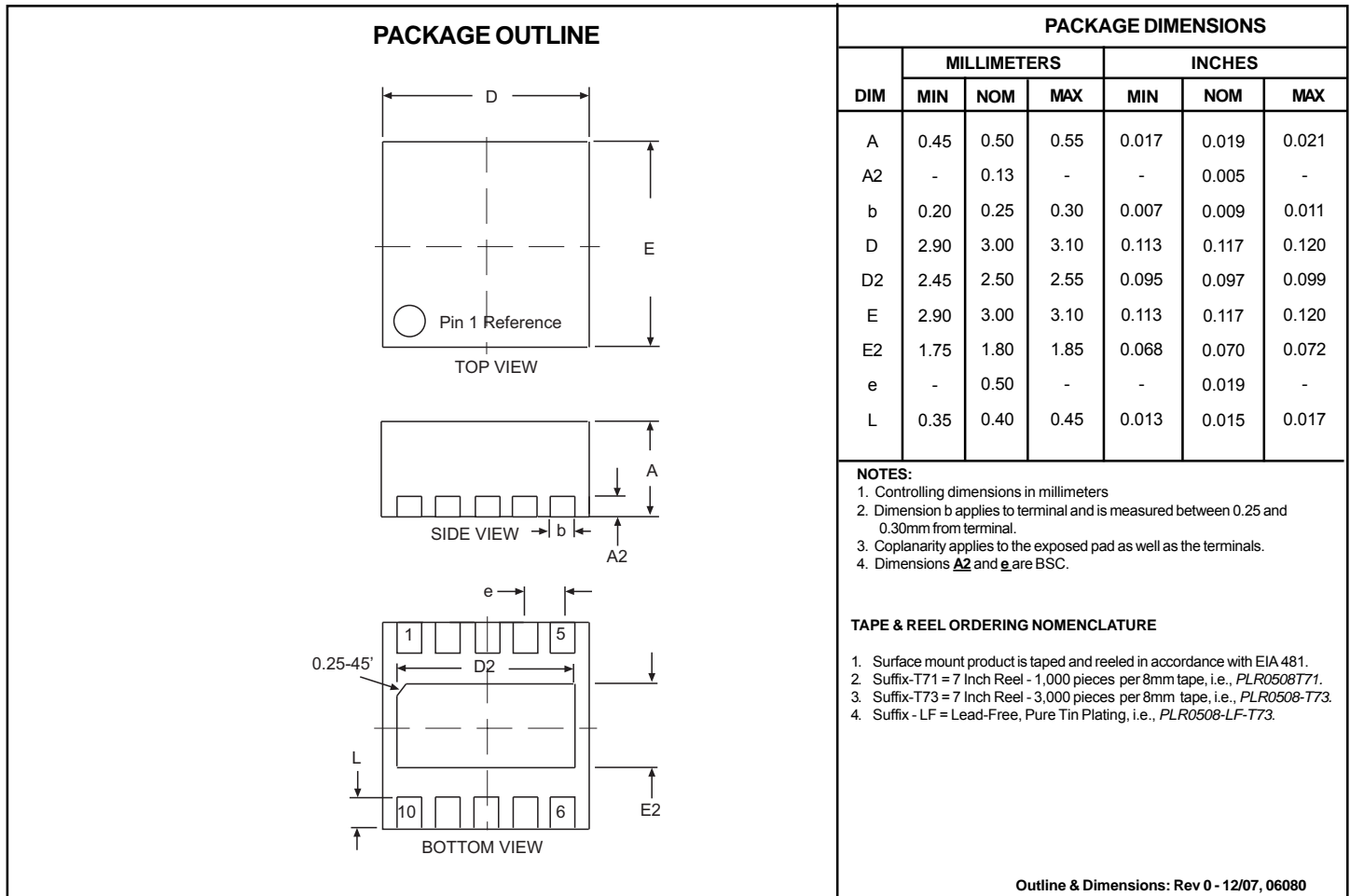
**FIGURE 4  
OVERSHOOT & CLAMPING VOLTAGE**



**FIGURE 5  
INSERTION LOSS**

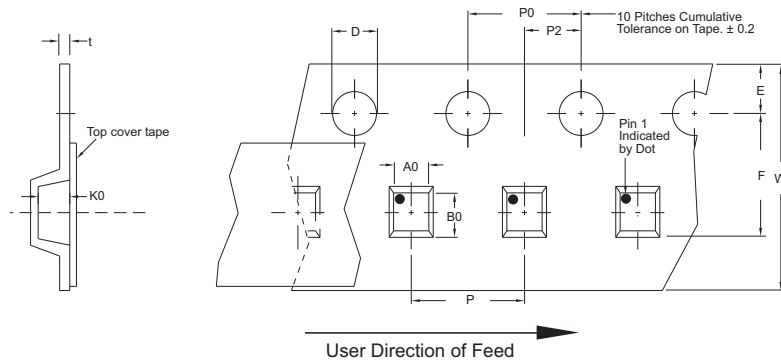


## DFN-10 (WIDE BODY) PACKAGE OUTLINE & DIMENSIONS



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	3.20±0.10	3.20±0.10	0.75 ± 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



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**ProTek Devices**  
 2929 South Fair Lane, Tempe, AZ 85282  
 Tel: 602-431-8101 Fax: 602-431-2288  
 E-Mail: [sales@protekdevices.com](mailto:sales@protekdevices.com)  
 Web Site: [www.protekdevices.com](http://www.protekdevices.com)