

STEERING DIODE/TVS ARRAY COMBO
APPLICATIONS

- ✓ Ethernet - 10/100/1000 Base T
- ✓ FireWire & USB
- ✓ Handheld Electronics
- ✓ Video/Graphic Cards
- ✓ WAN/LAN Equipment

IEC COMPATIBILITY (EN61000-4)

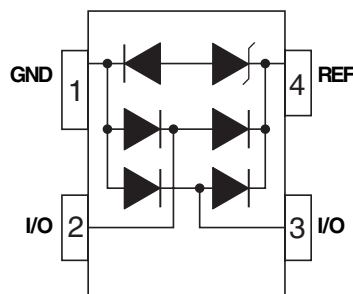
- ✓ 61000-4-2 (ESD): Air - 15kV, Contact - 8kV
- ✓ 61000-4-4 (EFT): 40A - 5/50ns
- ✓ 61000-4-5 (Surge): 24A, 8/20 μ s - Level 2(Line-Gnd) & Level 3(Line-Line)

FEATURES

- ✓ 300 Watts Peak Power per Line (tp = 8/20 μ s)
- ✓ ESD Protection > 25 kilovolts
- ✓ Low Operating Voltage: 2.8V & 3.3V
- ✓ Provides Two (2) Lines of Protection
- ✓ Low Leakage Current < 1.0 μ A
- ✓ Ultra Low Capacitance: 4.5pF Typical
- ✓ RoHS Compliant in Lead-Free Versions

MECHANICAL CHARACTERISTICS

- ✓ Molded JEDEC SOT-143
- ✓ Weight 9 milligrams (Approximate)
- ✓ Available in Tin-Lead or Lead-Free Pure-Tin Plating(Annealed)
- ✓ Solder Reflow Temperature:
 - Tin-Lead - Sn/Pb, 85/15: 240-245°C
 - Pure-Tin - Sn, 100: 260-270°C
- ✓ Flammability Rating UL 94V-0
- ✓ 8mm Tape and Reel Per EIA Standard 481
- ✓ Marking: Marking Code


PIN CONFIGURATION


DEVICE CHARACTERISTICS

MAXIMUM RATINGS @ 25°C Unless Otherwise Specified

PARAMETER	SYMBOL	VALUE	UNITS
Operating Temperature	T_J	-55°C to 150°C	°C
Storage Temperature	T_{STG}	-55°C to 150°C	°C
Peak Pulse Power ($t_p = 8/20\mu s$) - See Figure 1	P_{PP}	300	Watts
Forward Surge Rating (1/20s @ 25°C, $I_F = 10mA$)	V_F	1.0	Volts
Peak Pulse Current ($t_p = 8/20\mu s$)	I_{PP}	30	Amps

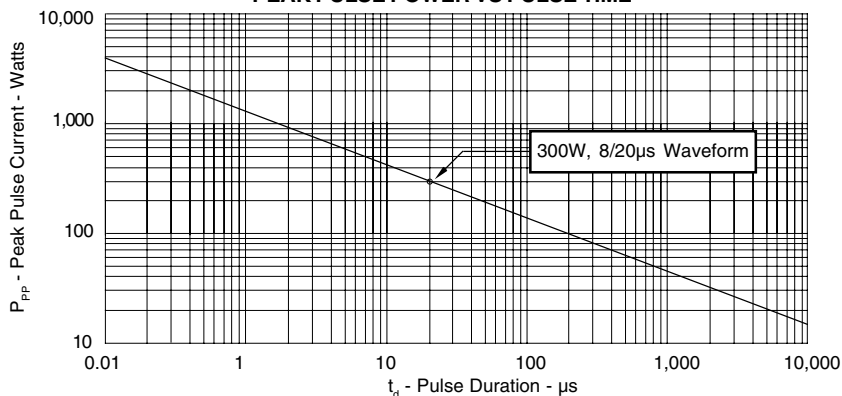
ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified

PART NUMBER	DEVICE MARKING	RATED STAND-OFF VOLTAGE (See Note 1)	MINIMUM SNAP-BACK VOLTAGE	MINIMUM BREAKDOWN VOLTAGE (See Note 1)	MAXIMUM CLAMPING VOLTAGE (See Fig. 2) (See Note 1)	MAXIMUM CLAMPING VOLTAGE (See Fig. 2) (See Note 1)	MAXIMUM LEAKAGE CURRENT (See Note 1)	TYPICAL CAPACITANCE (See Note 2)
		V_{WM} VOLTS	@ 50mA $V_{(SB)}$ VOLTS	@ 2μA $V_{(BR)}$ VOLTS	@ $I_p = 1A$ V_C VOLTS	@ 8/20μs V_C VOLTS	@ V_{WM} I_b μA	@ 0V, 1MHz $C_{J(SD)}$ pF
SR2.8	2A	2.8	2.8	3.0	5.0	8.5V @ 5A	1.0	4.5
SR3.3	3A	3.3	3.3	3.5	7.0	15V @ 10A	1.0	4.5

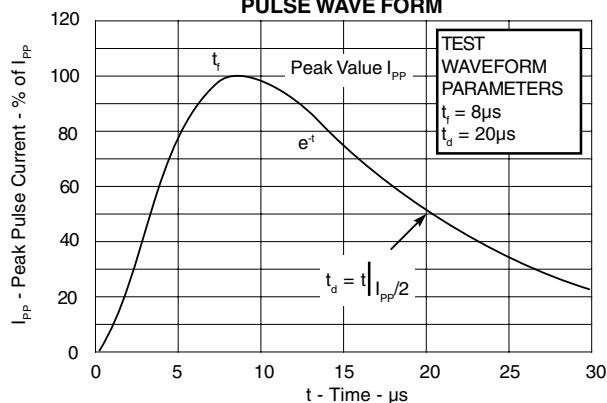
Note 1: From Pin 4 to 1.

Note 2: From Pin 1 to 3, 1 to 2, 3 to 4, 2 to 4.

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

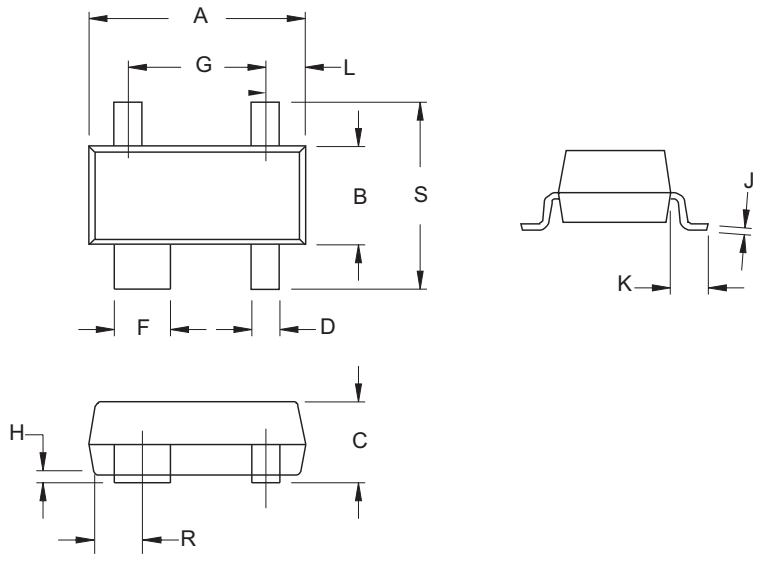



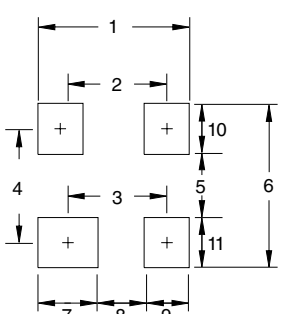
**FIGURE 2
PULSE WAVEFORM**



SR2.8 & SR3.3

SOT-143 PACKAGE OUTLINE & DIMENSIONS

PACKAGE OUTLINE		SOT-143			
					
PACKAGE DIMENSIONS					
DIM	MILLIMETERS		INCHES		
	MIN	MAX	MIN	MAX	
A	2.80	3.04	0.110	0.120	
B	1.20	1.39	0.047	0.055	
C	0.84	1.14	0.033	0.045	
D	0.39	0.50	0.015	0.020	
F	0.79	0.93	0.031	0.037	
G	1.78	2.03	0.070	0.080	
H	0.013	0.10	0.0005	0.004	
J	0.08	0.15	0.003	0.006	
K	0.46	0.60	0.018	0.024	
L	0.445	0.60	0.0175	0.024	
R	0.72	0.83	0.028	0.033	
S	2.11	2.48	0.083	0.098	

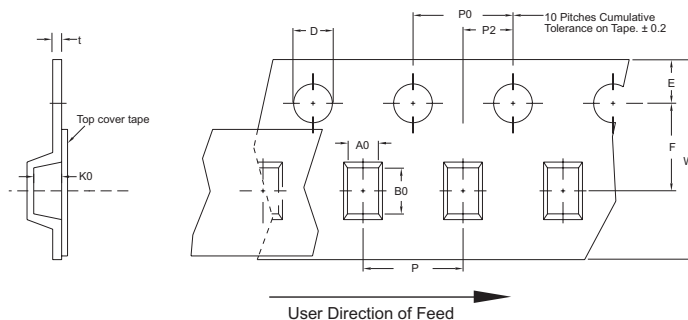
MOUNTING PAD			
TYPICAL			
DIM	Millimeters	Inches	
1	2.85	0.112	
2	2.00	0.079	
3	1.80	0.071	
4	1.90	0.075	
5	1.05	0.041	
6	2.75	0.108	
7	1.20	0.047	
8	0.80	0.031	
9	0.85	0.033	
10	0.85	0.033	
11	0.85	0.033	

NOTES			
1. Dimensioning and tolerances per ANSI Y14.5M, 1985.			
2. Controlling Dimension: Inches			
3. Dimensions are exclusive of mold flash and metal burrs.			
TAPE & REEL ORDERING NOMENCLATURE			
1. Surface mount product is taped and reeled in accordance with EIA-481.			
2. Suffix -T7 = 7 Inch Reel - 3,000 pieces per 8mm tape, i.e., SR2.8-T7.			
3. Suffix -T13 = 13 Inch Reel - 10,000 pieces per 8mm tape, i.e., SR2.8-T13.			
4. Suffix -LF = Lead-Free, Pure-Tin Plating, i.e., SR2.8-LF-T7.			

Outline & Dimensions: Rev 2 - 6/06, 06011

Tape & Reel Specifications (Dimensions in millimeters)

Reel Dia.	Tape Width	A0	B0	K0	D	E	F	W	P0	P2	P	tmax
178mm (7")	8mm	3.10 ± 0.10	2.70 ± 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



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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

Web Site: www.protekdevices.com