

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)

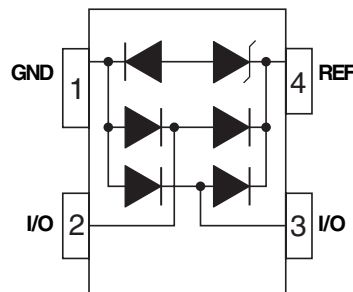
- ✓ 61000-4-2 (ESD): Air - 15kV, Contact - 8kV
- ✓ 61000-4-4 (EFT): 40A - 5/50ns
- ✓ 61000-4-5 (Surge): 24A, 8/20 μ s - Level 2(Line-Gnd) & Level 3(Line-Line)

FEATURES

- ✓ 300 Watts Peak Power per Line ($t_p = 8/20\mu$ 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 $^{\circ}$ C
 - Pure-Tin - Sn, 100: 260-270 $^{\circ}$ 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 @ 50mA $V_{(SB)}$ VOLTS	MINIMUM BREAKDOWN VOLTAGE (See Note 1) @ 2μA $V_{(BR)}$ VOLTS	MAXIMUM CLAMPING VOLTAGE (See Fig. 2) (See Note 1) @ $I_p = 1A$ V_c VOLTS	MAXIMUM CLAMPING VOLTAGE (See Fig. 2) (See Note 1) @ 8/20μs V_c VOLTS	MAXIMUM LEAKAGE CURRENT (See Note 1) @ V_{WM} I_b μA	TYPICAL CAPACITANCE (See Note 2) @ 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

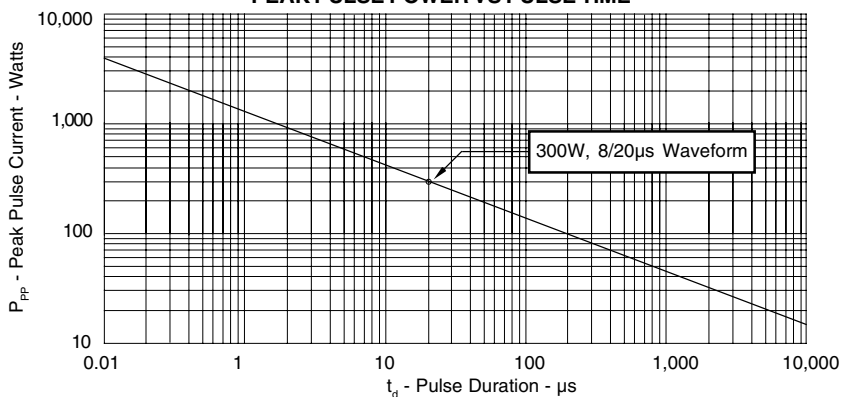
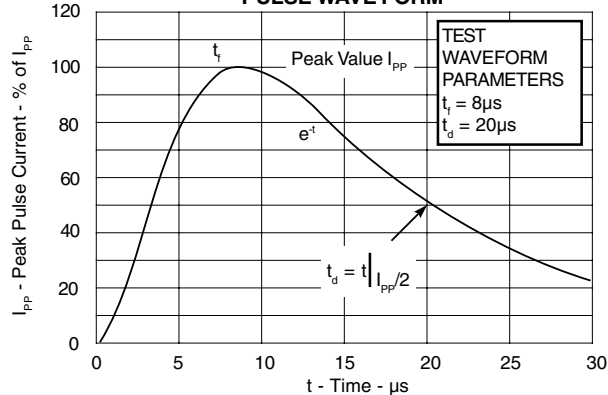


FIGURE 2
PULSE WAVE FORM



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				NOTES
TYPICAL				
DIM	Millimeters	Inches		
1	2.85	0.112		1. Dimensioning and tolerances per ANSI Y14.5M, 1985.
2	2.00	0.079		2. Controlling Dimension: Inches
3	1.80	0.071		3. Dimensions are exclusive of mold flash and metal burrs.
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		

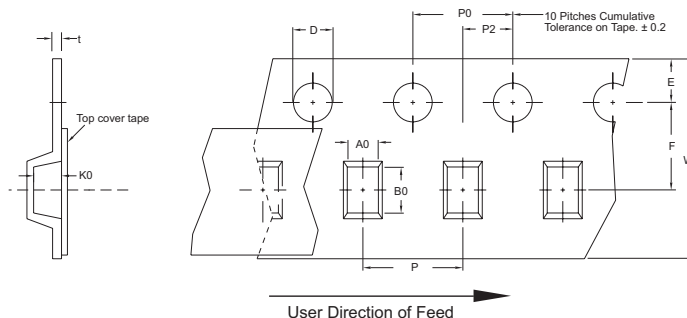
TAPE & REEL ORDERING NOMENCLATURE

- Surface mount product is taped and reeled in accordance with EIA-481.
- Suffix-T7 = 7 Inch Reel - 3,000 pieces per 8mm tape, i.e., *SR2.8-T7*.
- Suffix-T13 = 13 Inch Reel - 10,000 pieces per 8mm tape, i.e., *SR2.8-T13*.
- 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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