

## 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 $\mu$ s - Level 2(Line-Gnd) & Level 3(Line-Line)

### FEATURES

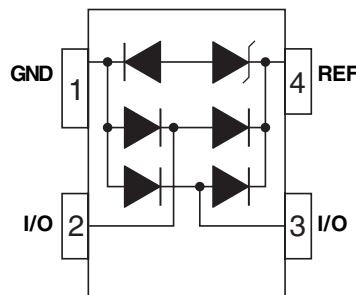
- ✓ 300 Watts Peak Power per Line (tp = 8/20 $\mu$ s)
- ✓ ESD Protection > 25 kilovolts
- ✓ Low Operating Voltage: 2.8V & 3.3V
- ✓ Provides Two (2) Lines of Protection
- ✓ **LOW LEAKAGE CURRENT < 1.0 $\mu$ A**
- ✓ **ULTRA LOW CAPACITANCE: 4.5pF Typical**
- ✓ RoHS Compliant in Lead-Free Versions

### 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



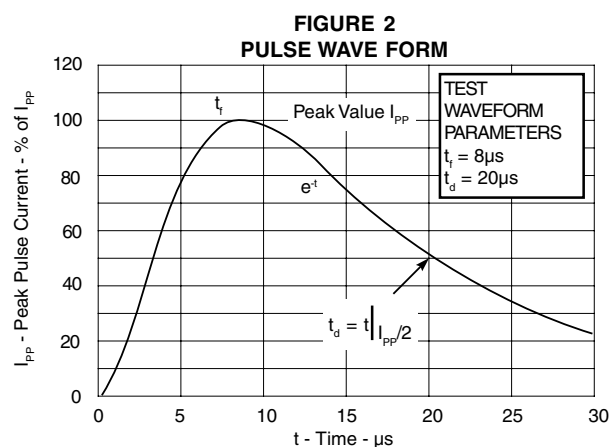
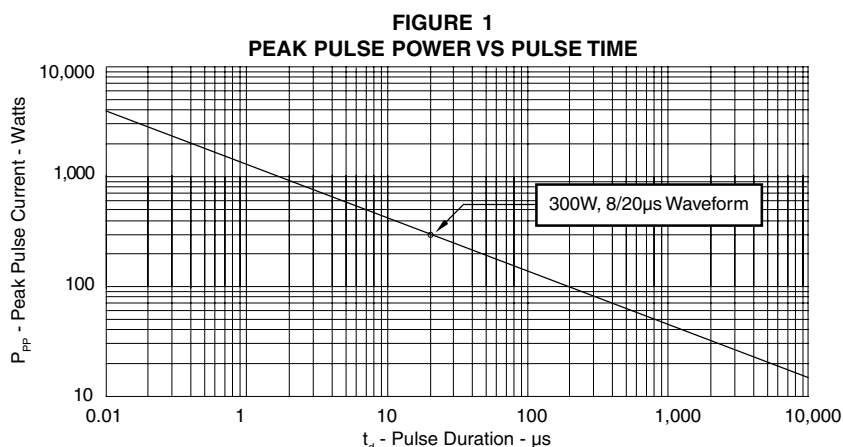
**DEVICE CHARACTERISTICS**

MAXIMUM RATINGS @ 25°C Unless Otherwise Specified			
PARAMETER	SYMBOL	VALUE	UNITS
Peak Pulse Power ( $t_p = 8/20\mu s$ ) - See Figure 1	$P_{PP}$	300	Watts
Operating Temperature	$T_J$	-55°C to 150°C	°C
Storage Temperature	$T_{STG}$	-55°C to 150°C	°C
Forward Surge Rating (1/20 seconds @ 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	$V_C$ VOLTS	@ $V_{WM}$ $I_D$ μA	@ 0V, 1 MHz $C_{j(SD)}$ 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.



**PACKAGE OUTLINE & DIMENSIONS**

### PACKAGE OUTLINE

### SOT-143

### PACKAGED 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 - 10,00 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 1 - 11/01, 06011**

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