

STEERING DIODE/TVS ARRAY COMBO

APPLICATIONS

- ✓ Ethernet - 10/100 Base T
- ✓ FireWire
- ✓ Wireless Communications
- ✓ USB Interface

IEC COMPATIBILITY (EN61000-4)

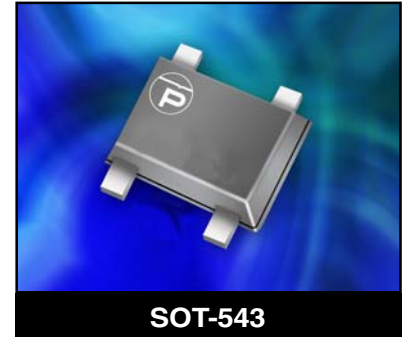
- ✓ 61000-4-2 (ESD): Air - 15kV, Contact - 8kV
- ✓ 61000-4-4 (EFT): 40A - 5/50ns
- ✓ 61000-4-5 (Surge): 24A, 8/20 μ s - Level 2(Line-Gnd) & Level 3(Line-Line)

FEATURES

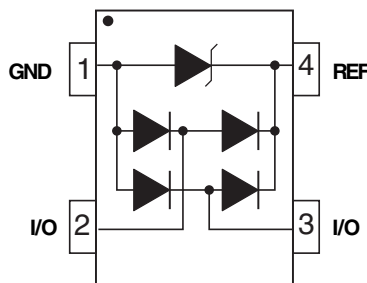
- ✓ 200 Watts Peak Power per Line (tp = 8/20 μ s)
- ✓ ESD Protection > 25 kilovolts
- ✓ Low Clamping Voltage
- ✓ Unidirectional Configuration
- ✓ Protects 2 I/O Ports & Power Supply
- ✓ Ultra-Low Capacitance: 0.6pF
- ✓ RoHS Compliant

MECHANICAL CHARACTERISTICS

- ✓ Molded JEDEC SOT-543
- ✓ Weight 3 milligrams (Approximate)
- ✓ Available in Lead-Free Pure-Tin Plating(Annealed)
- ✓ Solder Reflow Temperature:
Pure-Tin - Sn, 100: 260-270°C
- ✓ Consult Factory for Leaded Device Availability
- ✓ 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 (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
Peak Forward Voltage - $I_F = 1A$, 8/20µs	V_F	1.5	Volts

ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified

PART NUMBER	DEVICE MARKING	RATED STAND-OFF VOLTAGE V_{WM} VOLTS	MINIMUM BREAKDOWN VOLTAGE @ 1mA $V_{(BR)}$ VOLTS	MAXIMUM CLAMPING VOLTAGE (See Fig. 2) (See Note 2) @ $I_F = 1A$ V_C VOLTS	MAXIMUM CLAMPING VOLTAGE (See Fig. 2) (See Note 2) 8/20µs $V_C @ I_{PP}$ VOLTS	MAXIMUM LEAKAGE CURRENT @ V_{WM} I_b µA	MAXIMUM CAPACITANCE (See Note 1) (See Fig. 5) (Per Data Line) @ 0V, 1 MHz $C_{j(SD)}$ pF
PLR0502	B5	5.0	6.0	9.8	20.0V @ 10.0A	1.0	0.6

Note 1: As shown in Figure 5, REF 1 is connected to ground, REF 2 is connected to + V_{CC} and input applies to $V_{CC} = 5V$, $V_{sign} = 30mV$, $F = 1MHz$.

Note 2: Measured across pin 1 to pin 4.

FIGURE 1
PEAK PULSE POWER VS PULSE TIME

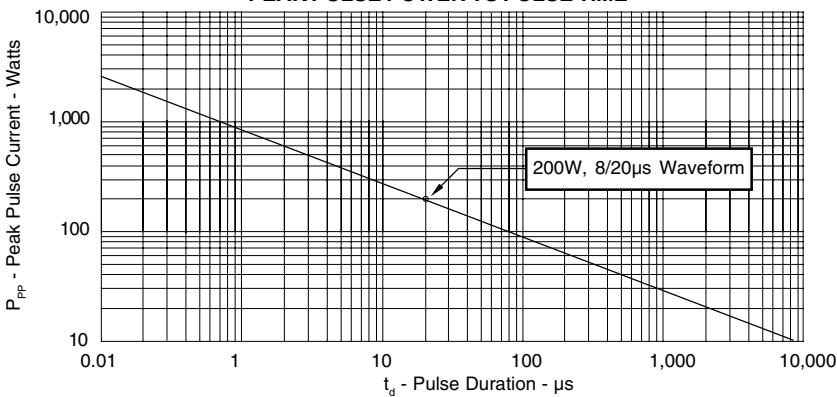
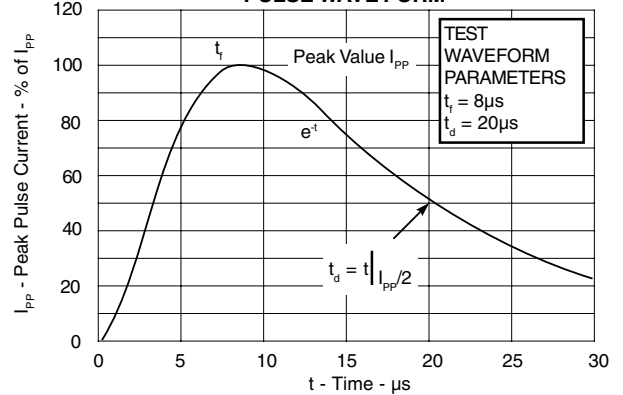
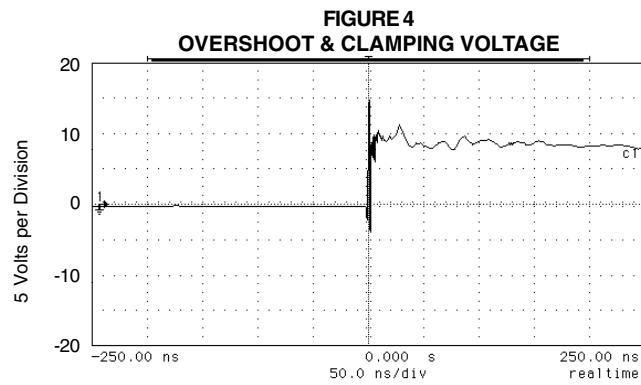
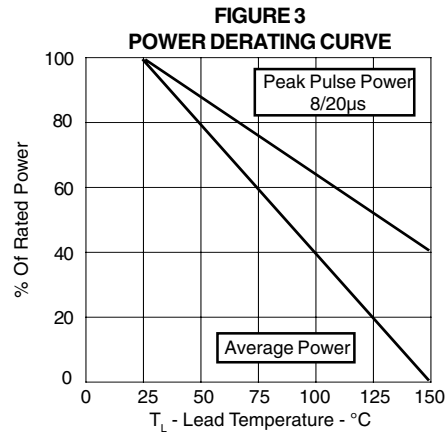


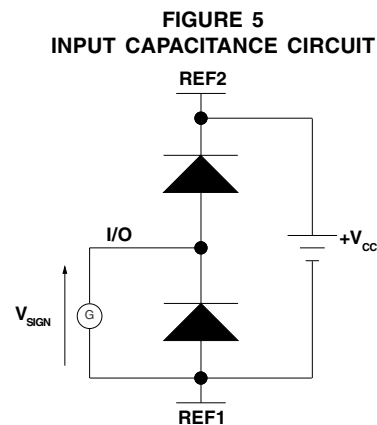
FIGURE 2
PULSE WAVE FORM



GRAPHS



ESD Test Pulse: 5 kilovolt, 1/30ns (waveform)



SOT-543 PACKAGE OUTLINE & DIMENSIONS

PACKAGE OUTLINE		PACKAGE DIMENSIONS			
DIM	MILLIMETERS		INCHES		
	MIN	MAX	MIN	MAX	
A	1.50	1.70	0.059	0.067	
B	1.10	1.30	0.043	0.051	
C	0.50	0.60	0.020	0.024	
D	0.17	0.27	0.007	0.011	
G	0.50 BSC	-	0.020 BSC	-	
H	1.50	1.70	0.059	0.067	
J	0.08	0.16	0.003	0.007	
K	0.10	0.30	0.004	0.0120	
R	0.05	0.15	0.002	0.006	

Do not connect center stub.

NOTES

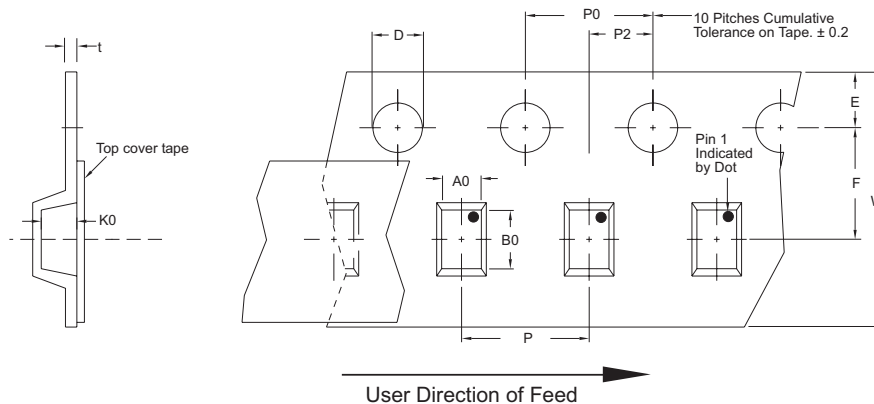
1. Dimensioning and tolerances per ANSI Y14.5M, 1985.
2. Controlling Dimension: Inches
3. Pin 3 is the cathode (Unidirectional Only).
4. Dimensions are exclusive of mold flash and metal burrs.

MOUNTING PAD			TAPING & REEL ORDERING NOMENCLATURE																			
<table border="1" style="margin: auto;"> <thead> <tr> <th colspan="3" style="text-align: center;">TYPICAL</th> </tr> <tr> <th style="text-align: center;">DIM</th> <th style="text-align: center;">Millimeters</th> <th style="text-align: center;">Inches</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">0.30</td> <td style="text-align: center;">0.012</td> </tr> <tr> <td style="text-align: center;">2</td> <td style="text-align: center;">1.02</td> <td style="text-align: center;">0.040</td> </tr> <tr> <td style="text-align: center;">3</td> <td style="text-align: center;">1.40</td> <td style="text-align: center;">0.055</td> </tr> <tr> <td style="text-align: center;">4</td> <td style="text-align: center;">0.51</td> <td style="text-align: center;">0.020</td> </tr> </tbody> </table>			TYPICAL			DIM	Millimeters	Inches	1	0.30	0.012	2	1.02	0.040	3	1.40	0.055	4	0.51	0.020	<ol style="list-style-type: none"> 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., PLR0502-T7. 3. Suffix -LF = Lead-Free Plating, i.e., PLR0502-LF-T7. 	
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Outline & Dimensions: Rev 0 - 1/07, 06071

Tape & Reel Specifications (Dimensions in millimeters)

Reel Dia.	Tape Width	A0	B0	K0	D	E	F	W	P0	P2	P	tmax
178mm (7")	8mm	1.78 ± 0.05	1.78 ± 0.05	0.69 ± 0.05	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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