

## STANDARD CAPACITANCE TVS ARRAY

## APPLICATIONS

- ✓ Sensors
- ✓ Automotive Power Bus

## 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

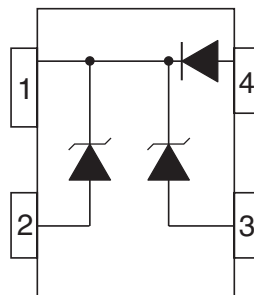
- ✓ 300 Watts Peak Pulse Power per Line (tp = 8/20 $\mu$ s)
- ✓ ESD Protection > 40 kilovolts
- ✓ Stand-Off Voltage: 33V
- ✓ Blocking Rectifier
- ✓ Provides Two (2) Lines of Protection
- ✓ Low Leakage Current < 0.1 $\mu$ A
- ✓ RoHS Compliant

## MECHANICAL CHARACTERISTICS

- ✓ Molded JEDEC SOT-143
- ✓ Weight 9 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



# PA36WR-2

## DEVICE CHARACTERISTICS

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

PARAMETER	SYMBOL	VALUE	UNITS
Operating Temperature	$T_A$	-55 to 150	°C
Storage Temperature	$T_{STG}$	-55 to 150	°C
Peak Pulse Power ( $t_p = 8/20\mu s$ ) - See Figure 1	$P_{PP}$	300	Watts
Forward Surge Rating (1/20s @ 25°C, $I_F = 10mA$ )	$V_F$	1.5	Volts
Repetitive Peak Reverse Voltage	$V_{RRM}$	700	Volts

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

PART NUMBER	DEVICE MARKING CODE	MAXIMUM STAND-OFF VOLTAGE (See Note 1) $V_{WM}$ VOLTS	MINIMUM BREAKDOWN VOLTAGE @ 1mA $V_{(BR)}$ VOLTS	MAXIMUM LEAKAGE CURRENT (See Note 1) @ $V_{WM}$ $I_D$ $\mu A$	MAXIMUM CLAMPING VOLTAGE (See Fig. 2) (See Note 1) $I_p @ 1.9A$ $V_C$ VOLTS	MAXIMUM CLAMPING VOLTAGE (See Fig. 2) (See Note 1) $I_p @ 6A$ $V_C$ VOLTS	MAXIMUM CAPACITANCE (See Note 1) @ 0V, 1 MHz $C_d$ pF
PA36WR-2	P36	33	36	0.1	45	66	45

Note 1: Measured between I/O pins and ground.

FIGURE 1  
PEAK PULSE POWER VS PULSE TIME

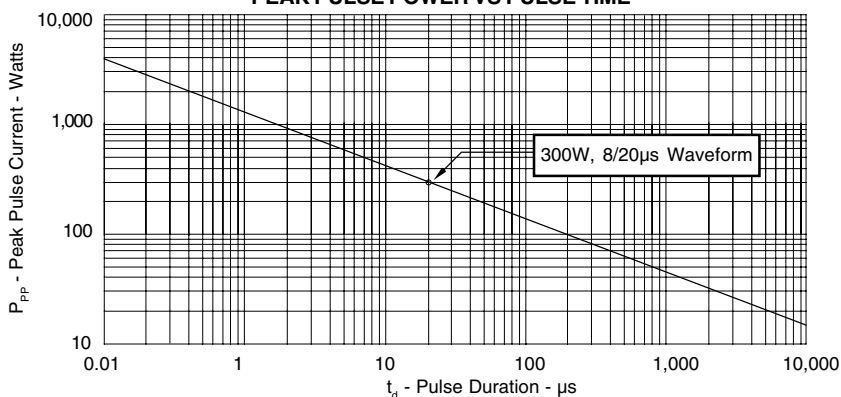
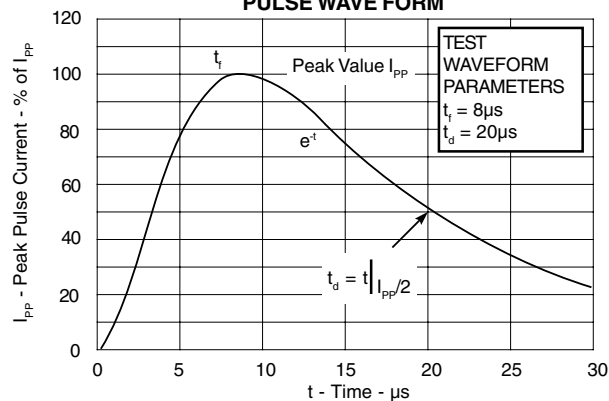


FIGURE 2  
PULSE WAVE FORM



# PA36WR-2

## SOT-143 PACKAGE OUTLINE & DIMENSIONS

**PACKAGE OUTLINE**

**SOT-143**

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.

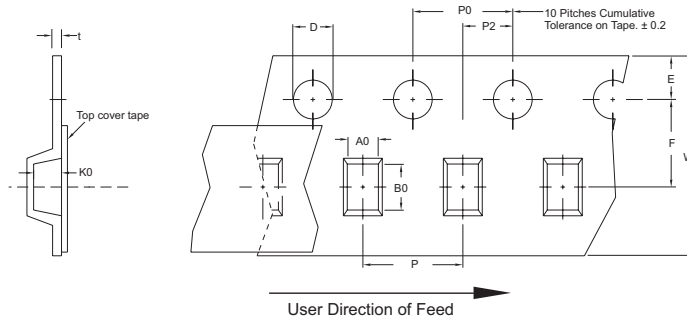
**TAPE & REEL ORDERING NOMENCLATURE**

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., PA36WR-2-T7.
3. Suffix-T13 = 13 Inch Reel - 10,000 pieces per 8mm tape, i.e., PA36WR-2-T13.
4. Suffix - LF = Lead-Free, Pure-Tin Plating, i.e., PA36WR-2-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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