ULTRA LOW CAPACITANCE TVS ARRAY



DESCRIPTION

The PAM02SD2303C is an ultra low capacitance transient voltage suppressor array, designed to protect automotive applications. The device is available in a bidirectional configuration and is rated at 350 Watts for an $8/20\mu s$ waveshape.

The PAMO2SD2303C meets IEC 61000-4-2 (ESD) and IEC 61000-4-4 (EFT) requirements. At higher operating frequencies or faster edge rates, insertion loss and signal integrity are a major concern. The device offers an ultra low capacitance and low leakage current in a miniature SOD-323 package.

FEATURES

• AEC-Q101 Qualified

- Compatible with IEC 61000-4-2 (ESD): Air 15kV, Contact 8kV
 Exceeds Level 4: Handles 10kV Contact & 25kV Air Discharge
- Compatible with IEC 61000-4-4 (EFT): 40A 5/50ns
- Compatible with IEC 61000-4-5 (Surge)
- 350 Watts Peak Pulse Power per Line (tp = 8/20μs)
- Replacement for MLV (0805)
- Bidirectional Configuration
- Protects One Power or I/O Port
- Available in 3V
- ESD Protection > 25kV
- Low Clamping Voltage
- Ultra Low Capacitance: 3pF (Typical)
- RoHS Compliant
- REACH Compliant

MECHANICAL CHARACTERISTICS

- Molded JEDEC SOD-323 Package
- Approximate Weight: 5 milligrams
- Lead-Free Pure-Tin Plating (Annealed)
- Solder Reflow Temperature:

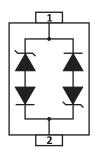
Pure-Tin - Sn, 100: 260-270°C

- 8mm Tape and Reel Per EIA Standard 481
- Flammability Rating UL 94V-0

APPLICATIONS

• Automotive Applications

PIN CONFIGURATION





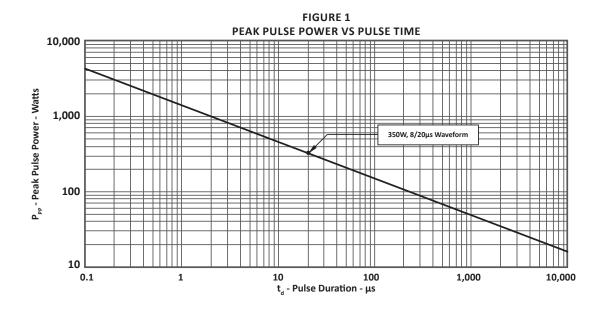
TYPICAL DEVICE CHARACTERISTICS

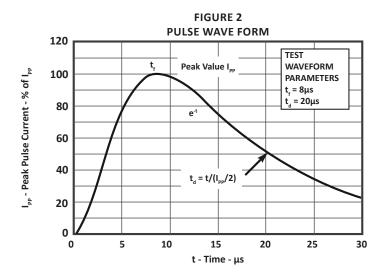
MAXIMUM RATINGS @ 25°C Unless Otherwise Specified							
PARAMETER SYMBOL VALUE UNITS							
Peak Pulse Power (tp = 8/20μs) - See Figure 1	P _{pp}	350	Watts				
Operating Temperature	T _A	-55 to 150	°C				
Storage Temperature	T _{stg}	-55 to 150	°C				

ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified								
PART NUMBER	DEVICE MARKING							
		V _{wm} VOLTS	@ 1mA V _(BR) VOLTS	@ IP = 1A V _c VOLTS	@V _{wм} Ι _D μΑ	@0V, 1MHz C pF		
PAM02SD2303C	3C	3.3	4.0	7.0	5	3		

05467.R0 8/1/14 Page 2 <u>www.protekdevices.com</u>

TYPICAL DEVICE CHARACTERISTICS





05467.R0 8/1/14 Page 3 <u>www.protekdevices.com</u>

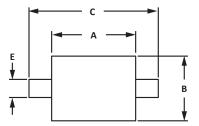


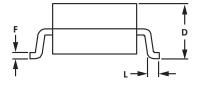
SOD-323 PACKAGE INFORMATION

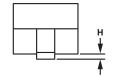
OUTLINE DIMENSIONS							
DIM	MILLIN	IETERS	INCHES				
	MIN	MAX	MIN	MAX			
А	1.60	1.90	0.063	0.075			
В	1.15	1.45	0.045	0.057			
С	2.39	2.70	0.094	0.106			
D	0.80	1.10	0.031	0.043			
Е	0.25	0.40	0.010	0.016			
F	0.10	0.20	0.004	0.008			
Н	-	0.10	-	0.004			
L	0.20	-	0.008	-			

NOTES

- 1. Controlling dimension: millimeters.
- 2. Dimensioning and tolerances per ANSI Y14.5M, 1985.
- 3. Dimensions are exclusive of mold flash and metal burrs.



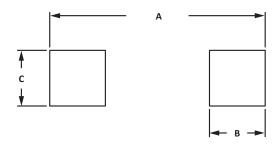




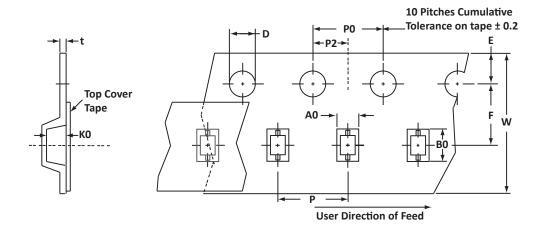
PAD LAYOUT DIMENSIONS							
MILLIN	IETERS	INCHES					
MIN	MAX	MIN	MAX				
2.87	3.12	0.113	0.123				
0.66	0.91	0.026	0.036				
0.66	0.91	0.026	0.036				
	MILLIN MIN 2.87 0.66	MILLIMETERS MIN MAX 2.87 3.12 0.66 0.91	MILLIMETERS INC MIN MAX MIN 2.87 3.12 0.113 0.66 0.91 0.026				

NOTES

1. Controlling dimension: millimeters.



TAPE AND REEL



SPECIFICATIONS												
REEL DIA.	TAPE WIDTH	A0	В0	КО	D	E	F	W	P0	P2	Р	tmax
178mm (7")	8mm	1.55 ± 0.10	2.90 ± 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

NOTES

- 1. Dimensions are in millimeters.
- 2. Surface mount product is taped and reeled in accordance with EIA-481.
- 3. Suffix T7 = 7" Reel 3,000 pieces per 8mm tape.
- 4. Marking on Part marking code (see page 2).

ORDERING INFORMATION							
BASE PART NUMBER	LEADFREE SUFFIX TAPE SUFFIX QTY/REEL REEL SIZE TUBE QTY						
PAM02SD2303C	n/a	-T7	3,000	7"	n/a		
This device is only available in a Lead-Free configuration.							

05467.R0 8/1/14 Page 5 <u>www.protekdevices.com</u>

COMPANY INFORMATION

COMPANY PROFILE

In business more than 20 years, ProTek Devices™ is a privately held semiconductor company. The company offers a product line of overvoltage protection and overcurrent protection components. These include transient voltage suppressor array (TVS arrays) avalanche breakdown diode, steering diode TVS array and electronics SMD chip fuses. These components deliver circuit protection in electronic systems from numerous overvoltage and overcurrent events. They include lightning; electrostatic discharge (ESD); nuclear electromagnetic pulses (NEMP); inductive switching; and electromagnetic interference (EMI) / radio frequency interference (RFI). ProTek Devices also offers high performance interface and linear products. They include analog switches; multiplexers; LED drivers; LED wafer die for ESD protection; audio control ICs; RF and related high frequency products.

CONTACT US

Corporate Headquarters

2929 South Fair Lane Tempe, Arizona 85282 USA

By Telephone

General: 602-431-8101

Sales: & Marketing: 602-414-5109 Customer Service: 602-414-5114 Product Technical Support: 602-414-5107

Bv Fax

General: 602-431-2288

By E-mail:

Asia Sales: <u>asiasales@protekdevices.com</u>
Europe Sales: <u>europesales@protekdevices.com</u>
U.S. Sales: <u>ussales@protekdevices.com</u>
Distributor Sales: <u>distysales@protekdevices.com</u>

Customer Service: service@protekdevices.com
Technical Support: support@protekdevices.com

ProTek Devices (Asia Pacific) Pte. Ltd.

8 Ubi Road 2, #06-19

Zervex

Singapore - 408538 Tel: +65-67488312 Fax: +65-67488313

Web

www.protekdevices.com

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