



**THE DATASHEET OF  
SMDA05C-8E3/TR13**



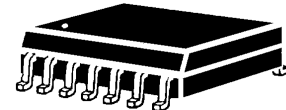


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**SMDA03C-8**  
 thru  
**SMDA24C-8**  
 TVSarray<sup>®</sup> Series

**DESCRIPTION (300 watt)**

This 14 pin 8 line Bi-directional array is designed for use in applications where protection is required at the board level from voltage transients caused by electrostatic discharge (ESD) as defined in IEC 1000-4-2, electrical fast transients (EFT) per IEC 1000-4-4 and effects of secondary lighting.



These TRANSIENT VOLTAGE SUPPRESSOR (TVS) Diode Arrays have a peak power of 300 watts for an 8/20  $\mu$ sec pulse and are designed to protect 3.0/3.3 volt components such as DRAM's, SRAM's, CMOS, HCMOS, HSIC, and low voltage interfaces up to 24 volts.

**FEATURES**

- Protects 3.0/3.3 up through 24V Components
- Protects 8 lines Bi-directional
- Provides electrically isolated protection
- SO-14 Packaging

**MECHANICAL**

- Molded SO-14 Surface Mount
- Weight: 0.127 grams (approximate)
- Body Marked with Logo, and device number
- Pin #1 defined by DOT on top of package
- Encapsulation meets UL 94V-0

**MAXIMUM RATINGS**

- Operating Temperatures: -55<sup>o</sup>C to +150<sup>o</sup>C
- Storage Temperature: -55<sup>o</sup>C to +150<sup>o</sup>C
- Peak Pulse Power: 300 Watts (8/20  $\mu$ sec, Figure 1)
- Pulse Repetition Rate: <.01%

**PACKAGING**

- Tape & Reel EIA Standard 481-1-A
- 13 inch reel 2,500 (OPTIONAL)
- Carrier tubes 55 pcs per (STANDARD)

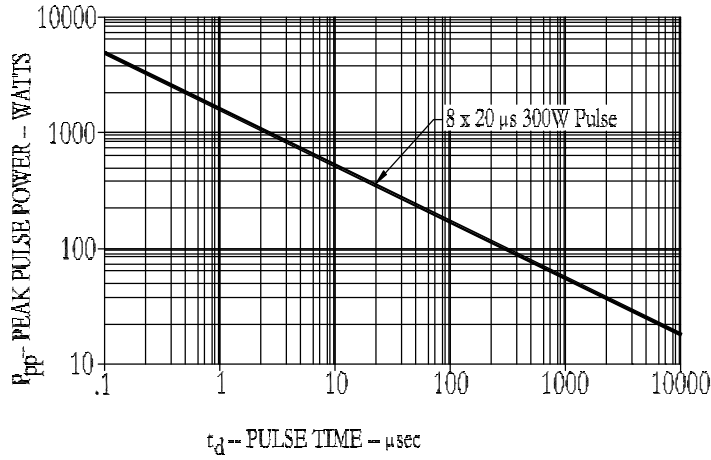
**ELECTRICAL CHARACTERISTICS @ 25<sup>o</sup>C Unless otherwise specified**

PART NUMBER	DEVICE MARKING	STAND OFF VOLTAGE $V_{WM}$	BREAKDOWN VOLTAGE $V_{BR}$ @1 mA	CLAMPING VOLTAGE $V_C$ @ 1 Amp (FIGURE 2)	CLAMPING VOLTAGE $V_C$ @ 5 Amp (FIGURE 2)	LEAKAGE CURRENT $I_b$ @ $V_{WM}$	CAPACITANCE (f=1 MHz) @0V C	TEMPERATURE COEFFICIENT OF $V_{BR}$ $\alpha_{VBR}$ mV/ <sup>o</sup> C
		VOLTS	VOLTS	VOLTS	VOLTS	$\mu$ A	pF	
		MAX	MIN	MAX	MAX	MAX	TYP	MAX
SMDA03C-8	SDL8	3.3	4	7.0	9.0	200	300	-5
SMDA05C-8	SDB8	5.0	6.0	9.8	11	40	200	1
SMDA12C-8	SDD8	12.0	13.3	19.0	24	1	75	8
SMDA15C-8	SDF8	15.0	16.7	24.0	30	1	50	11
SMDA24C-8	SDH8	24.0	26.7	43.0	55	1	35	28

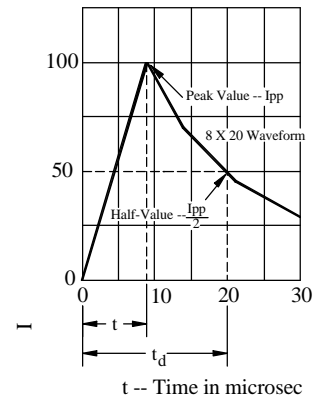
**NOTE:** Transient Voltage Suppression (TVS) product is normally selected based on its stand off voltage  $V_{WM}$ . Product selected voltage should be equal to or greater than the continuous peak operating voltage of the circuit to be protected.

**Application:** The SMDAXXC-8 product is designed for transient voltage suppression protection of components at the board level. It is an ideal product to be used for protection of I/O Transceivers.

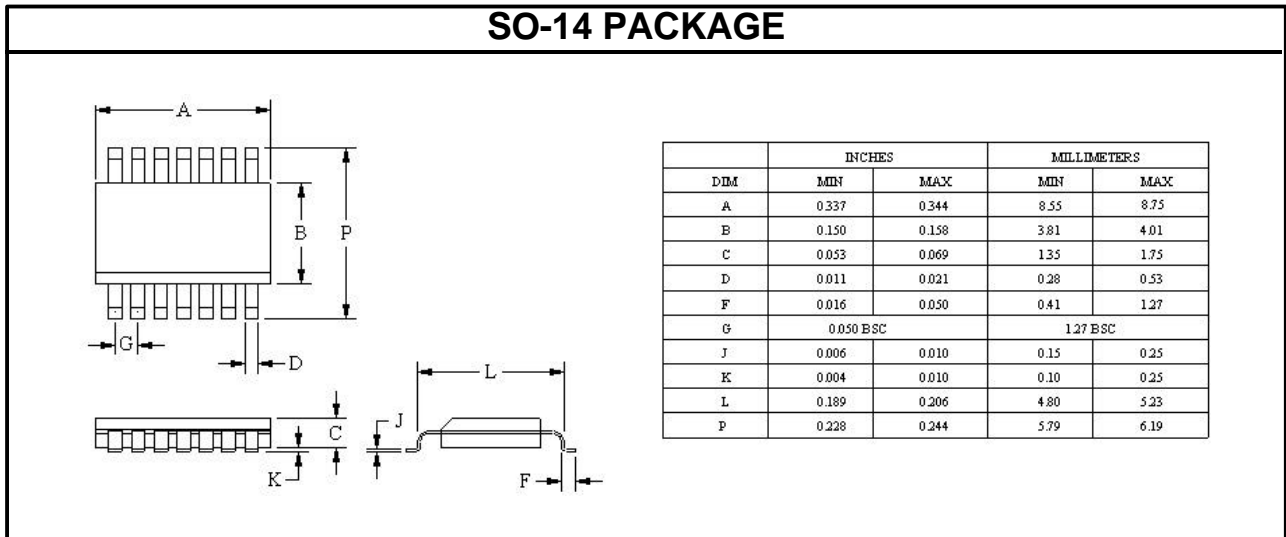
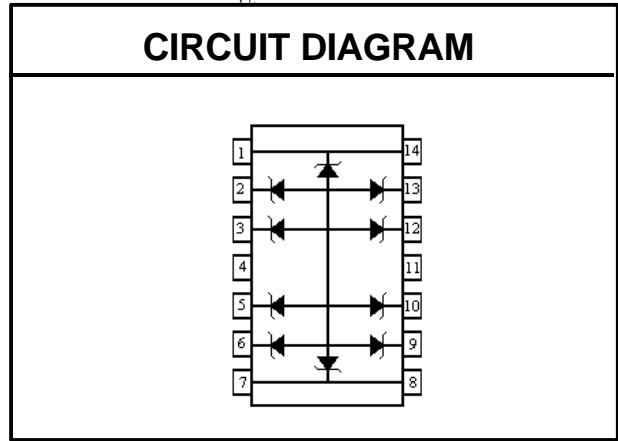
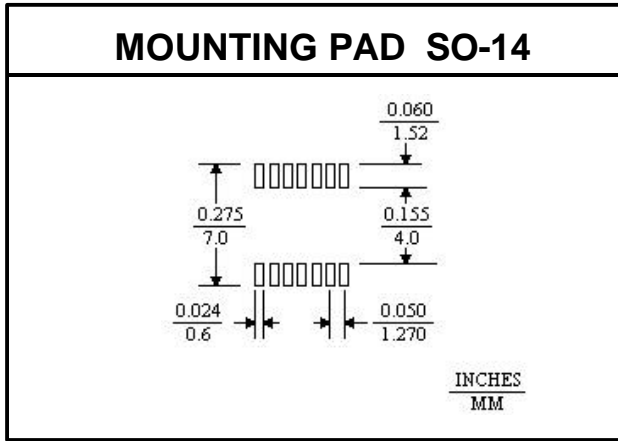
### WAVE FORMS



**FIGURE 1**  
Peak Pulse Power Vs Pulse Time



**FIGURE 2**  
Pulse Wave Form



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