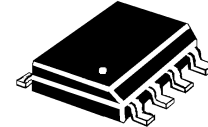




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## SMDA/B03 THRU SMDA/B24C

TVSarray<sup>®</sup> Series



### DESCRIPTION (300 and 500 watt)

This 8 pin 4 line Unidirectional or Bidirectional 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 by IEC 1000-4-2, electrical fast transients (EFT) per IEC 1000-4-4 and effects of secondary lighting.

These arrays are used to protect any combination of 4 lines. The SMDA/B product provides board level protection from static electricity and other induced voltage surges that can damage sensitive circuitry.

These TRANSIENT VOLTAGE SUPPRESSOR (TVS) Diode Arrays protect 3.0/3.3 Volt components such as DRAM's, SRAM's, CMOS, HCMOS, HSIC, and low voltage interfaces up to 24Volts.

### FEATURES

- Protects 3.0/3.3 up through 24V Components
- Protects 4 lines Unidirectional or Bidirectional
- Provides electrically isolated protection
- SO-8 Packaging

### MECHANICAL

- Molded SO-8 Surface Mount
- Weight: 0.066 grams (approximate)
- Body Marked with Logo, and device number
- Pin #1 defined by DOT on top of package

### MAXIMUM RATINGS

- Operating Temperatures: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- SMDA Peak Pulse Power: 300 Watts (8/20 µsec, Figure 1)
- SMDB Peak Pulse Power: 500 Watts (8/20 µsec, Figure 1)
- Pulse Repetition Rate: <.01%

### PACKAGING

- Tape & Reel EIA Standard 481-1-A
- 13 inch reel 2,500 pieces (OPTIONAL)
- Carrier tubes 95 pcs per (STANDARD)

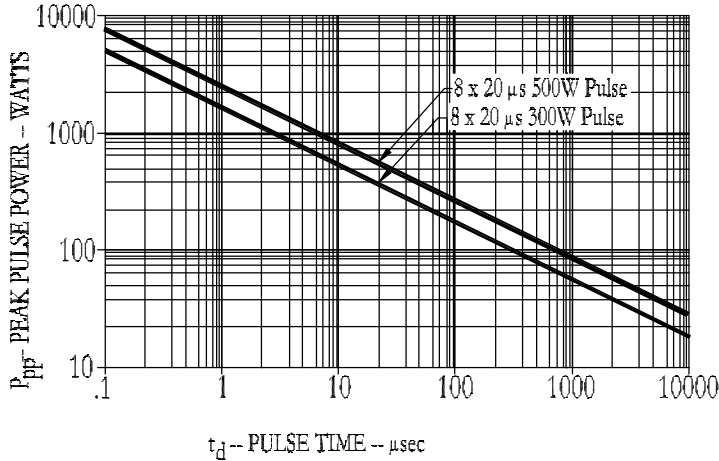
### ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless otherwise specified

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 $V_{BR}$ $\Delta V_{BR}$
		VOLTS	VOLTS	VOLTS	VOLTS	µA	pF	MV/°C
			MIN	MAX	MAX	MAX	TYP	MAX
SMDA03	SDK	3.3	4	7	9	200	800	-3
SMDB03C	SDL	3.3	4	7	9	200	400	-5
SMDB03	PDK	3.3	4	7	9	200	800	-3
SMDB03C	PDL	3.3	4	7	9	200	400	-5
SMDA05	SDA	5.0	6	9.8	11	20	600	3
SMDB05C	SDB	5.0	6	9.8	11	40	300	1
SMDB05	PDA	5.0	6	9.8	11	20	600	3
SMDB05C	PDB	5.0	6	9.8	11	40	300	1
SMDA12	SDC	12.0	13.3	19	24	1	185	10
SMDB12C	SDD	12.0	13.3	19	24	1	94	8
SMDB12	PDC	12.0	13.3	19	24	1	185	10
SMDB12C	PDD	12.0	13.3	19	24	1	94	8
SMDA15	SDE	15.0	16.7	24	30	1	140	13
SMDB15C	SDF	15.0	16.7	24	30	1	70	11
SMDB15	PDE	15.0	16.7	24	30	1	140	13
SMDB15C	PDF	15.0	16.7	24	30	1	70	11
SMDA24	SDG	24.0	26.7	43	55	1	90	30
SMDB24C	SDH	24.0	26.7	43	55	1	45	28
SMDB24	PDG	24.0	26.7	43	55	1	90	30
SMDB24C	PDH	24.0	26.7	43	55	1	45	28

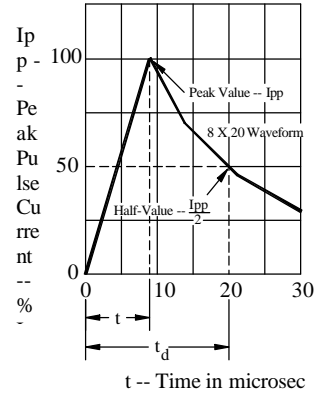
Part numbers with a "C" suffix are bidirectional devices

**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.

## WAVE FORMS



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



**FIGURE 2**  
Pulse Wave Form

