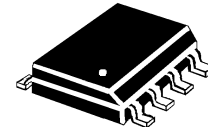




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SMDBA/B03 thru SMDBA/B24C TVSArray[®] Series



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 SMDBA/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
- SMDBA Peak Pulse Power: 300 Watts (8/20 μ sec, Figure 1)
- SMDB Peak Pulse Power: 500 Watts (8/20 μ sec, 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 (FIGURE2)	LEAKAGE CURRENT I_D @ V_{WM}	CAPACITANCE (f=1 MHz) @0V C	TEMPERATURE COEFFICIENT OF V_{BR} ΔV_{BR}
		VOLTS	VOLTS	VOLTS	VOLTS	μ A	pF	MV/°C
		MAX	MIN	MAX	MAX	MAX	TYP	MAX
SMDBA03	SDK	3.3	4	7	9	200	800	-3
SMDBA03C	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
SMDBA05	SDA	5.0	6	9.8	11	20	600	3
SMDBA05C	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
SMDBA12	SDC	12.0	13.3	19	24	1	185	10
SMDBA12C	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
SMDBA15	SDE	15.0	16.7	24	30	1	140	13
SMDBA15C	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
SMDBA24	SDG	24.0	26.7	43	55	1	90	30
SMDBA24C	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

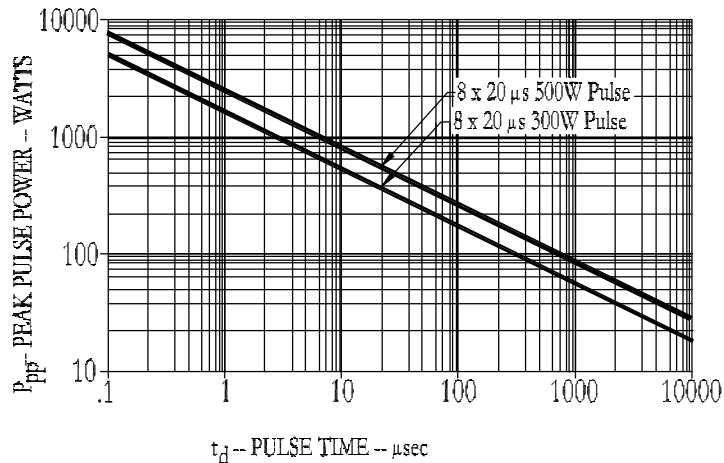


FIGURE 1
Peak Pulse Power Vs Pulse Time

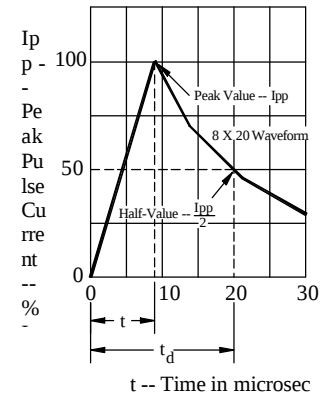


FIGURE 2
Pulse Wave Form

