

RoHS Compliant Product

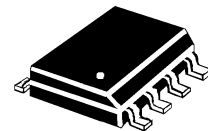
DESCRIPTION (300 and 500 watt)

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.

TVSarray[®] Series



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} ΔV_{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 |
| SMDA03C | 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 |
| SMDA05C | 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 |
| SMDA12C | 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 |
| SMDA15C | 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 |
| SMDA24C | 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

SMDA/B03 thru SMDA/B24C

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

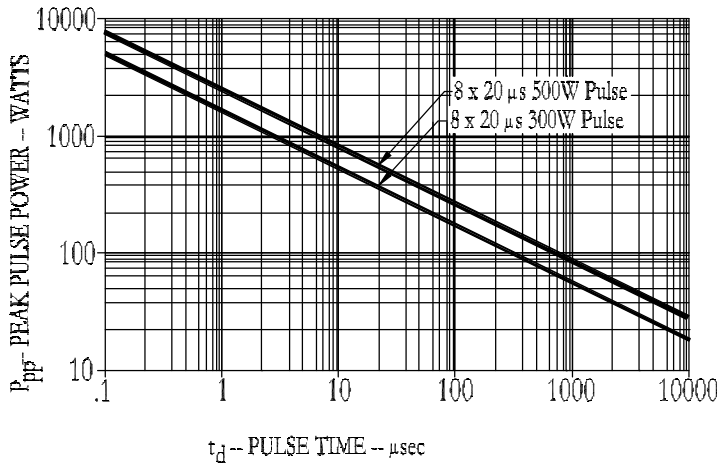


FIGURE 1
Peak Pulse Power Vs Pulse Time

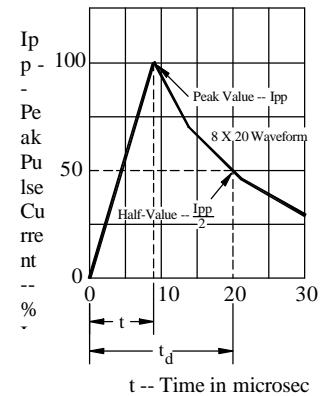
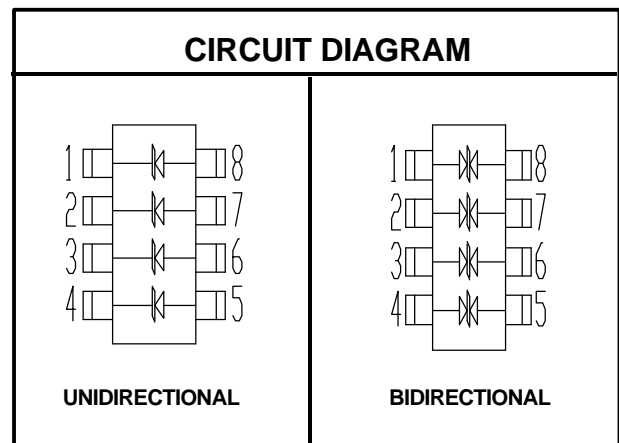
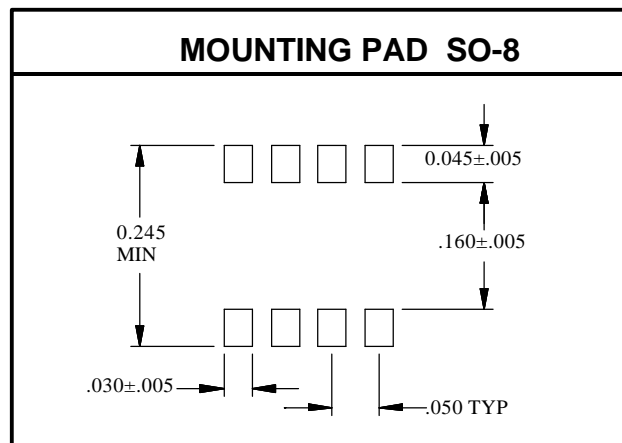


FIGURE 2
Pulse Wave Form



SO-8 PACKAGE

