

STANDARD CAPACITANCE TVS ARRAY

APPLICATIONS

- ✓ RS-232, RS-422 & RS-423 Data Lines
- ✓ Cellular Phones
- ✓ Audio/Video Inputs
- ✓ Portable Electronics
- ✓ Wireless Network Systems
- ✓ Medical Sensors

IEC COMPATIBILITY (EN61000-4)

- ✓ 61000-4-2 (ESD): Air - 15kV, Contact - 8kV
- ✓ 61000-4-4 (EFT): 40A - 5/50ns
- ✓ 61000-4-5 (Surge): 12A, 8/20 μ s - Level 1(Line-Gnd) & Level 2(Line-Line)

FEATURES

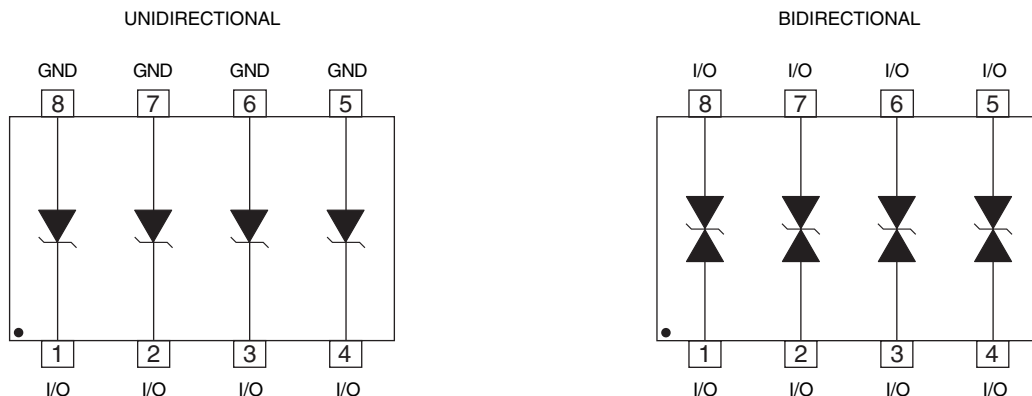
- ✓ 500 Watts Peak Pulse Power per Line ($t_p=8/20\mu$ s)
- ✓ Unidirectional & Bidirectional Configurations
- ✓ Available in Voltage Types Ranging From: 3V to 36V
- ✓ Protects Up to Four (4) Lines
- ✓ ESD Protection > 40 kilovolts
- ✓ RoHS Compliant in Lead-Free Versions

MECHANICAL CHARACTERISTICS

- ✓ Molded JEDEC SO-8 Package
- ✓ Weight 70 milligrams (Approximate)
- ✓ Available in Tin-Lead or Lead-Free Pure-Tin Plating(Annealed)
- ✓ Solder Reflow Temperature:
 - Tin-Lead - Sn/Pb, 85/15: 240-245°C
 - Pure-Tin - Sn, 100: 260-270°C
- ✓ Flammability Rating UL 94V-0
- ✓ 12mm Tape and Reel Per EIA Standard 481
- ✓ Marking: Logo, Marking Code, Date Code & Pin One Defined By Dot on Top of Package



PIN CONFIGURATIONS



DEVICE CHARACTERISTICS

MAXIMUM RATINGS @ 25°C Unless Otherwise Specified			
PARAMETER	SYMBOL	VALUE	UNITS
Peak Pulse Power ($t_p = 8/20\mu s$) - See Figure 1	P_{PP}	500	Watts
Operating Temperature	T_J	-55°C to 150°C	°C
Storage Temperature	T_{STG}	-55°C to 150°C	°C
Forward Voltage @ 100mA, 300μs - Square Wave (Note 1)	V_F	1.5	Volts

Note 1: Only applies to unidirectional devices.

ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified							
PART NUMBER (See Note 1)	DEVICE MARKING CODE	RATED STAND-OFF VOLTAGE	MINIMUM BREAKDOWN VOLTAGE	MAXIMUM CLAMPING VOLTAGE (See Fig. 2)	MAXIMUM CLAMPING VOLTAGE (See Fig. 2)	MAXIMUM LEAKAGE CURRENT	MAXIMUM CAPACITANCE PER LINE
		V_{WM} VOLTS	@ 1mA $V_{(BR)}$ VOLTS	@ $I_p = 1A$ V_C VOLTS	@ 8/20μs $V_C @ I_{PP}$	@ V_{WM} I_D μA	@ 0V, 1 MHz C pF
SMDA03	SDL	3.3	4.0	6.5	10.9V @ 43.0A	125	800
SMDA03C	SDM	3.3	4.5	7.0	10.9V @ 43.0A	125	450
SMDA05	SDA	5.0	6.0	9.8	13.5V @ 42.0A	20	550
SMDA05C	SDB	5.0	6.0	9.8	13.5V @ 42.0A	20	308
SMDA08	SDJ	8.0	8.5	13.4	16.9V @ 34.0A	10	500
SMDA08C	SDK	8.0	8.5	13.4	16.9V @ 34.0A	10	300
SMDA12	SDC	12.0	13.3	19.0	25.9V @ 27.0A	1	185
SMDA12C	SDD	12.0	13.3	19.0	25.9V @ 27.0A	1	105
SMDA15	SDE	15.0	16.7	24.0	30.0V @ 17.0A	1	140
SMDA15C	SDF	15.0	16.7	24.0	30.0V @ 17.0A	1	80
SMDA24	SDG	24.0	26.7	43.0	49.0V @ 12.0A	1	88
SMDA24C	SDH	24.0	26.7	43.0	49.0V @ 12.0A	1	50
SMDA36	SDN	36.0	40.0	51.0	76.8V @ 9.0A	1	80
SMDA36C	SDP	36.0	40.0	51.0	76.8V @ 9.0A	1	45

Note 1: Part numbers with a "C" suffix are bidirectional devices, i.e., SMDA03C.

GRAPHS

FIGURE 1
PEAK PULSE POWER VS PULSETIME

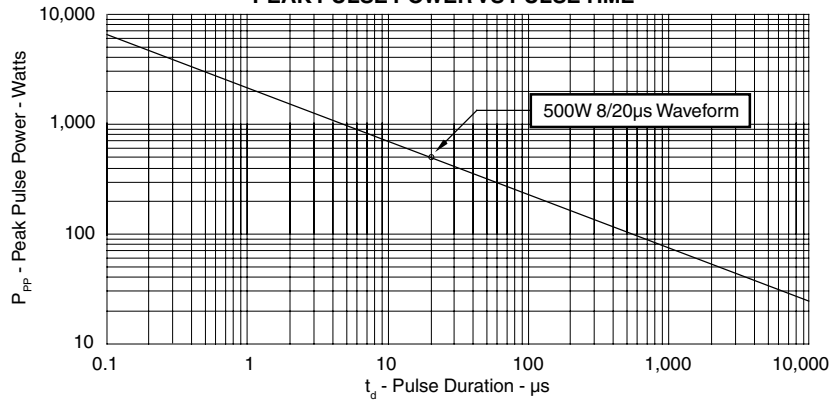


FIGURE 2
PULSE WAVE FORM

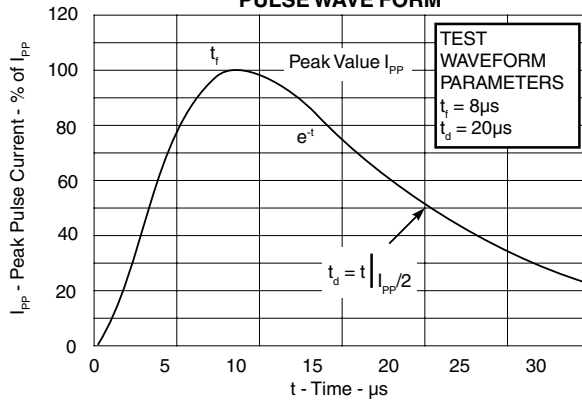
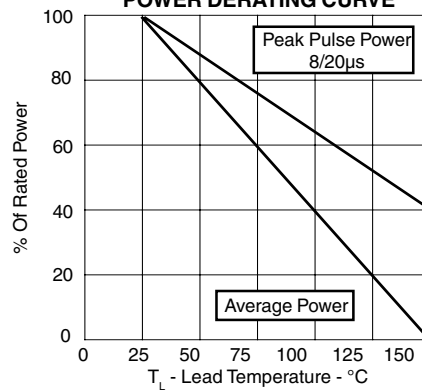
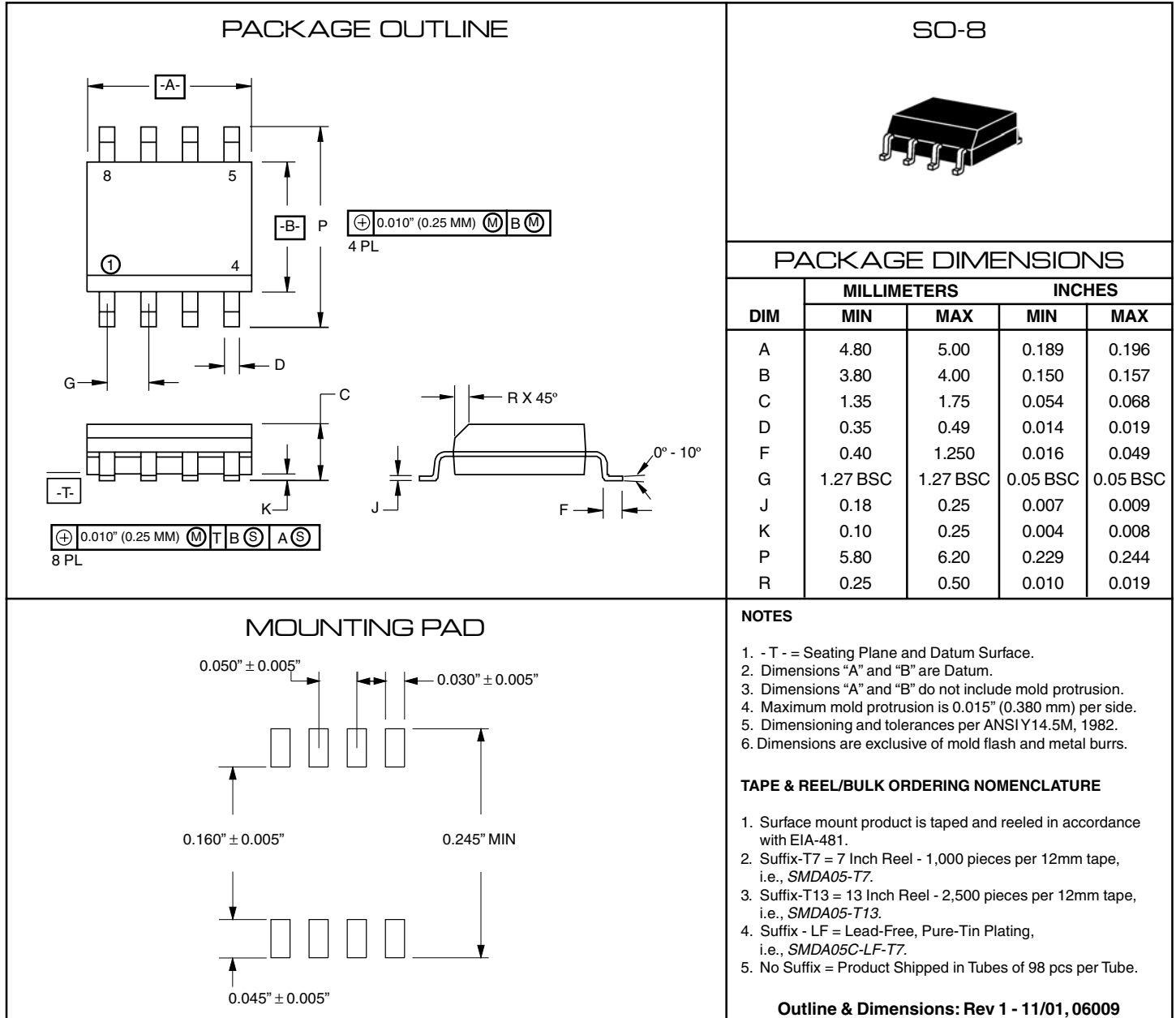


FIGURE 3
POWER DERATING CURVE



PACKAGE OUTLINE & DIMENSIONS



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