

BIDIRECTIONAL MONOLITHIC TVS DIODE ARRAY
APPLICATIONS

- ✓ RS-232, RS-422 & RS-423 Data Lines
- ✓ Microprocessor Based Equipment
- ✓ Control & Monitoring Systems
- ✓ Portable Electronics

IEC COMPATIBILITY (EN61000-4)

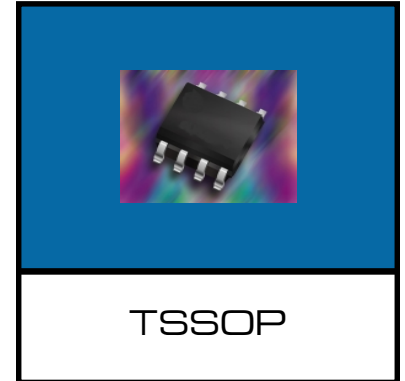
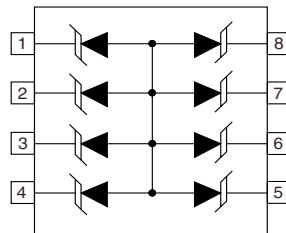
- ✓ 61000-4-2 (ESD): Air - 15kV, Contact - 8kV
- ✓ 61000-4-4 (EFT): 40A - 5/50ns
- ✓ 61000-4-5 (Surge): 12A, 8/20 μ s - Level 1(Line-Gnd) & Level 2(Line-Line)

FEATURES

- ✓ 500 Watts Peak Pulse Power Dissipation Per Line ($t_p = 8/20\mu$ s)
- ✓ Bidirectional Monolithic Design
- ✓ ESD Protection > 40 kilovolts
- ✓ Available in Five Voltage Types Ranging From 5.0V to 24V

MECHANICAL CHARACTERISTICS

- ✓ Molded JEDEC SO-8
- ✓ Weight 0.1 gram (Approximate)
- ✓ Flammability Rating UL 94V-0
- ✓ 12mm Tape and Reel Per EIA Standard 481
- ✓ Device Marking: Marking Code & Logo
- ✓ Pin 1 Indicated By Dot on Top of Package


CIRCUIT DIAGRAMS


TSM DA05CM thru TSM DA24CM

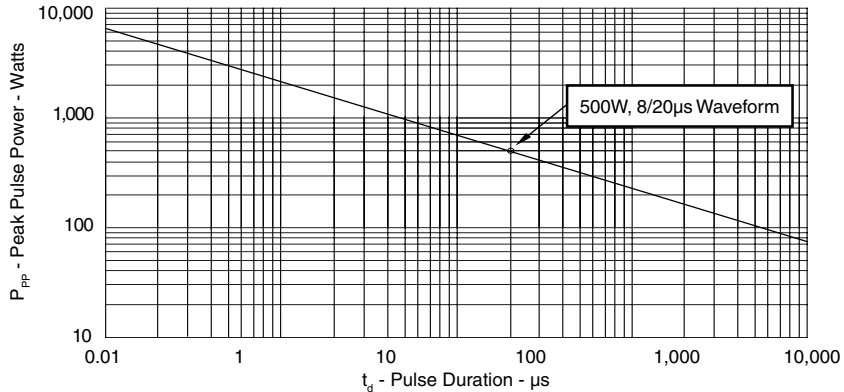
DEVICE CHARACTERISTICS

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

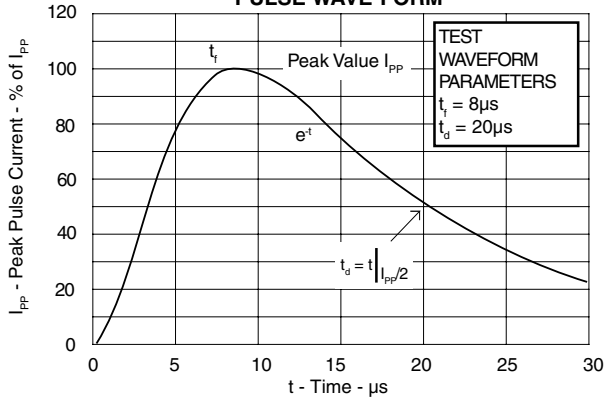
ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified							
PART NUMBER	DEVICE MARKING	RATED STAND-OFF VOLTAGE V_{WM} VOLTS	MINIMUM BREAKDOWN VOLTAGE @ 1mA $V_{(BR)}$ VOLTS	MAXIMUM CLAMPING VOLTAGE (See Fig. 2) @ $I_p = 1A$ V_C VOLTS	MAXIMUM CLAMPING VOLTAGE (See Fig. 2) @ 8/20 μs $V_C @ I_{PP}$	MAXIMUM LEAKAGE CURRENT @ V_{WM} I_d μA	MAXIMUM CAPACITANCE 0V @ 1 MHz C pF
TSM DA05CM	REJ	5.0	6.0	9.8	19V @ 30A	100	350
TSM DA08CM	REK	8.0	8.5	13.4	23V @ 24A	10	300
TSM DA12CM	REL	12.0	13.4	19.0	29V @ 20A	1	150
TSM DA15CM	REM	15.0	16.7	24.0	31V @ 18A	1	100
TSM DA24CM	REN	24.0	26.7	43.0	45V @ 13A	1	63

GRAPHS

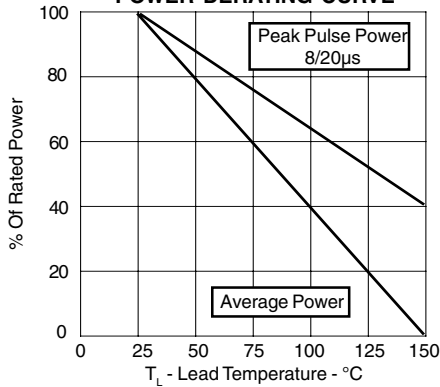
**FIGURE 1
 PEAK PULSE POWER VS PULSE TIME**



**FIGURE 2
 PULSE WAVE FORM**

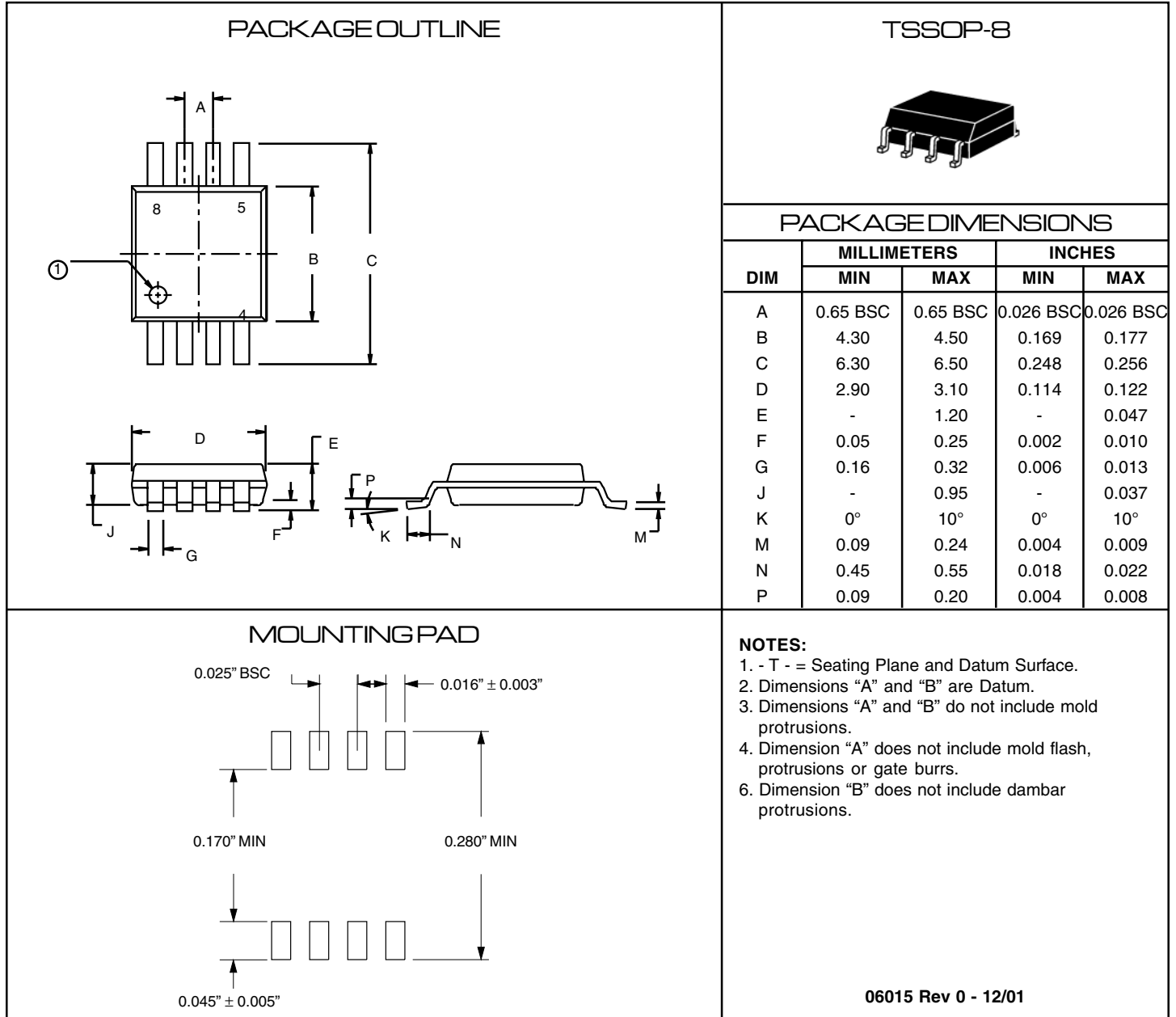


**FIGURE 3
 POWER DERATING CURVE**



TSMDA05CM thru TSMDA24CM

PACKAGE OUTLINE & DIMENSIONS



PART NUMBER SUFFIXES USED FOR TAPE & REEL/BULK ORDERING:

Surface mount product is taped and reeled in accordance with EIA-481.
 Suffix-T7 = 7 Inch Reel - 1,000 pieces per reel i.e.: TSMDA05CM - T7
 Suffix-T13 = 13 Inch Reel - 2,500 pieces per reel i.e.: TSMDA05CM - T13
 No Suffix = Product Shipped in Tubes of 98 pcs per Tube

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