

STANDARD CAPACITANCE TVS ARRAY

APPLICATIONS

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

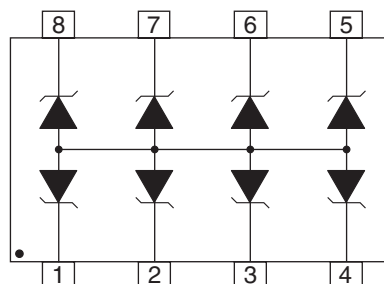
- ✓ 500 Watts Peak Pulse Power per Line (tp=8/20 μ s)
- ✓ Bidirectional Configurations
- ✓ Monolithic Design
- ✓ Available in Voltage Types Ranging From: 5V to 24V
- ✓ Protects 4 - 7 Lines
- ✓ ESD Protection > 40 kilovolts
- ✓ RoHS Compliant in Lead-Free Versions

MECHANICAL CHARACTERISTICS

- ✓ Molded JEDEC MSOP-8 Package
- ✓ Weight 24 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 CONFIGURATION



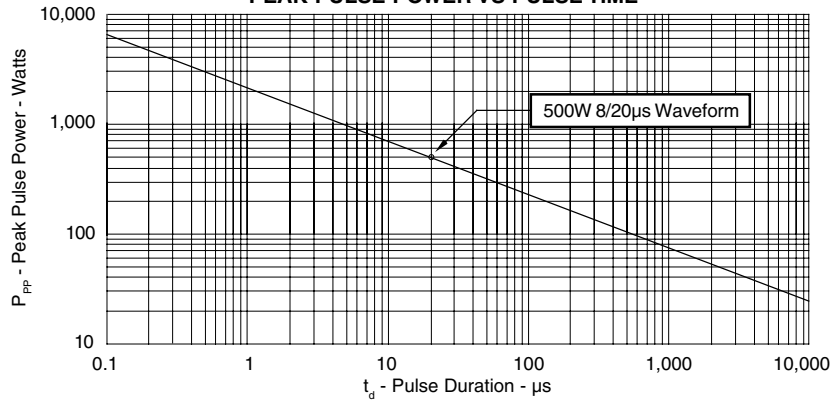
DEVICE CHARACTERISTICS

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

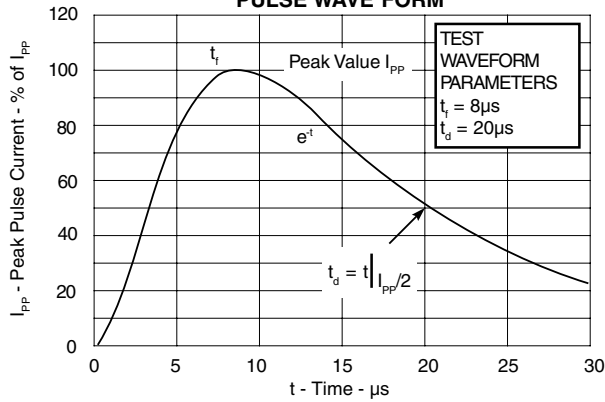
ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified							
PART NUMBER	DEVICE MARKING CODE	RATED STAND-OFF VOLTAGE V_{WM} VOLTS	MINIMUM BREAKDOWN VOLTAGE @ 1mA $V_{(BR)}$ VOLTS	MAXIMUM CLAMPING VOLTAGE (See Fig. 2) @ $I_p = 1A$ V_C VOLTS	MAXIMUM CLAMPING VOLTAGE (See Fig. 2) @ 8/20 μs $V_C @ I_{PP}$	MAXIMUM LEAKAGE CURRENT @ V_{WM} I_D μA	MAXIMUM CAPACITANCE PER LINE @ 0V, 1 MHz C pF
TSMDA05CM	REJ	5.0	6.0	9.8	19.0V @ 30A	100	350
TSMDA08CM	REK	8.0	8.5	13.4	23.7V @ 24A	10	300
TSMDA12CM	REL	12.0	13.4	19.0	29.2V @ 20A	1	150
TSMDA15CM	REM	15.0	16.7	24.0	31.1V @ 18A	1	100
TSMDA24CM	REN	24.0	26.7	43.0	45.0V @ 13A	1	63

GRAPHS

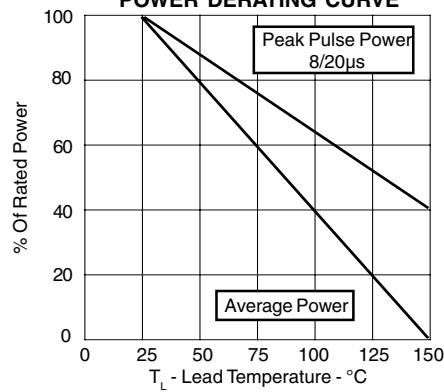
**FIGURE 1
 PEAK PULSE POWER VS PULSE TIME**



**FIGURE 2
 PULSE WAVE FORM**



**FIGURE 3
 POWER DERATING CURVE**



PACKAGE OUTLINE & DIMENSIONS

PACKAGE OUTLINE		MSOP-8			
		PACKAGE DIMENSIONS			
DIM	MILLIMETERS		INCHES		
	MIN	MAX	MIN	MAX	
A	0.65 BSC	0.65 BSC	0.026 BSC	0.026 BSC	
B	2.90	3.10	0.114	0.122	
C	4.80	5.00	0.189	0.197	
D	2.90	3.10	0.114	0.122	
E	-	1.10	-	0.044	
F	0.05	0.25	0.002	0.010	
G	0.16	0.32	0.006	0.013	
J	-	0.95	-	0.037	
K	0°	6°	0°	6°	
M	0.09	0.24	0.004	0.009	
N	0.45	0.55	0.018	0.022	

MOUNTING PAD		NOTES	
		<ol style="list-style-type: none"> 1. - T = Seating Plane and Datum Surface. 2. Dimensions "A" and "B" are Datum. 3. Dimensions "A" and "B" do not include mold protrusions. 4. Dimension "A" does not include mold flash, protrusions or gate burrs. 6. Dimension "B" does not include dambar protrusions. 	
<ol style="list-style-type: none"> 1. Surface mount product is taped and reeled in accordance with EIA-481. 2. Suffix-T13 = 13 Inch Reel - 4,000 pieces per 12mm tape, i.e., TSM DA05CM-T13. 3. Suffix - LF = Lead-Free, Pure-Tin Plating, i.e., TSM DA05CM-LF-T13. 4. No Suffix = Product Shipped in Tubes of 102 pcs per Tube. 		<p style="text-align: center;">TAPE & REEL/BULK ORDERING NOMENCLATURE</p>	
		<p>Outline & Dimensions: Rev 0 - 10/03, 06046</p>	

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