

STANDARD CAPACITANCE TVS ARRAY
APPLICATIONS

- ✓ Parallel Port
- ✓ RS-232, RS-422 & RS-423 Data Lines
- ✓ Industrial & Instrumentation Equipment
- ✓ Board Level Interface Protection
- ✓ I/O Port Protection

IEC COMPATIBILITY (EN61000-4)

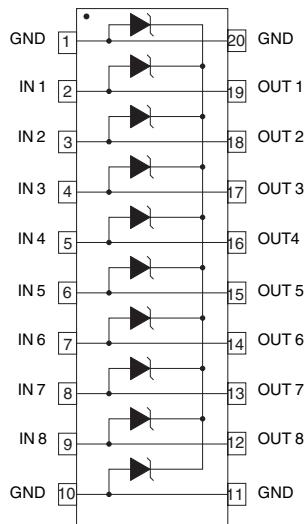
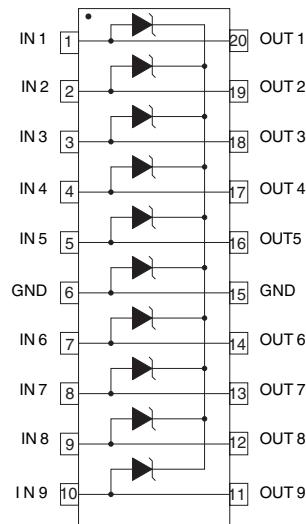
- ✓ 61000-4-2 (ESD): Air - 15kV, Contact - 8kV
- ✓ 61000-4-4 (EFT): 40A - 5/50ns
- ✓ 61000-4-5 (Surge): 24A, 8/20 μ s - Level 2(Line-Gnd) & Level 3(Line-Line)

FEATURES

- ✓ 1500 Watts Peak Pulse Power per Line (tp=8/20 μ s)
- ✓ ESD Protection > 40 kilovolts
- ✓ Protection for 8 or 9 Bidirectional Data Lines
- ✓ Externally Low Clamping Voltage
- ✓ Available in 4 Voltage Types Ranging From 5V to 24V
- ✓ Bidirectional Configuration
- ✓ Monolithic Design

MECHANICAL CHARACTERISTICS

- ✓ Molded JEDEC SO-20WB (Wide Body) Package
- ✓ Weight 0.6 grams (Approximate)
- ✓ Flammability rating UL 94V-0
- ✓ 24mm Tape and Reel Per EIA Standard 481
- ✓ Marking: Logo, Part Number, Date Code & Pin One Defined By Dot on Top of Package


PIN CONFIGURATIONS
EQUAL TO 8 BIDIRECTIONAL TVS DEVICES

EQUAL TO 9 BIDIRECTIONAL TVS DEVICES


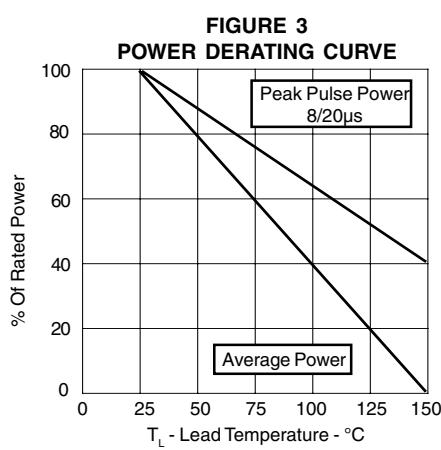
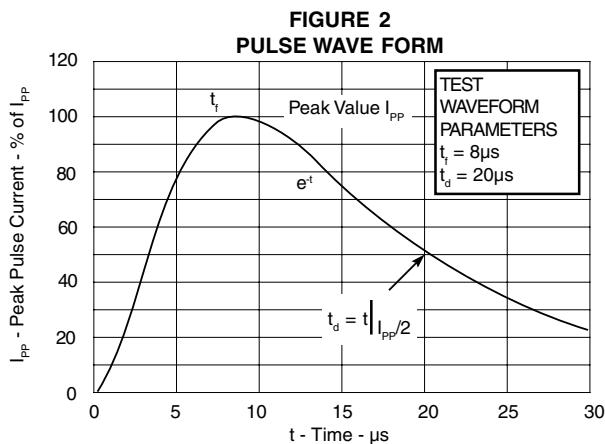
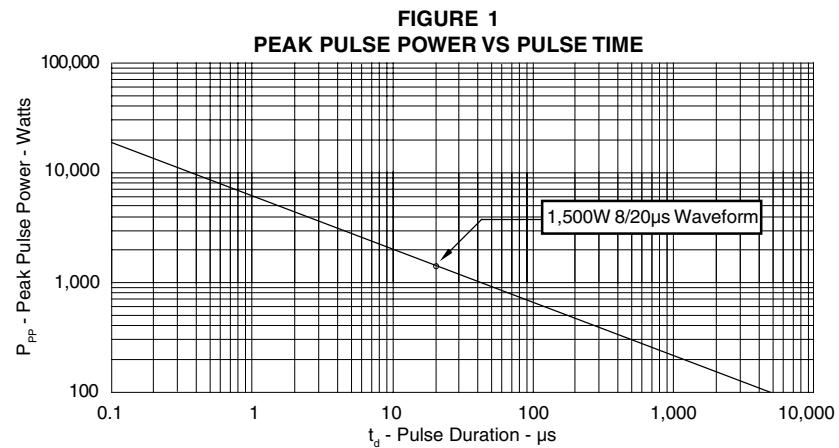
DEVICE CHARACTERISTICS

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}	1500	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 (See Note 1)	RATED STAND-OFF VOLTAGE V_{WM} VOLTS	MINIMUM BREAKDOWN VOLTAGE @ 1mA $V_{(BR)}$ VOLTS	MAXIMUM CLAMPING VOLTAGE (See Fig. 2) @ $I_{PP} = 10A$ V_C VOLTS	MAXIMUM CLAMPING VOLTAGE (See Fig. 2) @ 8/20μs V_C @ I_{PP}	MAXIMUM LEAKAGE CURRENT @ V_{WM} I_D μA	MAXIMUM CAPACITANCE @ 0V, 1 MHz C_J pF
SM20MT05C	5.0	6.5	9.5	11.0	50	700
SM20MT08C	8.0	10.0	13.0	12.0	10	360
SM20MT15C	15.0	18.0	23.0	26.0	4	250
SM20MT24C	24.0	25.0	31.0	36.0	4	140

Note 1: These devices are bidirectional only. Electrical characteristics apply in both directions. The monolithic TVS array is based on 10 unidirectional P/N junctions with a common cathode and can be configured to offer 8 to 9 bidirectional lines of protection. The inputs are symmetrical and can be reversed for specific application layout requirements.

GRAPHS



PACKAGE OUTLINE & DIMENSIONS

PACKAGE OUTLINE		SO-20WB (Wide Body)																																																												
		PACKAGE DIMENSIONS <table border="1"> <thead> <tr> <th rowspan="2">DIM</th><th colspan="2">MILLIMETERS</th><th colspan="2">INCHES</th></tr> <tr> <th>MIN</th><th>MAX</th><th>MIN</th><th>MAX</th></tr> </thead> <tbody> <tr> <td>A</td><td>12.65</td><td>12.95</td><td>0.499</td><td>0.510</td></tr> <tr> <td>B</td><td>7.40</td><td>7.60</td><td>0.292</td><td>0.299</td></tr> <tr> <td>C</td><td>2.35</td><td>2.65</td><td>0.093</td><td>0.104</td></tr> <tr> <td>D</td><td>0.35</td><td>0.49</td><td>0.014</td><td>0.019</td></tr> <tr> <td>F</td><td>0.50</td><td>0.90</td><td>0.020</td><td>0.035</td></tr> <tr> <td>G</td><td>1.27 BSC</td><td>1.27 BSC</td><td>0.05 BSC</td><td>0.05 BSC</td></tr> <tr> <td>J</td><td>0.25</td><td>0.32</td><td>0.010</td><td>0.012</td></tr> <tr> <td>K</td><td>0.10</td><td>0.25</td><td>0.004</td><td>0.009</td></tr> <tr> <td>P</td><td>10.05</td><td>10.55</td><td>0.395</td><td>0.415</td></tr> <tr> <td>R</td><td>0.25</td><td>0.75</td><td>0.010</td><td>0.029</td></tr> </tbody> </table>		DIM	MILLIMETERS		INCHES		MIN	MAX	MIN	MAX	A	12.65	12.95	0.499	0.510	B	7.40	7.60	0.292	0.299	C	2.35	2.65	0.093	0.104	D	0.35	0.49	0.014	0.019	F	0.50	0.90	0.020	0.035	G	1.27 BSC	1.27 BSC	0.05 BSC	0.05 BSC	J	0.25	0.32	0.010	0.012	K	0.10	0.25	0.004	0.009	P	10.05	10.55	0.395	0.415	R	0.25	0.75	0.010	0.029
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MOUNTING PAD		NOTES <ol style="list-style-type: none"> - T - = Seating Plane and Datum Surface. Dimensions "A" and "B" are Datum. Dimensions "A" and "B" do not include mold protrusions. Maximum mold protrusion is 0.015" (0.380 mm) per side. Dimensioning and tolerances per ANSI Y14.5M, 1982. Dimensions are exclusive of mold flash and metal burrs. TAPE & REEL/BULK ORDERING NOMENCLATURE <ol style="list-style-type: none"> Surface mount product is taped and reeled in accordance with EIA-481. Suffix-T13 = 13 Inch Reel - 1,000 pieces per 24mm tape, i.e., SM20MT05C-T13. No Suffix = Product Shipped in Tubes of 37 pcs per Tube. 																																																												
Outline & Dimensions: Rev 1 - 11/01, 06018																																																														

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