

SM20MT05C thru SM20MT24C

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)

- ✓ 61000-4-4 (EFT): 40A 5/50ns
- ✓ 61000-4-5 (Surge): 24A, 8/20µs Level 2(Line-Gnd) & Level 3(Line-Line)

FEATURES

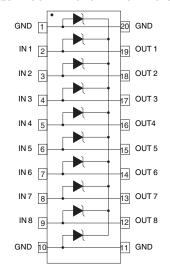
- ✓ 1500 Watts Peak Pulse Power per Line (tp=8/20µs)
- ✓ ESD Protection > 40 kilovolts
- ✔ Protection for 8 or 9 Bidirectional Data Lines
- ✓ Externally Low Clamping Voltage
- ✓ Available in 4 Voltage Types Ranging From 5V to 24V
- ✓ Bidirectional Configuration
- ✓ Monolithic Design

MECHANICAL CHARACTERISTICS

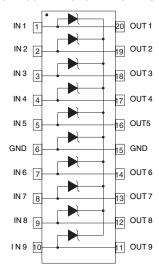
- ✓ Molded JEDEC SO-20WB (Wide Body) Package
- ✓ Weight 0.6 grams (Approximate)
- ✓ Flammability rating UL 94V-0
- ✓ 24mm Tape and Reel Per EIA Standard 481
- ✓ Marking: Logo, Part Number, Date Code & Pin One Defined By Dot on Top of Package

PIN CONFIGURATIONS

EQUALTO 8 BIDIRECTIONALTVS DEVICES



EQUALTO 9 BIDIRECTIONALTVS DEVICES





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DEVICE CHARACTERISTICS

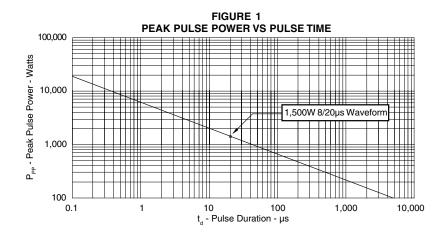
MAXIMUM RATINGS @ 25°C Unless Otherwise Specified						
PARAMETER	SYMBOL	VALUE	UNITS			
Peak Pulse Power (t _p = 8/20μs) - See Figure 1	$P_{_{PP}}$	1500	Watts			
Operating Temperature	T _J	-55°C to 150°C	∞			
Storage Temperature	T _{STG}	-55°C to 150°C	∞			

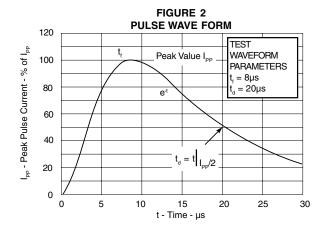
ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified							
PART NUMBER (See Note 1)	RATED STAND-OFF VOLTAGE	MINIMUM BREAKDOWN VOLTAGE	MAXIMUM CLAMPING VOLTAGE (See Fig. 2)	MAXIMUM CLAMPING VOLTAGE (See Fig. 2)	MAXIMUM LEAKAGE CURRENT	MAXIMUM CAPACITANCE	
	V _{wm} VOLTS	@ 1mA V _(BR) VOLTS	@ I _{PP} = 10A V _C VOLTS	@ 8/20μs V _c @ Ι _{ΡΡ}	@ V _{wм} Ι _D μΑ	@ 0V, 1 MHz C _J pF	
SM20MT05C SM20MT08C SM20MT15C SM20MT24C	5.0 8.0 15.0 24.0	6.5 10.0 18.0 25.0	9.5 13.0 23.0 31.0	11.0 12.0 26.0 36.0	50 10 4 4	700 360 250 140	

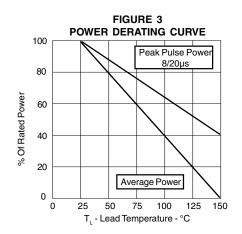
Note 1: These devices are bidirectional only. Electrical characteristics apply in both directions. The monolithic TVS array is based on 10 unidirectional P/N junctions with a common cathode and can be configured to offer 8 to 9 bidirectional lines of protection. The inputs are symmetrical and can be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

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GRAPHS

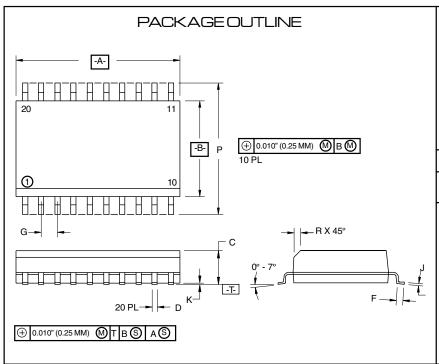






SM20MT05C SM20MT24C

PACKAGE OUTLINE & DIMENSIONS



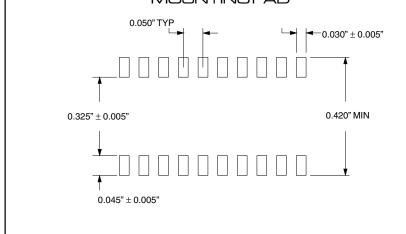
SO-20WB (Wide Body)



PACKAGE DIMENSIONS

	N/11 1 1N/1	TEDE	INCHES		
	MILLIMETERS		попез		
DIM	MIN	MAX	MIN	MAX	
Α	12.65	12.95	0.499	0.510	
В	7.40	7.60	0.292	0.299	
С	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	
Р	10.05	10.55	0.395	0.415	
R	0.25	0.75	0.010	0.029	

MOUNTINGPAD



NOTES

- 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. Maximum mold protrusion is 0.015" (0.380 mm) per side.
- 5. Dimensioning and tolerances per ANSI Y14.5M, 1982.
- 6. Dimensions are exclusive of mold flash and metal burrs.

TAPE & REEL/BULK ORDERING NOMENCLATURE

- 1. Surface mount product is taped and reeled in accordance with EIA-481.
- 2. Suffix-T13 = 13 Inch Reel 1,000 pieces per 24mm tape, i.e., SM20MT05C-T13.
- 3. No Suffix = Product Shipped in Tubes of 37 pcs per Tube.

Outline & Dimensions: Rev 1 - 11/01, 06018

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ProTek Devices

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