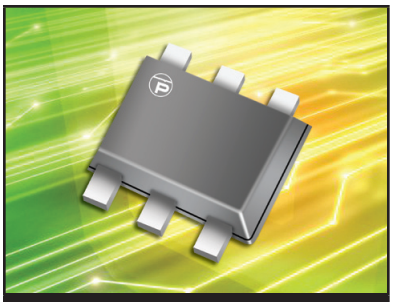
MULTI-LINE TVS ARRAY



SOT-563 PACKAGE

DESCRIPTION

The MSMFxxC series are multi-line TVS arrays designed to protect wireless telecommunications and portable electronic applications from the damaging effects of ESD and EFT. The MSMFxxC is available in a 5 line unidirectional or 4 line bidirectional configuration and is rated at 100 Watts peak pulse power, which is sufficient protection for tertiary type lightning threats at key interface locations.

Packaged in a miniature SOT-563, the MSMFxxC series meets IEC 61000-4-2 (ESD) and 61000-4-4 (EFT) immunity requirements. Each device should be placed near a connector to provide the best protection against transients.

FEATURES

- Compatible with IEC 61000-4-2 (ESD): Air 15kV, Contact 8kV
- Compatible with IEC 61000-4-4 (EFT): 40A, 5/50ns
- 100 Watts Peak Pulse Power per Line(tp = 8/20µs)
- Monolithic Design
- Available in Multiple Voltages
- Low Clamping Voltage
- ESD Protection > 25 kilovolts
- Low Leakage Current
- Protects 4 Bidirectional Lines & 5 Unidirectional Lines
- RoHS Compliant
- REACH Compliant

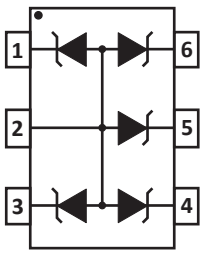
APPLICATIONS

- Communication Systems
- SMART Phones
- Portable Electronics
- Video Interfaces

MECHANICAL CHARACTERISTICS

- Molded JEDEC SOT-563 Package
- Approximate Weight: 3 milligrams
- Lead-Free Nickel Paladium Gold Plating
- Solder Reflow Temperature - 260-270°C
- Flammability Rating UL 94V-0
- 8mm Tape and Reel per EIA Standard 481

PIN CONFIGURATION



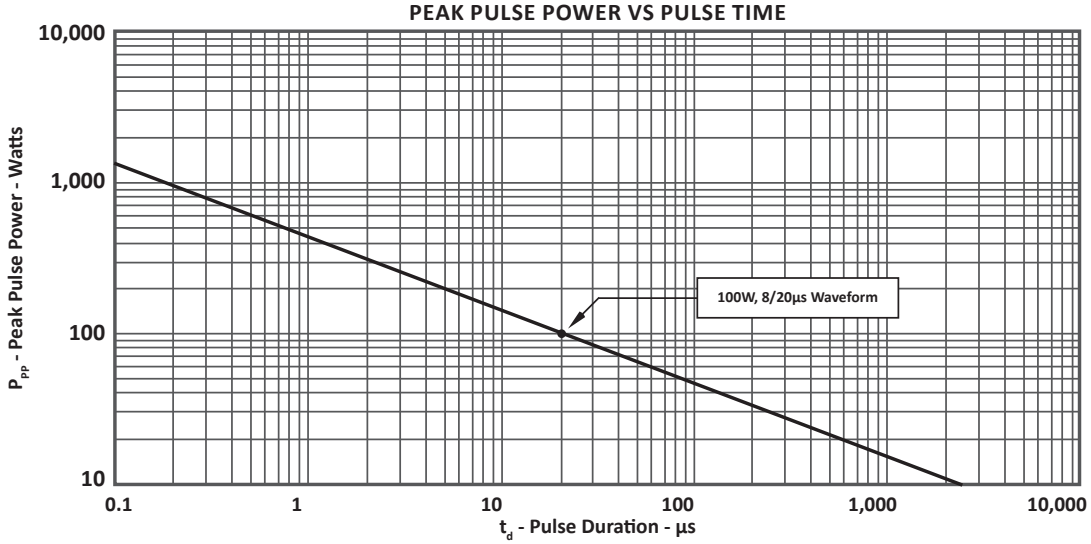
TYPICAL DEVICE CHARACTERISTICS

MAXIMUM RATINGS @ 25°C Unless Otherwise Specified			
PARAMETER	SYMBOL	VALUE	UNITS
Peak Pulse Power (tp = 8/20µs) - See Figure 1	P_{PP}	100	Watts
Operating Temperature	T_L	-55 to 150	°C
Storage Temperature	T_{STG}	-55 to 150	°C
Maximum Forward Voltage @ 10mA	V_F	1.0	V

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 (Fig. 2) @ 8/20µs V_C @ I_{PP}	MAXIMUM LEAKAGE CURRENT @V_{WM} I_D µA	TYPICAL CAPACITANCE (Note 1) @0V, 1MHz C pF
MSMF05C	B	5.0	6.0	12.0V @ 9.0A	1	40
MSMF12C	D	12.0	13.3	23.8V @ 4.2A	1	20
MSMF15C	F	15.0	16.7	33.3V @ 3.0A	1	15
MSMF24C	H	24.0	26.7	55.5V @ 1.8A	1	10

NOTES
1. Pins 1, 3, 4, 5 or 6 to pin 2.

FIGURE 1
PEAK PULSE POWER VS PULSE TIME



TYPICAL DEVICE CHARACTERISTICS

FIGURE 2
PULSE WAVE FORM

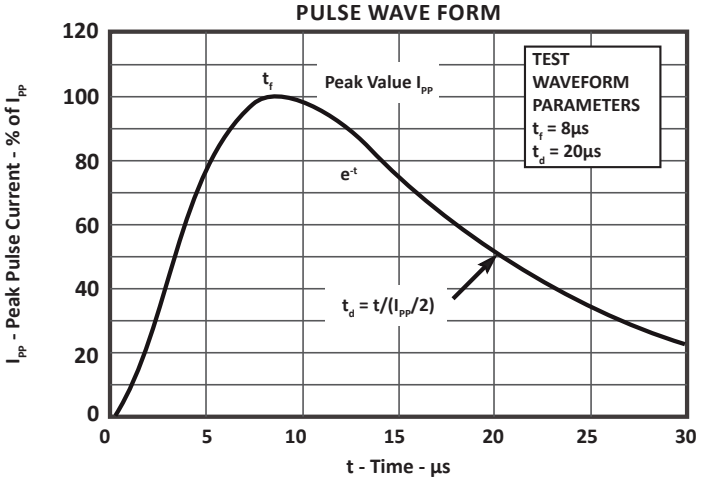


FIGURE 3
POWER DERATING CURVE

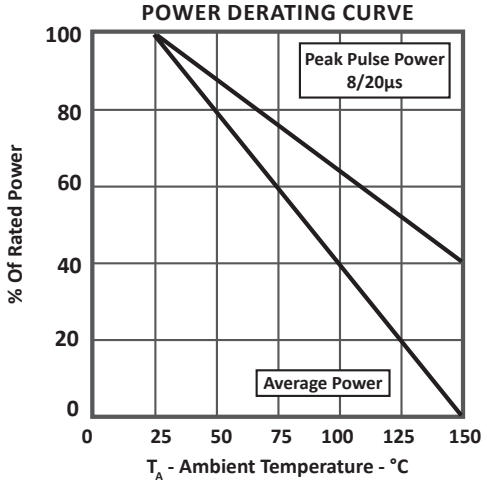
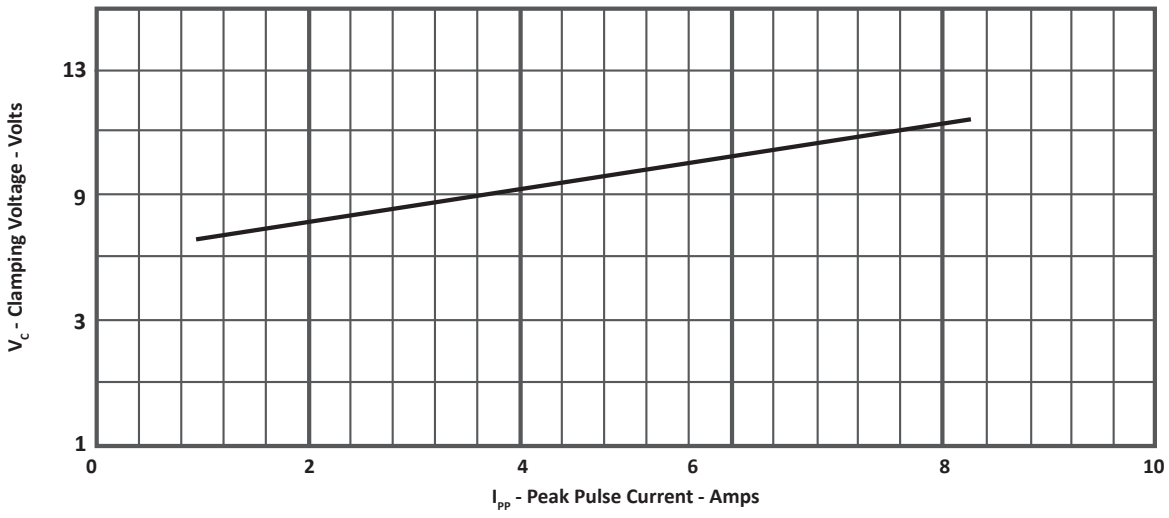


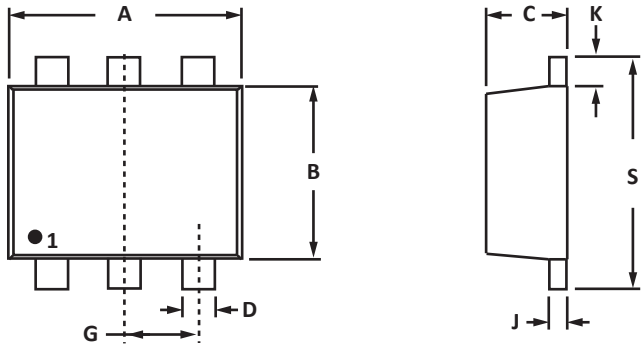
FIGURE 4
TYPICAL CLAMPING VOLTAGE VS PEAK PULSE CURRENT



SOT-563 PACKAGE INFORMATION

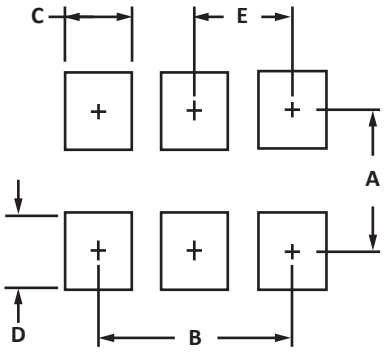
OUTLINE DIMENSIONS				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.50	1.70	0.059	0.067
B	1.10	1.30	0.043	0.051
C	0.50	0.60	0.020	0.024
D	0.17	0.27	0.007	0.011
G	0.50 BSC		0.020 BSC	
J	0.08	0.18	0.003	0.007
K	0.10	0.30	0.004	0.012
S	1.50	1.70	0.059	0.067

NOTES
1. Controlling dimension: inches.
2. Dimensioning and tolerances per ANSI Y14.5M, 1985.
3. Dimensions are exclusive of mold flash and metal burrs.

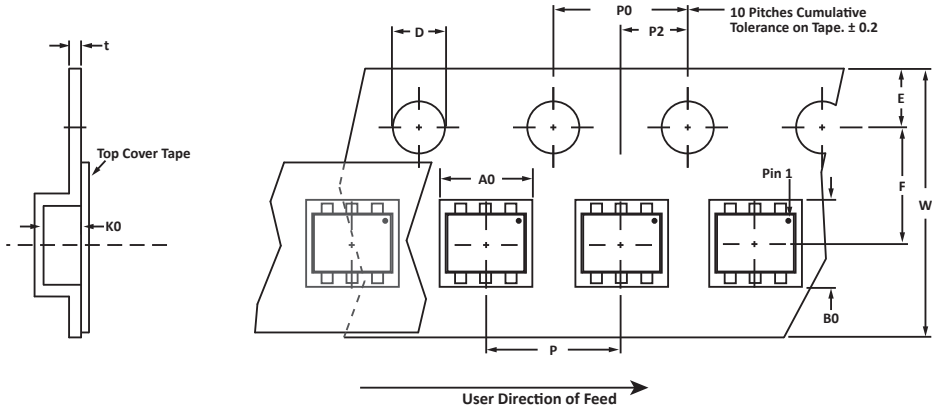


PAD LAYOUT DIMENSIONS		
DIM	MILLIMETERS	INCHES
	NOMINAL	NOMINAL
A	1.40	0.055
B	1.02	0.040
C	0.30	0.012
D	0.51	0.020
E	0.51	0.020

NOTES
1. Controlling dimension: inches.



TAPE AND REEL



SPECIFICATIONS												
REEL DIA.	TAPE WIDTH	A0	B0	K0	D	E	F	W	P0	P2	P	tmax
178mm (7")	8mm	1.78 ± 0.05	1.78 ± 0.05	0.69 ± 0.05	1.50 ± 0.10	1.75 ± 0.10	3.50 ± 0.05	8.00 ± 0.30	4.00 ± 0.10	2.00 ± 0.05	4.00 ± 0.10	0.25

NOTES
1. Dimensions are in millimeters.
2. Surface mount product is taped and reeled in accordance with EIA-481.
3. Suffix - T7 = 7" Reel - 3,000 pieces per 8mm tape.
4. Suffix - T13 = 13" Reel - 10,000 pieces per 8mm tape.
5. Marking on Part - marking code (see page 2) and pin one defined by dot on package.

Package outline, pad layout and tape specifications per document number 06051.R3 3/11.

ORDERING INFORMATION					
BASE PART NUMBER (xx = Voltage)	LEADFREE SUFFIX	TAPE SUFFIX	QTY/REEL	REEL SIZE	TUBE QTY
MSMFxxC	-P	-T7	3,000	7"	n/a
MSMFxxC	-P	-T13	10,000	13"	n/a

COMPANY INFORMATION

COMPANY PROFILE

ProTek Devices, based in Tempe, Arizona USA, is a manufacturer of Transient Voltage Suppression (TVS) products designed specifically for the protection of electronic systems from the effects of lightning, Electrostatic Discharge (ESD), Nuclear Electromagnetic Pulse (NEMP), inductive switching and EMI/RFI. With over 25 years of engineering and manufacturing experience, ProTek designs TVS devices that provide application specific protection solutions for all electronic equipment/systems.

ProTek Devices Analog Products Division, also manufactures analog interface, control, RF and power management products.

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