MULTI-LINE LOW CAPACITANCE TVS ARRAY



DESCRIPTION

The MSMF05LC is a 5 Volt, low capacitance, multi-line TVS array. This device is designed to protect wireless telecommunications and portable electronic applications from the damaging effects of ESD and EFT. The MSMF05LC is available in a 4 line unidirectional or 3 line bidirectional configuration with a working voltage of 5 Volts and a minimum breakdown voltage of 6 Volts. This device is rated at 25 Watts peak pulse power, which is sufficient protection for tertiary type lightning threats at key interface locations.

Packaged in a miniature SOT-553, the MSMF05LC 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
- 25 Watts Peak Pulse Power per Line(tp = 8/20μs)
- Monolithic Design
- · Available in 5 Volts
- Low Clamping Voltage
- ESD Protection > 25 kilovolts
- Low Leakage Current
- · Low Capacitance: 9pF
- Protects 4 Unidirectional Lines or 3 Bidirectional Lines
- RoHS Compliant
- REACH Compliant

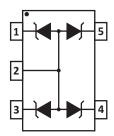
MECHANICAL CHARACTERISTICS

- Molded JEDEC SOT-553 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

APPLICATIONS

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

PIN CONFIGURATION



TYPICAL DEVICE CHARACTERISTICS

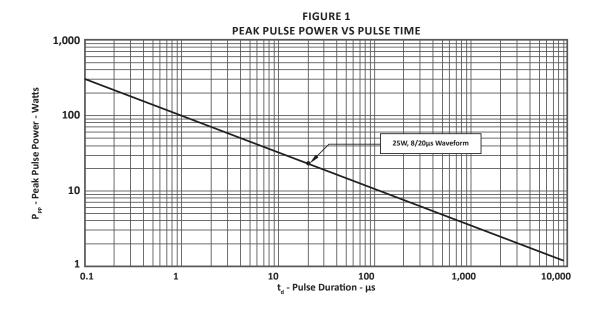
MAXIMUM RATINGS @ 25°C Unless Otherwise Specified						
PARAMETER	SYMBOL	VALUE	UNITS			
Peak Pulse Power (tp = 8/20μs) - See Figure 1	P _{pp}	25	Watts			
Operating Temperature	T _L	-55 to 150	°C			
Storage Temperature	T _{stg}	-55 to 150	°C			
Maximum Forward Voltage @ 10mA	V _F	1.0	V			

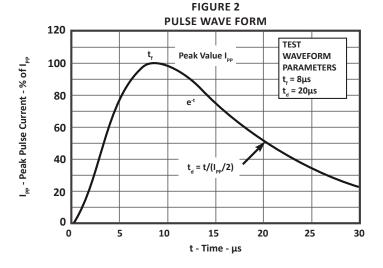
ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified								
PART NUMBER	DEVICE MARKING	RATED STAND-OFF VOLTAGE V _{WM} VOLTS	MINIMUM BREAKDOWN VOLTAGE @ 1mA V _(BR) VOLTS	MAXIMUM CLAMPING VOLTAGE (Fig. 2) @ I _p = 2A V _C VOLTS	MAXIMUM LEAKAGE CURRENT @V _{wM} I _D μΑ	TYPICAL CAPACITANCE (Note 1) @0V, 1MHz C pF		
MSMF05LC	5L	5.0	6.0	12.0	1	9		

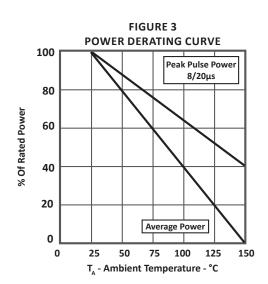
NOTES

^{1.} Pins 1, 3, 4 or 5 to pin 2.

TYPICAL DEVICE CHARACTERISTICS







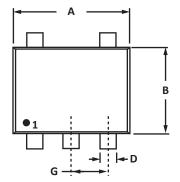
SOT-553 PACKAGE INFORMATION

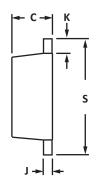
OUTLINE DIMENSIONS						
DIM	MILLIN	IETERS	INCHES			
	MIN	MAX	MIN	MAX		
Α	1.50 1.70		0.059	0.067		
В	1.10 1.30		0.043	0.051		
С	0.50 0.60		0.020	0.024		
D	0.17 0.27		0.007	0.011		
G	0.50 BSC		0.020) BSC		
J	0.08 0.18		0.003	0.007		
К	0.10 0.30		0.004	0.012		
S	1.50 1.70		0.059	0.067		

1. Controlling dimension: inches.

NOTES

- 2. Dimensioning and tolerances per ANSI Y14.5M, 1985.
- 3. Dimensions are exclusive of mold flash and metal burrs.

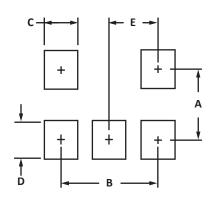




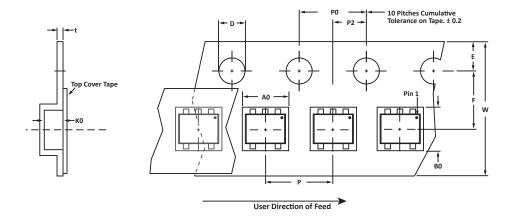
PAD LAYOUT DIMENSIONS					
DIM	MILLIMETERS	INCHES			
DIM	NOMINAL	NOMINAL			
А	1.40	0.055			
В	1.02	0.040			
С	0.30	0.012			
D	0.51	0.020			
Е	0.51	0.020			

NOTES

1. Controlling dimension: inches.



TAPE AND REEL



SPECIFICATIONS												
REEL DIA.	TAPE WIDTH	A0	В0	КО	D	E	F	W	P0	P2	Р	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 06050.R3 3/11.

ORDERING INFORMATION						
BASE PART NUMBER	LEADFREE SUFFIX	TAPE SUFFIX	QTY/REEL	REEL SIZE	TUBE QTY	
MSMF05LC	-Р	-T7	3,000	7"	n/a	
MSMF05LC	-Р	-T13	10,000	13"	n/a	
This device is only available in a Lead-Free configuration.						

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COMPANY INFORMATION

COMPANY PROFILE

In business more than 20 years, ProTek Devices™ is a privately-held company located in Tempe, Arizona, that offers a product line of transient voltage suppressors (TVS); avalanche breakdown diodes; steering diode TVS arrays and other surge suppressor component products. These TVS devices protect electronic systems from the effects of lightning, electrostatic discharge (ESD), nuclear electromagnetic pulses (NEMP), inductive switching and EMI / RFI. ProTek Devices also offers high performance interface and linear products that include analog switches; multiplexers; LED drivers; audio control ICs; RF and related high frequency products. The analog devices work in a host of consumer; industrial; automotive and other applications.

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