

## LOW CAPACITANCE TVS ARRAY

## APPLICATIONS

- ✓ Computer Notebooks
- ✓ Communication Systems & Cellular Phones
- ✓ Printers
- ✓ Personal Digital Assitant(PDA)
- ✓ Video Equipment

## IEC COMPATIBILITY (EN61000-4)

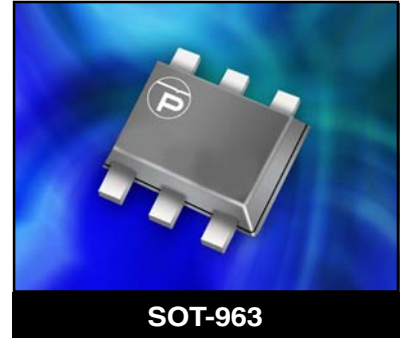
- ✓ 61000-4-2 (ESD): Air - 15kV, Contact - 8kV
- ✓ 61000-4-4 (EFT): 40A - 5/50ns

## FEATURES

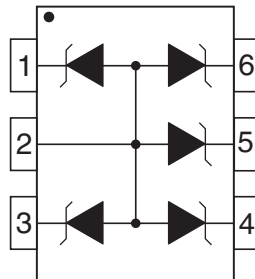
- ✓ 25 Watts Peak Pulse Power per Line ( $t_p=8/20\mu s$ )
- ✓ Monolithic Structure
- ✓ Available in 5 Volts
- ✓ Low Clamping Voltage
- ✓ ESD Protection > 40 kilovolts
- ✓ Low Leakage Current
- ✓ Low Capacitance: 9pF
- ✓ Protects 5 Unidirectional and 4 Bidirectional Lines
- ✓ RoHS Compliant

## MECHANICAL CHARACTERISTICS

- ✓ Molded JEDEC SOT-963 Package
- ✓ Weight 3 milligrams (Approximate)
- ✓ Available in Lead-Free Nickel-Paladium-Gold Plating
- ✓ Solder Reflow Temperature:  
Nickel-Paladium-Gold (Ni/Pd/Au) Sn/Ag/Cu: 260-270°C
- ✓ Consult Factory for Leaded Device Availability
- ✓ Flammability Rating UL 94V-0
- ✓ 8mm Tape and Reel Per EIA Standard 481
- ✓ Marking: Marking Code & Pin One Defined By Dot on Top of Package



## PIN CONFIGURATION



# VSMF05LCC

## 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	$P_{PP}$	25	Watts
Operating Temperature	$T_J$	-55°C to 150°C	°C
Storage Temperature	$T_{STG}$	-55°C to 150°C	°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 (See Fig. 2)  @ 8/20 $\mu s$ $V_C @ I_{PP}$	MAXIMUM LEAKAGE CURRENT  @ $V_{WM}$ $I_b$ $\mu A$	TYPICAL CAPACITANCE (See Note 1)  0V @ 1 MHz C pF
VSMF05LCC	5B	5.0	6.0	12.0V @ 2.0A	1	9

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

FIGURE 1  
PEAK PULSE POWER VS PULSE TIME

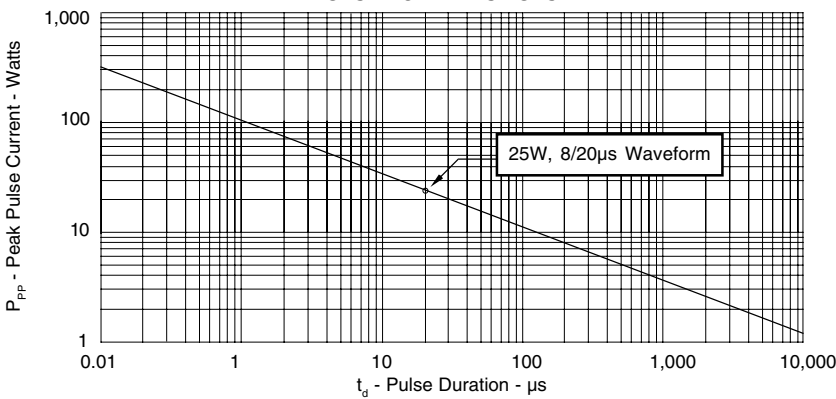
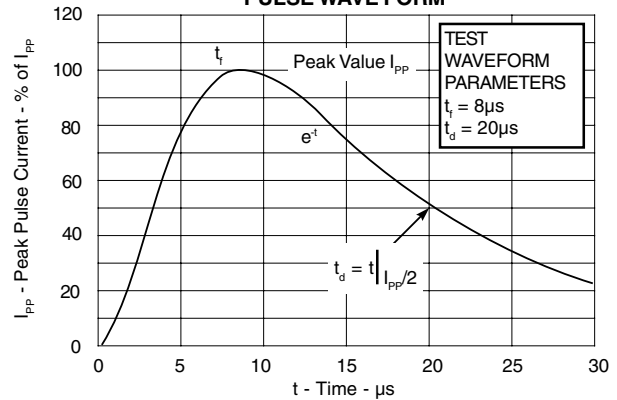
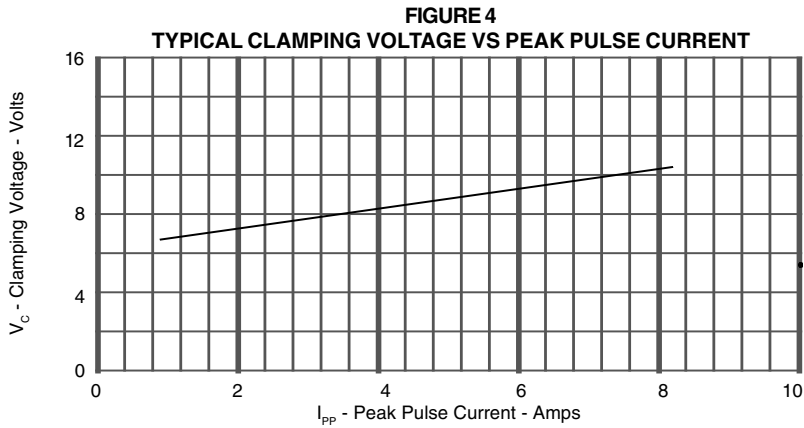
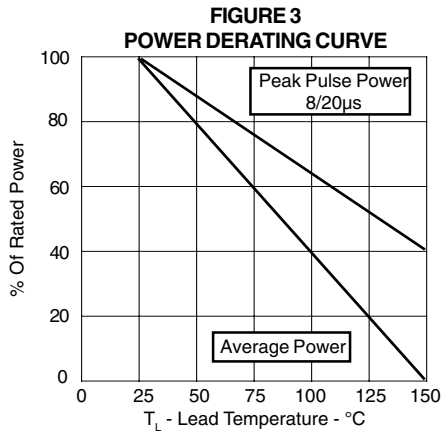


FIGURE 2  
PULSE WAVEFORM



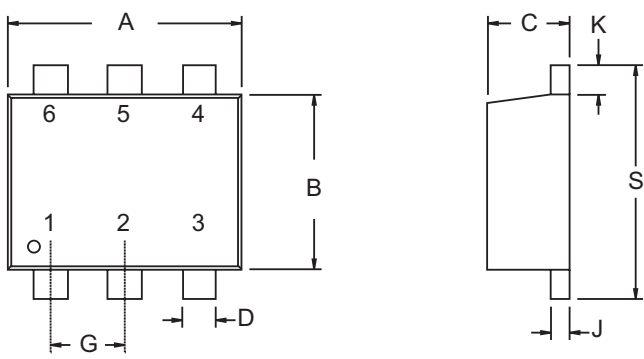
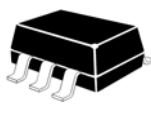
# VSMF05LCC

## GRAPHS

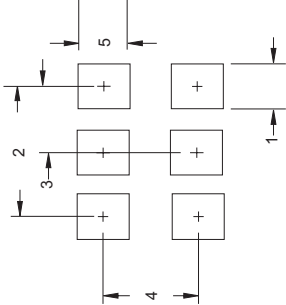


# VSMF05LCC

## SOT-963 PACKAGE OUTLINE & DIMENSIONS

PACKAGE OUTLINE		SOT-963			
					
PACKAGE DIMENSIONS					
DIM	MILLIMETERS		INCHES		
	MIN	MAX	MIN	MAX	
A	0.95	1.05	0.037	0.041	
B	0.75	0.85	0.028	0.034	
C	0.40	0.50	0.016	0.020	
D	0.10	0.20	0.004	0.008	
G	0.35	0.40	0.014	0.016	
J	0.05	0.15	0.002	0.006	
K	0.05	0.15	0.002	0.006	
S	0.95	1.05	0.037	0.041	

MOUNTING PAD			
TYPICAL			
DIM	Millimeters	Inches	
1	0.20	0.008	
2	0.70	0.028	
3	0.35	0.014	
4	0.90	0.035	
5	0.20	0.008	

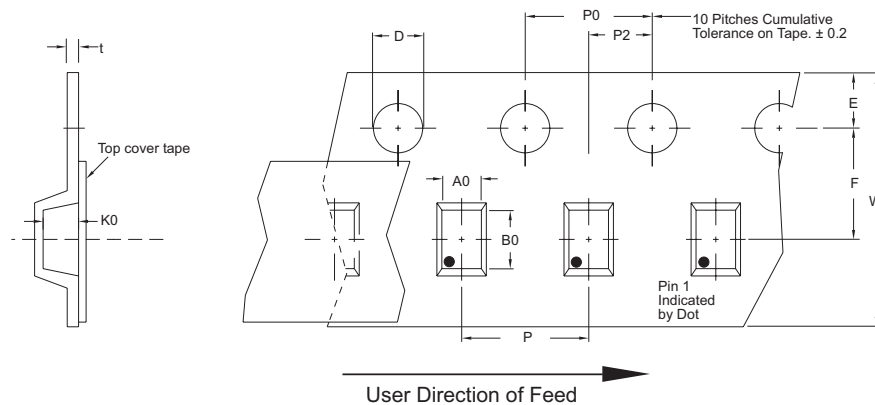
  

NOTES				
1.	Dimensioning and tolerances per ANSI Y14.5M, 1985.			
2.	Controlling Dimension: Inches			
3.	Pin 3 is the cathode (Unidirectional Only).			
4.	Dimensions are exclusive of mold flash and metal burrs.			
TAPE & REEL/BULK ORDERING NOMENCLATURE				
1.	Surface mount product is taped and reeled in accordance with EIA-481.			
2.	Suffix - T7 = 7 Inch Reel - 3,000 pieces per 8mm tape, i.e., VSMF05LCC-P-T7.			
3.	Suffix - T13 = 13 Inch Reel - 10,000 pieces per 8mm tape, i.e., VSMF05LCC-P-T13.			
4.	Suffix - P = Lead-Free, Nickel-Paladium-Gold Plating, i.e., VSMF05LCC-P.			

**Outline & Dimensions: Rev 0 - 9/06, 06070**

Tape & Reel Specifications (Dimensions in millimeters)

Reel Dia.	Tape Width	A0	B0	K0	D	E	F	W	P0	P2	P	tmax
178mm (7")	8mm	1.17 ± 0.05	1.17 ± 0.05	0.66 ± 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



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**ProTek Devices**

2929 South Fair Lane, Tempe, AZ 85282

Tel: 602-431-8101 Fax: 602-431-2288

E-Mail: [sales@protekdevices.com](mailto:sales@protekdevices.com)

Web Site: [www.protekdevices.com](http://www.protekdevices.com)