



VSMF05LC

LOW CAPACITANCE TVS ARRAY

APPLICATIONS

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

IEC COMPATIBILITY (EN61000-4)

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

FEATURES

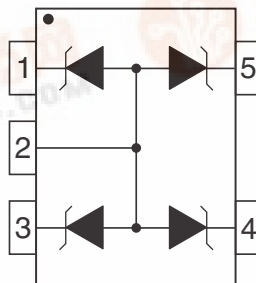
- ✓ 25 Watts Peak Pulse Power per Line (tp=8/20μs)
- ✓ Monolithic Structure
- ✓ Available in 5 Volts
- ✓ Low Clamping Voltage
- ✓ ESD Protection > 40 kilovolts
- ✓ Low Leakage Current
- ✓ Low Capacitance: 9pF
- ✓ Protects Four (4) Unidirectional Lines
- ✓ RoHS Compliant

MECHANICAL CHARACTERISTICS

- ✓ Molded JEDEC SOT-953 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



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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	MINIMUM BREAKDOWN VOLTAGE	MAXIMUM CLAMPING VOLTAGE (See Fig. 2)	MAXIMUM LEAKAGE CURRENT	TYPICAL CAPACITANCE (See Note 1)
		V_{WM} VOLTS	@ 1mA $V_{(BR)}$ VOLTS	@ 8/20 μs $V_C @ I_{PP}$	@ V_{WM} I_b μA	0V @ 1 MHz C pF
VSMF05LC	5A	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

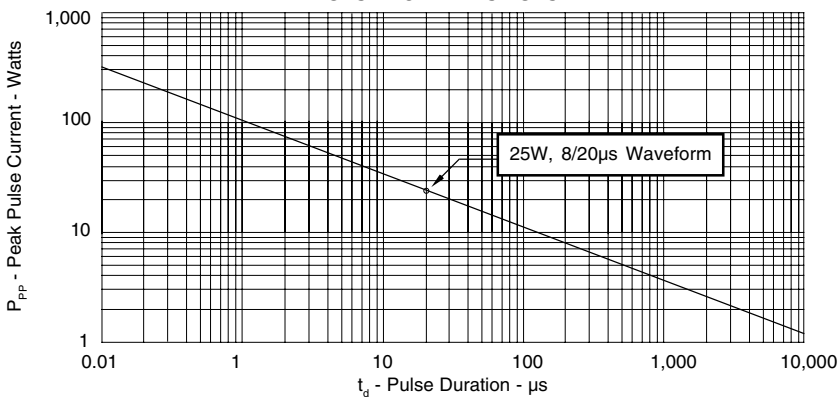
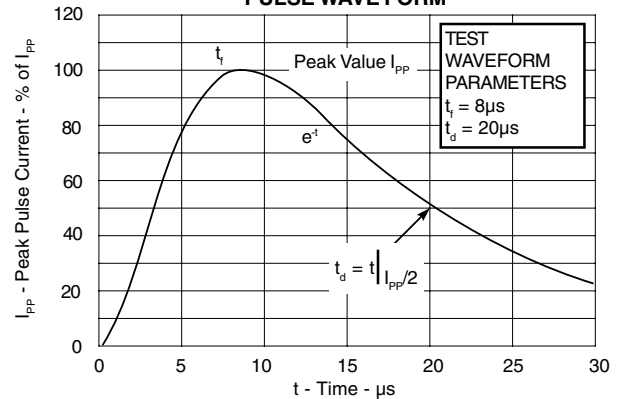
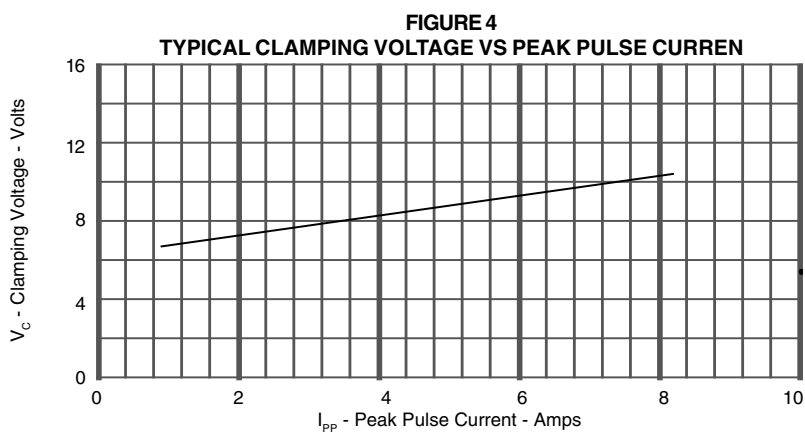
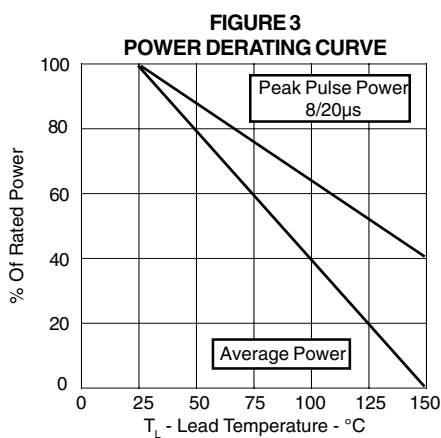


FIGURE 2
PULSE WAVE FORM



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GRAPHS



VSMF05LC

SOT-953 PACKAGE OUTLINE & DIMENSIONS

PACKAGE OUTLINE

SOT-953

PACKAGE DIMENSIONS				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	0.95	1.05	0.037	0.041
B	0.75	0.80	0.029	0.034
C	0.40	0.50	0.019	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

- Dimensioning and tolerances per ANSI Y14.5M, 1985.
- Controlling Dimension: Inches
- Pin 3 is the cathode (Unidirectional Only).
- Dimensions are exclusive of mold flash and metal burrs.

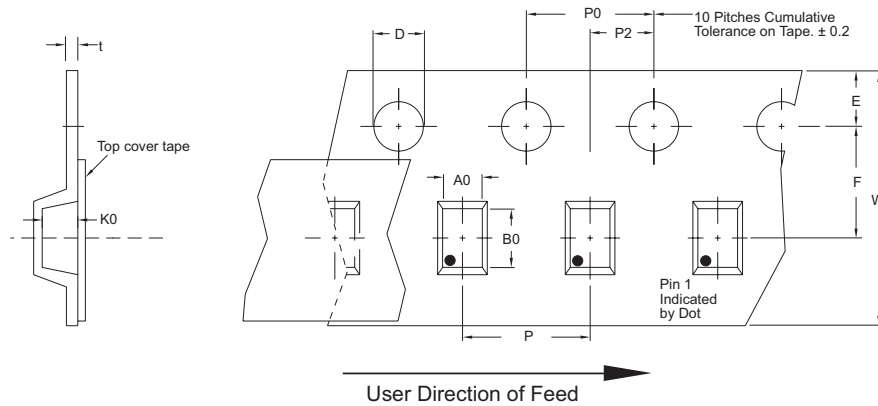
TAPE & REEL/BULK ORDERING NOMENCLATURE

- Surface mount product is taped and reeled in accordance with EIA-481.
- Suffix -T7 = 7 Inch Reel - 3,000 pieces per 8mm tape, i.e., *VSMF05LC-P-T7*.
- Suffix -T13 = 13 Inch Reel - 10,000 pieces per 8mm tape, i.e., *VSMF05LC-P-T13*.
- Suffix -P = Lead-Free, Nickel-Paladium-Gold Platin, i.e., *VSMF05LC-P-T7*.

Outline & Dimensions: Rev 0 - 9/06, 06061

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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