

## LOW CAPACITANCE VSIP® TVS ARRAY



**10 PIN VSIP® PACKAGE**

### DESCRIPTION

The VS10P03LC is a low voltage, low capacitance TVS array available in a 10 pin VSIP package. This device is designed to protect telecommunications equipment from the damaging effects of ESD, EFT and secondary transient threats.

The VS10P03LC has a peak pulse power rating of 300 Watts for an 8/20µs waveshape. This device meets the IEC 61000-4-2, IEC 61000-4-4 and IEC 61000-4-5 requirements.

### FEATURES

- Compatible with IEC 61000-4-2 (ESD): Air - 15kV, Contact - 8kV
- Compatible with IEC 61000-4-4 (EFT): 40A - 5/50ns
- Compatible with IEC 61000-4-5 (Surge): 24A, 8/20µs - Level 2(Line-Gnd) & Level 3(Line-Line)
- 300 Watts Peak Pulse Power per Line (tp = 8/20µs)
- Bidirectional Configuration
- ESD Protection > 25 kilovolts
- Protects 4 Bidirectional Lines
- Low Capacitance: 15pF
- RoHS Compliant
- REACH Compliant

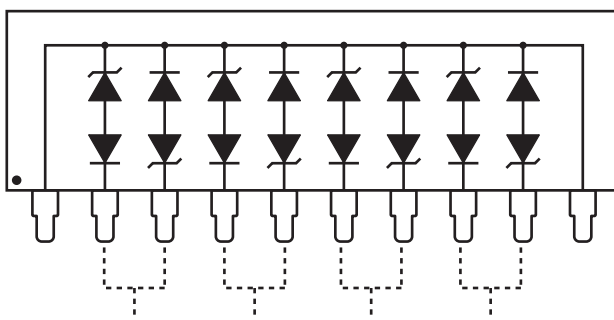
### APPLICATIONS

- RS-232 & RS-485 Data Lines
- ATM Circuit Interfaces
- xDSL Interfaces
- Ethernet & Token Ring
- I/O Port Protection

### MECHANICAL CHARACTERISTICS

- Molded 10 Pin Plastic VSIP® Package
- Approximate Weight: 1.5 grams
- Lead-Free Pure-Tin Plating (Annealed)
- Solder Reflow Temperature:  
Pure-Tin - Sn, 100: 260-270°C
- Flammability Rating UL 94V-0

### 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	$P_{PP}$	300	Watts
Operating Temperature	$T_L$	-55 to 150	°C
Storage Temperature	$T_{STG}$	-55 to 150	°C

**SERIES "A" ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified**

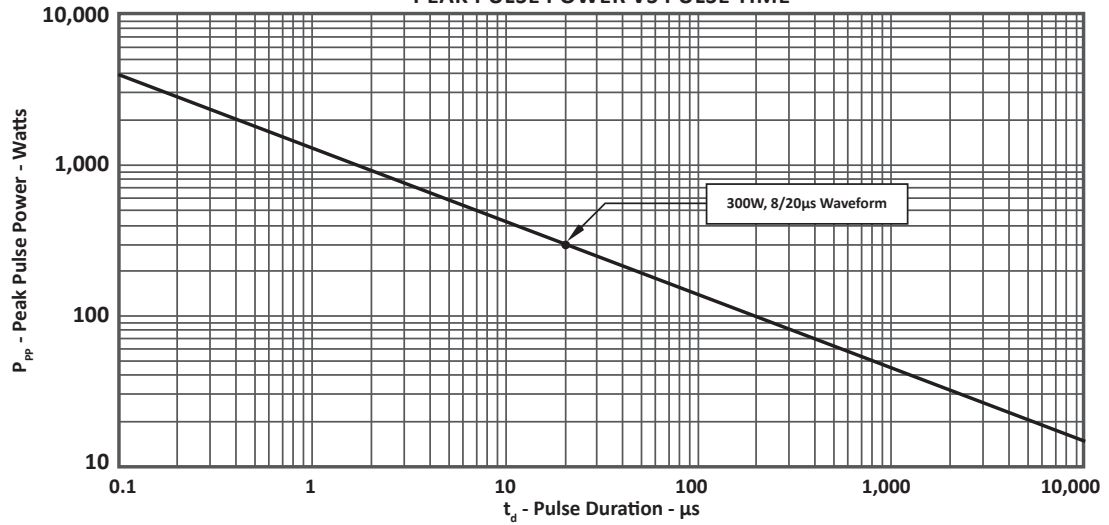
PART NUMBER (Note 1)	RATED STAND-OFF VOLTAGE $V_{WM}$ VOLTS	MINIMUM BREAKDOWN VOLTAGE @1mA $V_{(BR)}$ VOLTS	MAXIMUM CLAMPING VOLTAGE (Fig. 2) @ IP = 5A $V_C$ VOLTS	MAXIMUM LEAKAGE CURRENT @ $V_{WM}$ $I_D$ μA	MAXIMUM CAPACITANCE @ 0V, 1MHz C pF
VS10P03LC	3.3	4.5	9.0	125	15

**NOTES**

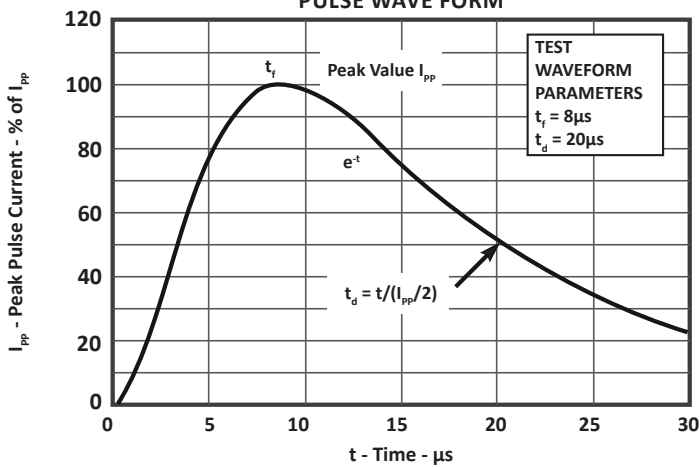
1. Do not surge from pins 2 to 1, 1 to 3, 4 to 1, 1 to 5, 6 to 1, 1 to 7, 8 to 1 and 1 to 9. PIV typically greater than 100 Volts for each rectifier diode.

**TYPICAL DEVICE CHARACTERISTICS**

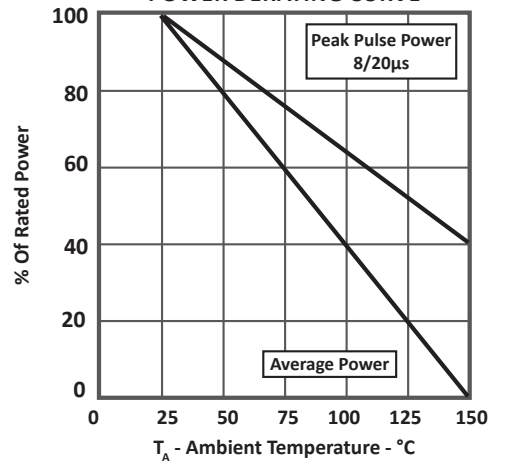
**FIGURE 1**  
**PEAK PULSE POWER VS PULSE TIME**



**FIGURE 2**  
**PULSE WAVE FORM**



**FIGURE 3**  
**POWER DERATING CURVE**



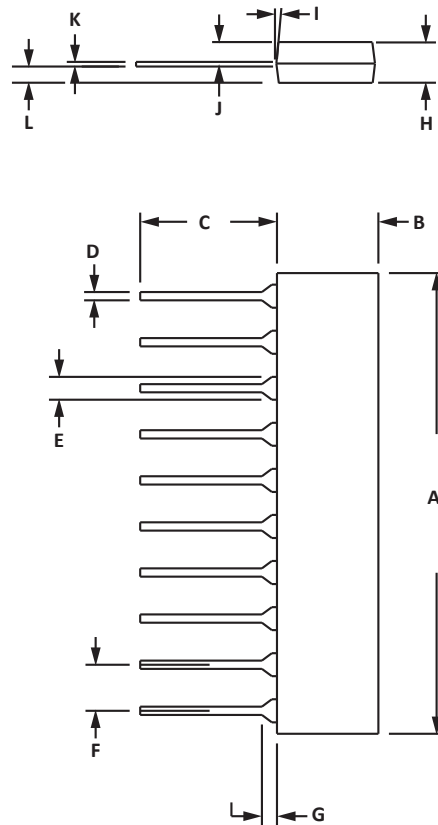
## 10 PIN VSIP PACKAGE INFORMATION

### OUTLINE DIMENSIONS

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	25.65	26.01	1.01	1.024
B	5.68	6.45	0.244	0.254
C	5.92	6.73	0.233	0.265
D	0.406	0.508	0.016	0.020
E	1.27	1.65	0.05	0.065
F	2.49	2.59	0.098	0.102
G	0.38	1.40	0.015	0.055
H	2.65	3.17	0.104	0.125
I	7° TYP	7° TYP	7° TYP	7° TYP
J	1.47	1.98	0.058	0.078
K	0.20	0.30	0.008	0.012
L	0.81	1.57	0.032	0.062

#### NOTES

- Dimensions are exclusive of mold flash and metal burrs.
- Controlling dimensions in inches.



### ORDERING INFORMATION

BASE PART NUMBER	LEADFREE SUFFIX	TAPE SUFFIX	QTY/REEL	REEL SIZE	TUBE QTY
VS10P03LC	-LF	n/a	n/a	n/a	18

#### NOTES

- Marking on Part - logo, part number, date code and pin one defined by dot on top of package.
- This device is only available in a lead-free configuration.

Package outline per document number 06016.R2 9/09

## COMPANY INFORMATION

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### 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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