

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

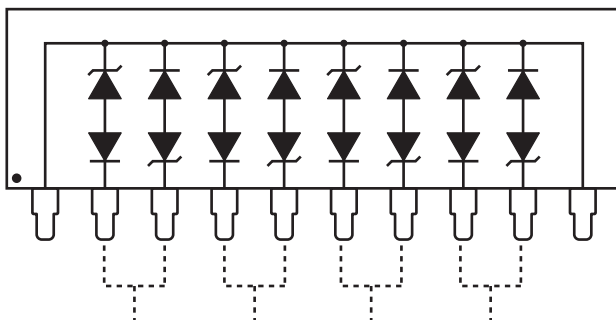
APPLICATIONS

- 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 ($t_p = 8/20\mu s$) - 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

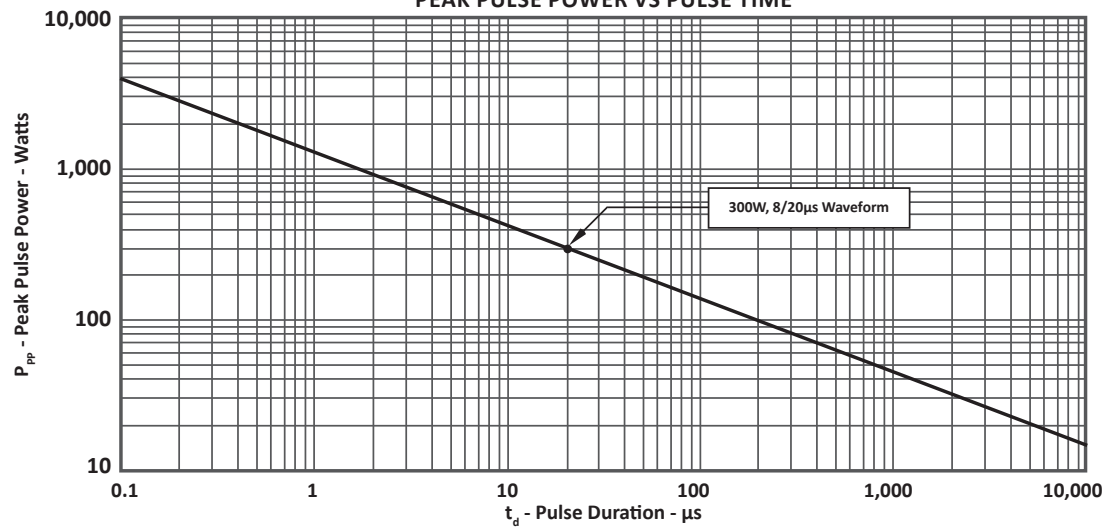


FIGURE 2
PULSE WAVE FORM

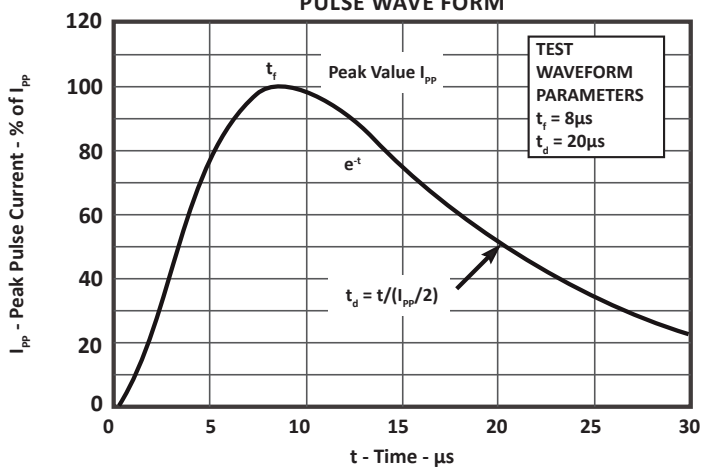
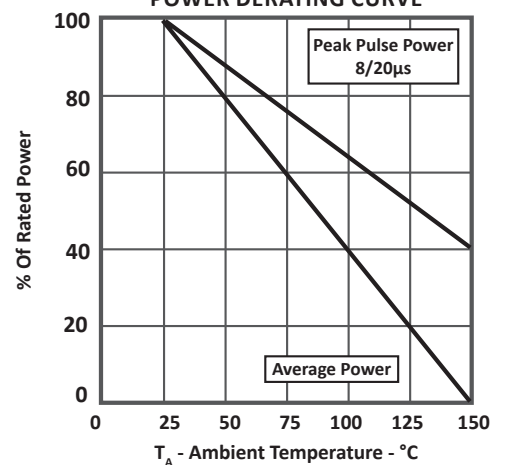


FIGURE 3
POWER DERATING CURVE

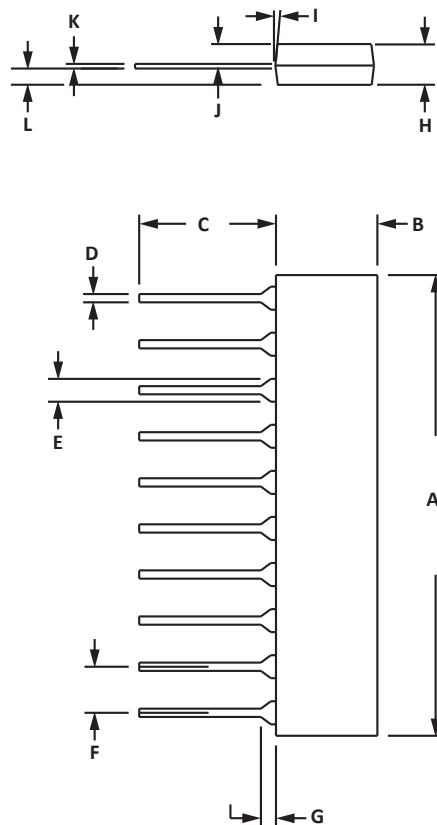


10 PIN VSIP PACKAGE INFORMATION

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

1. Dimensions are exclusive of mold flash and metal burrs.
2. 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

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

Package outline per document number 06016.R2 9/09

COMPANY INFORMATION

COMPANY PROFILE

In business more than 25 years, ProTek Devices™ is a privately held semiconductor company. The company offers a product line of overvoltage protection and overcurrent protection components. These include transient voltage suppressor array (TVS arrays) avalanche breakdown diode, steering diode TVS array and electronics SMD chip fuses. These components deliver circuit protection in electronic systems from numerous overvoltage and overcurrent events. They include lightning; electrostatic discharge (ESD); nuclear electromagnetic pulses (NEMP); inductive switching; and electromagnetic interference (EMI) / radio frequency interference (RFI). ProTek Devices also offers LED wafer die for ESD protection and related high frequency products. ProTek Devices is ISO 9001:2015 certified.

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