

# MULTILAYER VARISTORS

## Transient Voltage Surge Suppressors

### Applications

- Suppression of circuit board level Surge, ESD, EFT and other transient events
- ESD protection for components sensitive to IEC 61000-4-2, MIL-STD-883C Method 3015.7, and other industry specifications
- Provides on-board transient voltage protection for ICs and Transistors
- Used to help achieve Electromagnetic Compliance of end products
- Replace larger surface mount TVS zeners diodes in many applications

### Features

- Thinlayer and high precise technique
- Able to withstand high surge current
- Bi-directional clamping characteristic
- Standard / Low capacitance chip TVS types available
- Available with Nickel / Tin end terminations

### Specification

- Operating Temperature      ● Solderability  
-55 to +125°C                      260°C 2sec (IEC 60068-2-58)
- Soldering Heat Resistance  
260°C 5sec (IEC 60068-2-58)
- Response time < 0.5ns
- Temperature coefficient ( $\alpha V$ ) of clamping Voltage ( $V_c$ )  
@ specified test current      <0.01% / °C
- Leadless 0402, 0603, 0805, 1206, 1210, 1812, 2220 chip sizes
- Operating voltage range (DC) available from 3.3V to 120V
- Withstand ESD durability test severity of IEC 61000-4-2 level 4

## PRODUCT NUMBER SYSTEM

**JV 12 ML 05 113 P T □**

1 2 3 4 5 6 7 8

1=Series Code

JV : High Power Series

2=Size code

12 : EIA 1812

3=Type Code

ML : Multilayer

4=Rated Voltage Code

05 : 5.5 V<sub>M(DC)</sub>

5=Capacitance

113 :  $11 \times 10^3 = 11000$  pF Typical

6=End Termination

P : Nickle/Tin plated

7=Packing Code

T : Tape & Reel

B : Bulk

8=Special Code

## DEVICE RATINGS AND SPECIFICATIONS

PART NUMBER	Maximum Ratings(125°C)					Specifications(25°C)		
	Maximum Continuous Working Voltage		Maximum Non- Repetitive Surge Current (8/20μs)	Maximum Non- Repetitive Surge Energy (10/1000μs)	Maximum Clamping Voltage at Specified Current (8/20μs)	Nominal Voltage at 1 mA (DC) Test Current		Typical Capacitance @1 MHz
	V <sub>M(DC)</sub>	V <sub>M(AC)</sub>	I <sub>TM</sub>	W <sub>TM</sub>	V <sub>c</sub>	V <sub>N(DC)</sub> min.	V <sub>N(DC)</sub> max.	C
	(V)	(V)	(A)	(J)	(V)	(V)	(V)	(pF)
JV12ML05113PT	5.5	4	250	0.5	15.5 at 10 A	7.1	9.8	11000
JV12ML12642PT	12	9	400	1.0	30 at 10 A	14.0	18.5	6400
JV12ML18552PT	18	14	600	2.0	38 at 10 A	20.0	28.0	5500
JV12ML30292PT	30	25	800	3.6	65 at 10 A	35.0	43.0	2900
JV12ML38222PT	38	30	800	4.2	77 at 10 A	42.3	51.7	2200
JV12ML45192PT	45	35	500	4.5	90 at 10 A	50.0	61.0	1900
JV12ML56132PT	56	40	500	4.8	110 at 10 A	61.2	74.0	1300
JV12ML68771PT	68	50	400	4.5	135 at 10 A	74.0	90.0	770
JV12ML85401PT	85	60	400	5.8	165 at 10 A	91.0	115.0	400
JV12ML121301PT	120	95	400	5.8	250 at 10 A	135.0	165.0	300
JV12ML151201PT	150	115	300	5.0	290 at 10 A	162.0	198.0	200
JV12ML171181PT	170	130	200	4.5	340 at 10 A	184.0	228.0	180

Notes :

- 1、Maximum ESD clamp voltage tested with IEC 61000-4-2 Human Body Model discharge test current and direct discharge to device terminal (IEC preferred test method) .
- 2、Typical leakage current < 5μA .
- 3、Capacitance may be customized , please contact factory for availability .