

# 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 to120V
- Withstand ESD durability test severity of IEC 61000-4-2 level 4

## PRODUCT NUMBER SYSTEM

JV 02 ML 03 251 P T

1 2 3 4 5 6 7 8

1=Series Code

JV : High Power Series

2=Size code

02 : EIA 0402

3=Type Code

ML : Multilayer

4=Rated Voltage Code

03 : 3.3 VM(DC)

5=Capacitance

251 :  $25 \times 10^1 = 250$  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)
JV 02 ML 03 251PT	3.3	2.5	6	0.02	12 at 1 A	3.7	7.0	250
JV 02 ML 05 281PT	5.5	4	20	0.05	17 at 1 A	7.1	9.8	280
JV 02 ML 09 201PT	9	6	20	0.05	26 at 1 A	10.0	14.5	200
JV 02 ML 12 161PT	12	9	20	0.05	30 at 1 A	14.0	18.5	160
JV 02 ML 14 141PT	14	11	20	0.05	35 at 1 A	16.0	21.0	145
JV 02 ML 18 850PT	18	14	20	0.05	42 at 1 A	22.0	28.0	85
JV 02 ML 22 750PT	22	17	20	0.05	47 at 1 A	24.3	30.0	75

### 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 .