Miniature 0201 MLV

Multilayer Ceramic Transient Voltage Suppressors ESD Protection for any Circuit with Board Space Constraints





GENERAL CHARACTERISTICS

- Operating Temperature: -55°C to +125°C
- Working Voltage: 3.5Vdc 16Vdc
- Case Size: 0201

GENERAL DESCRIPTION

KYOCERA AVX 0201 Multi-Layer Varistors are designed for circuits where board space is a premium. 0201 MLV offer bi-directional ESD protection in the smallest package available today. The added advantage is EMI/RFI attenuation. 0201 MLV can replace 2 diodes and the EMC capacitor for a one chip solution.

The miniature size and one chip solution team to offer designers the best in ESD protection and EMI filtering in one ultra compact device.



APPLICATIONS

- Cell phone
- PDA
- Camera modules
- Embedded components
- Hearing aid
- Any circuit with space constraints



TVS & EMI

FEATURES

- Capacitance 15pF to 150pF
- Low VB Version
- Bi-Directional protection
- Fastest response time to ESD strikes
- Multi-strike capability
- Ultra compact 0201 case size

HOW TO ORDER

VC	AS	0201	09	v	300	w	Р	
T	T		Т	Т	T	Т	Т	
Varistor Clamp	Automotive Series	Chip Size 0201	Working Voltage 09 = 9V	Energy Rating V = 0.02J	Capacitance 300 = 32V	Package W = 7" 10kpcs	Termination P = Ni Barrier/ 100% Sn (matte)	RoHS COMPLIANT

COMPLIANT MSL 1 Pb Free 260°C

Part Number	V _w (DC)	V _w (AC)	V _B	V _c	I _{vc}	I,	E _T	I _P	Cap
VC020103V101WP	3.5	2.0	4.76 min 8.84 max	14max	1	50	0.02	10	100pF ±40%
VC020103V121WP	3.5	2.0	4.76 min 8.84 max	14max	1	50	0.02	10	125pF ±30%
VC020103V151WP	3.5	2.0	4.76 min 8.84 max	14max	1	50	0.02	10	150pF ±30%
VC020105T150WP	5.6	4.0	10.0 min 15.6 max	35max	1	50	0.01	2	15pF ±30%
VC020105T330WP	5.6	4.0	10.0 min 15.6 max	35max	1	50	0.01	4	33pF ±30%
VC020105T500WP	5.6	4.0	10.0 min 15.6 max	35max	1	50	0.01	5	50pF ±30%
VC020105T101WP	5.6	4.0	10.0 min 15.6 max	35max	1	50	0.01	5	100pF ±30%
VC020105V101WP	5.6	4.0	6.4 min 9.6 max	17max	1	50	0.02	4	100pF ±30%
VC020107V101WP	7.0	5.6	9.6 min 14.4 max	20max	1	50	0.02	5	100pF ±30%
VC020116T150WP	16	11	21.7 min 29.3 max	45max	1	50	0.01	1	15pF ±30%

 $V_w(DC)$ DC Working Voltage [V]

- V_w(AC) AC Working Voltage [V]
- V_B Breakdown Votage [V @ 1mADC]
- V_c Clamping Votage [V @ IVC]

I_{vc} Test Current for VC [A, 8x20μS]

- Maximum leakage current at the working voltage [µA]
- Transient Energy Rating [J, 10x1000µS]
- Peak Current Rating [A, 8x20µS]
- Cap Capacitance [pF] @ 1KHz specified and 0.5VRMS

The Important Information/Disclaimer is incorporated in the catalog where these specifications came from or available online at www.kyocera-avx.com/disclaimer/ by reference and should be reviewed in full before placing any order.

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E_T

 I_{P}

TDS-TS-0021 | Rev 1

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PHYSICAL DIMENSIONS: mm (inches)



Size (EIA)	Length (L)	Width (W)	Max Thickness (T)	Terminal
0201	0.60±0.03	0.30±0.03	0.33 max.	0.15±0.05
	(0.024±0.001)	(0.011±0.001)	(0.013 max.)	(0.006±0.002)

15 pF

VOLTAGE/CURRENT CHARACTERISTICS



TYPICAL 8 KV ESD PERFORMANCE (150pF / 3000hm IEC Network)



8 kV CONTACTED ESD PULSE 1 Mohm Input (150pF / 300ohm IEC Network)







33 pF

3.5VDC

– 100 pF







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Mouser Electronics

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KYOCERA AVX:

<u>VC020105T150WP</u> <u>VC020105T330WP</u> <u>VC020105T101WP</u> <u>VC020105T500WP</u> <u>VC020103V101WP</u> <u>VC020103V121WP</u> <u>VC020103V151WP</u> <u>VC020116T150WP</u> <u>VC020105V101WP</u> <u>VC020107V101WP</u>