

Surface Mount Multilayer Varistors

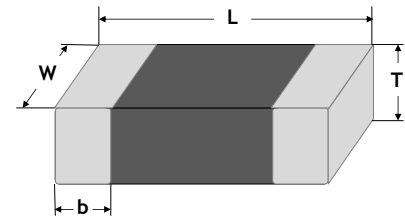
High Voltage (HV) Series

Features:

- Bidirectional and symmetrical V/I characteristics Low Capacitance
- Meet IEC61000-4-2 Standard
- Large withstanding surge current capability - 400~500A (@8/20 μ s)
- Multilayer construction provides higher power dissipation

Shape and Dimensions:

Unit (mm)	Length (L)	Width (W)	Thickness (T)	Termination bandwidth (b)
MLV3220HV240V0500	8.1 \pm 0.30	5.0 \pm 0.30	1.7 \pm 0.30	0.8 +0.5/-0.1
MLV3220HV270V0500				
MLV3220HV390V0500				
MLV3220HV430V0450				
MLV3220HV470V0400				



Product Identification:

MLV	3220	HV	270V	0500
Category Code MLV = Multilayer Varistor	Size Code Inch (mm) 3220 (8153)	Application Code HV = High Voltage	Breakdown Voltage Code 390V = 390V 430V = 430V 470V = 470V	Surge Current Code 0400 = 400A 0450 = 450A 0500 = 500A

Electrical Characteristics:

Operating temperature: -55 to +85°C

Part Number	Size	Working Voltage		Breakdown Voltage ¹ @1mA (V)	Clamping Voltage ²		Surge Current ³ @8/20 μ s (A)	Energy (J)	Capacitance ⁴ @1kHz (pF)
		Vac	Vdc		A	V			
MLV3220HV240V0500	3220	150	200	240 (\pm 10%)	10	390	500	> 14.5	380
MLV3220HV270V0500		175	225	270 (\pm 10%)		450	500	> 16.0	340
MLV3220HV390V0500		250	330	390 (\pm 10%)		647	500	> 20.0	125
MLV3220HV430V0450		275	369	430 (\pm 10%)		705	450	> 21.0	120
MLV3220HV470V0400		300	385	470 (\pm 10%)		775	400	> 21.6	115

¹ The breakdown voltage was measured at 1 mA current.

² The clamping voltage was measured at standard current 3220 (10A).

³ The surge current was tested at 8/20 μ s waveform.

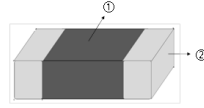
⁴ The capacitance value only for customer reference, it's not formal specification.

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Construction and Materials:

Body ①	Termination ②
ZnO	Ag/Ni/Sn

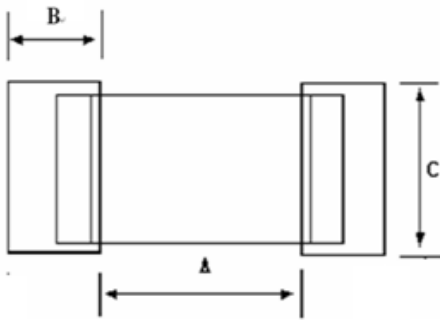


Packaging:

Chip Size	Parts on 7 inch (178mm) Reel
3220	1,000

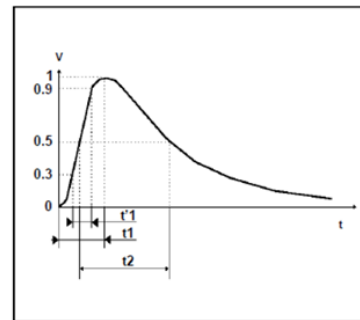
Recommended Foot Print Dimensions:

Size	A (mm)	B (mm)	C (mm)
3220	6.2~7.0	1.6~2.6	4.8~5.8



Surge Waveform:

Severity Level	t1 (=1.67t'1)	t2
1	8 μs	20 μs

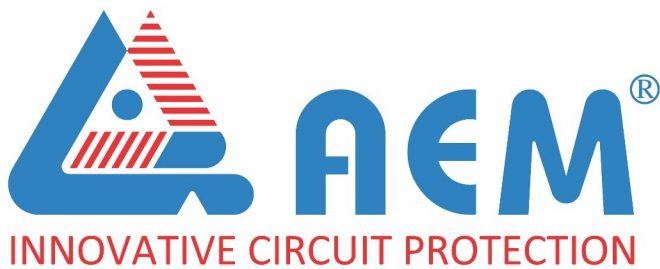


Environmental Test:

Test item	Test condition	Requirement
High Temperature Storage	* Temperature : 125±2°C * Time : 1000±2 hours * Test after placing in ambient temperature for 24 hours	* Breakdown voltage change : within ±10% * No mechanical damage
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High Temperature Storage	* Temperature : 125±2°C * Time : 1000±2 hours * Test after placing in ambient temperature for 24 hours	* Breakdown voltage change : within ±10% * No mechanical damage
High Temperature Load	* Temperature : 85±2°C * Rated working voltage applied * Time : 1000±2 hours * Test after placing in ambient temperature for 24 hours	* Breakdown voltage change : within ±10% * No mechanical damage
High Temperature Load	* Temperature : 85±2°C * Rated working voltage applied * Time : 1000±2 hours * Test after placing in ambient temperature for 24 hours	* Breakdown voltage change : within ±10% * No mechanical damage

Disclaimer

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