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Raychem
Overvoltage Devices

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Multi Layer Varistor
MLV1206-700K

Document: SCD 26512
Status: Released
Rev. B Date: September 21, 2006

GENERAL DESCRIPTION

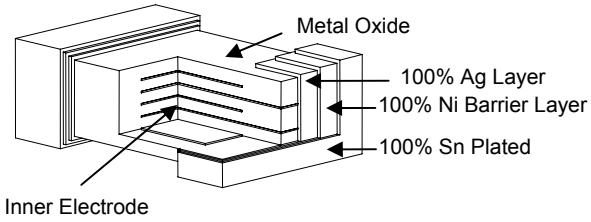
These Multi Layer Varistors are leadless, surface mount packages made of multiple layers of Zinc Oxide, with electrodes between them. They are used to help protect integrated circuits and other sensitive equipment. Their small size is ideal for high density printed circuit boards.

BENEFITS

- Help to protect equipment against typical ESD, EMC and EOS (Electrical Over Stress) events and transients
- Cost efficient assembly and protection
- Resistance to standard wave solder fluxes, provides excellent assembly solderability
- Longer battery life due to low leakage current

FEATURES

- Bidirectional clamping
- Compatible with standard surface mount methods
- Low and stable leakage current
- Quick response time (<1ns)
- High transient current capability
- RoHS Compliant



APPLICATIONS

Protection of data and power lines in:

- Computer I/O ports and interfaces
- Automotive electronic circuits
- Telecom circuits
- Industrial instrumentation

SYMBOL

MATERIALS INFORMATION

ROHS Compliant

Directive 2002/95/EC Compliant

ELV Compliant

Directive 2000/53/EC Compliant

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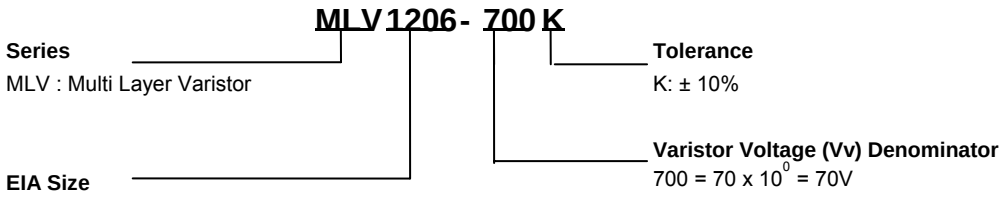
Ratings @ (25± 5°C)

	Varistor Voltage	Maximum Working Voltage		Clamping Voltage	Max Peak Current	Max Transient Energy	Typical Capacitance
Symbol	Vv	V_{RMS}	V_{DC}	Vc	I_{max}	W_{max}	Cp[1]
Units	V	V	V	V	A	J	pF
Test Conditions	@ 1mA DC	<50µA	<50µA	@ 10A 8/20µ	8/20µs	10/1000µs	@ 1MHz
MLV1206-700K	70 ± 10 %	40	56	120	200	1.0	180

Note 1: Device capacitance measured with zero volt bias and 1 Vrms amplitude

PART NUMBERING



GENERAL CHARACTERISTICS

Operating Temperature: -55°+125°C

Storage Temperature: -55°+150°C

ENVIRONMENTAL CHARACTERISTICS

Characteristics	Specifications	Test Conditions
Bias Humidity	Δ Vv / Vv ≤ ± 10%	90%RH, 40ºC, maximum working Voltage V_{DC}, 1000 hours
Thermal Shock	Δ Vv / Vv ≤ ± 10%	-55ºC to 125ºC, 30 min. cycle, 5 cycles
Full Load Voltage	Δ Vv / Vv ≤ ± 10%	Maximum working Voltage V_{DC}, 125ºC, 1000 hours
Solderability	95% Coverage	230ºC, 2s
Solder Heat Resistance	90% Coverage	260ºC, 10s

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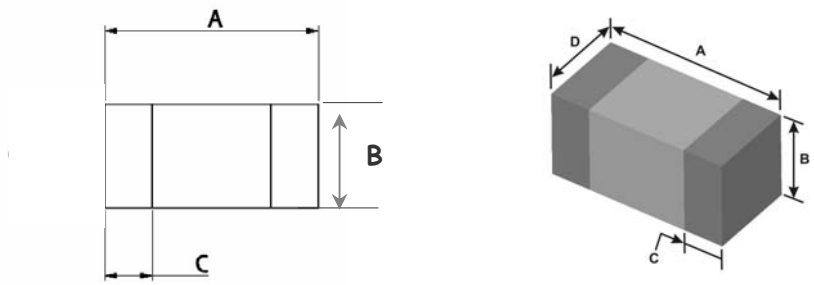
DIMENSIONS

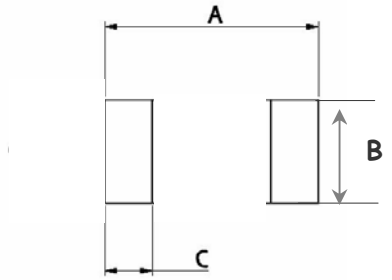


Drawing Not To Scale

	length A		Height B		Terminal Width C		Width D	
	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
mm:	3.0	3.4	--	1.7	0.25	0.75	1.4	1.8
in*:	(0.118)	(0.134)	--	(0.067)	(0.01)	(0.03)	(0.06)	(0.07)

* Rounded off approximation

RECOMMENDED PAD LAYOUT



	A	B	C
mm:	4.06	1.65	1.02
in:*	(0.160)	(0.065)	(0.040)

* Rounded off approximation

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STORAGE CONDITION

Storage time: 12 months max

Storage temperature: 5 to 40°C

Relative humidity: 65% max