

GENERAL DESCRIPTION

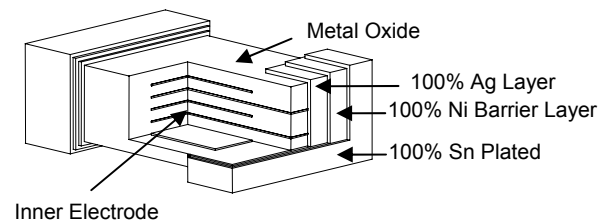
These Multi Layer Varistors are leadless, surface mount packages made of multiple layers of Zinc Oxide, with electrodes between them. They are used to help protect integrated circuits and other sensitive equipment. Their small size is ideal for high density printed circuit boards.

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 ($<1\text{ns}$)
- 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

Multi Layer Varistor Overvoltage Protection Device

Raychem Circuit Protection Products

PRODUCT: MLV1206-700K

DOCUMENT: SCD 26512
PCN : RF0772
REV LETTER: D
REV DATE: AUGUST 10, 2007
PAGE NO.: 2 OF 4

Ratings @ (25± 5°C)

	Varistor Voltage	Maximum Working Voltage		Clamping Voltage	Max Peak Current	Max Transient Energy	Typical Capacitance
Symbol	V _v	V _{RMS}	V _{DC}	V _c	I _{max}	W _{max}	Cp ¹
Units	V	V	V	V	A	J	pF
Test Conditions	@ 1mA DC	<50µA	<50µA	@ 10A 8/20µs	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

Manufacturer Series

MLV: Multi Layer Varistors

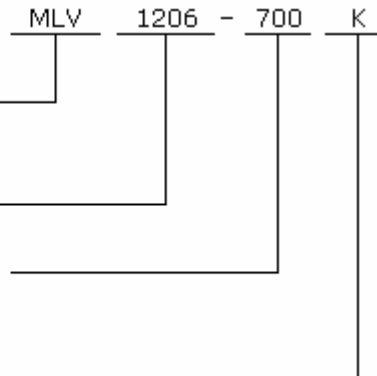
EIA Size

Varistor Voltage(V_v) Denominator

700: 70 × 10⁰ = 70V

Tolerance

K : ± 10%



GENERAL CHARACTERISTICS

Operating Temperature: -55°+125°C

Storage Temperature: -55°+150°C

ENVIRONMENTAL CHARACTERISTICS

Characteristics	Specifications	Test Conditions
Bias Humidity	$\Delta V_v / V_v \leq \pm 10\%$	90%RH, 40°C, maximum working Voltage V _{DC} , 1000 hours
Thermal Shock	$\Delta V_v / V_v \leq \pm 10\%$	-55°C to 125°C, 30 min. cycle, 5 cycles
Full Load Voltage	$\Delta V_v / V_v \leq \pm 10\%$	Maximum working Voltage V _{DC} , 125°C, 1000 hours
Solderability	95% Coverage	230°C, 2s
Solder Heat Resistance	90% Coverage	260°C, 10s

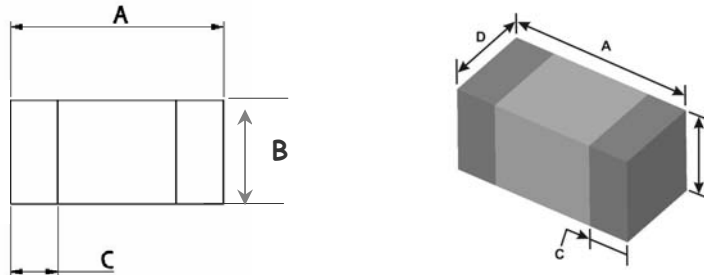
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DIMENSIONS

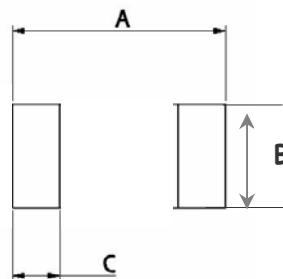


Drawing Not To Scale

	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

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