

INTRODUCTION

The MLV Series, designed for surface mount applications, are small multilayer varistors. They are available in standard EIA sizes of 0402, 0603, 0805, 1206, 1210, 1812 and 2220 packages. The MLV Series have 5 different sub-series:

EV Series - This is our lowest capacitance MLV series. Typically these are used in ESD and data line protection.

SV Series - This is our standard MLV series. They provide good high current pulse protection with moderate capacitance.

TV Series - This is our low capacitance MLV series, similar to the SV Series. This series should be selected when the SV series capacitance is too high.

PV Series - This is our power MLV series. They can protect against higher surge currents than the SV Series.

AV Series - This is our array series. They are designed for multiple I/O connections in a single package.

The MLV Series of varistors are designed to provide transient, surge, and ESD (Electrostatic Discharge) protection for a wide variety of applications.

STANDARD MARKING

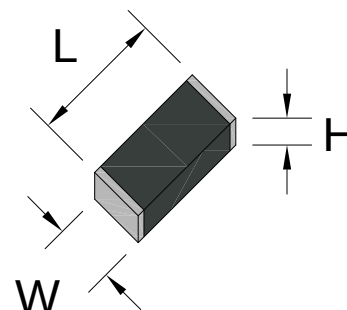
The MLV Series currently do not have markings.

STYLE DESIGNATION

The Maida Style Number is the typical means to identify our components when ordered. The style number identifies several parameters that are important for the characteristics of the device. An alternative ordering method, if known, is by our Item Number.

The following example is the standard part numbering system when ordering our MLV Series components by the Maida Style Number:

- | | | | | | | | |
|--|-----------|-----------|----------|-------------|----------|------------|----------|
| | <u>EV</u> | <u>18</u> | <u>N</u> | <u>0603</u> | <u>L</u> | <u>120</u> | <u>R</u> |
| 1. Series Designation | ↑ | ↑ | ↑ | ↑ | ↑ | ↑ | ↑ |
| 2. DC Voltage Rating (VDC) | | ↑ | ↑ | ↑ | ↑ | ↑ | ↑ |
| 3. End Termination Type | | | ↑ | ↑ | ↑ | ↑ | ↑ |
| N – Tin (Sn) plated Nickel (Ni) | | | | | | | |
| 4. Chip size | | | | ↑ | ↑ | ↑ | ↑ |
| As defined by EIA standards | | | | | | | |
| 5. Special Capacitance Designation | | | | | ↑ | ↑ | ↑ |
| L – Low Capacitance | | | | | | | |
| 7. Nominal Capacitance (pF) | | | | | | ↑ | ↑ |
| Two significant figures plus number of zeroes that follow, i.e. 120 is 12 pF | | | | | | | |
| 8. Packaging Code | | | | | | | ↑ |
| B – Bulk | | | | | | | |
| R – Tape & Reel | | | | | | | |



EV SERIES for ESD PROTECTION

Level 4 ESD protection to 8kV direct, 15kV air discharge

Maida Style Number	Recognitions To Safety Agency Standards						Nominal Size	Minimum Marking	Maximum Ratings						Electrical Characteristics					
									Applied Voltage		Energy		Peak Current 8 x 20 μ sec # Pulses	Varistor Voltage @1 mA DC		Max Clamping Voltage (@Test Current)		Typical Cap.		
											10 x 1000 μ sec	8 x 20 μ sec	1	2	Vmin	Vmax	(8 x 20 μ sec)			
	A	B	C	D	E	F	(EIA)		(AC)	(DC)	(J)	(J)	(A)	(A)	(V)	(V)	(V)	(A)	1 V rms @1kHz (pF)	
EV5N0402L1R0							0402	N/A	4	5	N/A	N/A	N/A	N/A	7.6	12	25	10	1	
EV5N0402L3R0							0402	N/A	4	5	N/A	N/A	N/A	N/A	7.6	12	25	10	3	
EV5N0402L5R0							0402	N/A	4	5	N/A	N/A	N/A	N/A	7.6	12	25	10	5	
EV5N0402L100							0402	N/A	4	5	N/A	N/A	N/A	N/A	7.6	12	25	10	10	
EV5N0402L150							0402	N/A	4	5	N/A	N/A	N/A	N/A	7.6	12	25	10	15	
EV5N0402L220							0402	N/A	4	5	N/A	N/A	N/A	N/A	7.6	12	25	10	22	
EV5N0402L330							0402	N/A	4	5	N/A	N/A	N/A	N/A	7.6	12	25	10	33	
EV5N0402L470							0402	N/A	4	5	N/A	N/A	N/A	N/A	7.6	12	25	10	47	
EV5N0402L680							0402	N/A	4	5	N/A	N/A	N/A	N/A	7.6	12	25	10	68	
EV5N0402L820							0402	N/A	4	5	N/A	N/A	N/A	N/A	7.6	12	25	10	82	
EV5N0402L101							0402	N/A	4	5	N/A	N/A	N/A	N/A	7.6	12	25	10	100	
EV9N0402L220							0402	N/A	6.5	9	N/A	N/A	N/A	N/A	11	17	35	10	22	
EV18N0402L5R0							0402	N/A	14	18	N/A	N/A	N/A	N/A	46	60	110	10	5	
EV18N0402L100							0402	N/A	14	18	N/A	N/A	N/A	N/A	46	60	110	10	10	
EV18N0402L220							0402	N/A	14	18	N/A	N/A	N/A	N/A	46	60	110	10	22	
EV42N0402L3R0							0402	N/A	38	42	N/A	N/A	N/A	N/A	46	75	135	10	3	
EV5N0603L1R0							0603	N/A	4	5	N/A	N/A	N/A	N/A	7.6	12	25	10	1	
EV5N0603L3R0							0603	N/A	4	5	N/A	N/A	N/A	N/A	7.6	12	25	10	3	
EV5N0603L5R0							0603	N/A	4	5	N/A	N/A	N/A	N/A	7.6	12	25	10	5	
EV5N0603L100							0603	N/A	4	5	N/A	N/A	N/A	N/A	7.6	12	25	10	10	
EV5N0603L150							0603	N/A	4	5	N/A	N/A	N/A	N/A	7.6	12	25	10	15	
EV5N0603L220							0603	N/A	4	5	N/A	N/A	N/A	N/A	7.6	12	25	10	22	
EV5N0603L330							0603	N/A	4	5	N/A	N/A	N/A	N/A	7.6	12	25	10	33	
EV5N0603L470							0603	N/A	4	5	N/A	N/A	N/A	N/A	7.6	12	25	10	47	
EV5N0603L680							0603	N/A	4	5	N/A	N/A	N/A	N/A	7.6	12	25	10	68	
EV5N0603L820							0603	N/A	4	5	N/A	N/A	N/A	N/A	7.6	12	25	10	82	
EV5N0603L101							0603	N/A	4	5	N/A	N/A	N/A	N/A	7.6	12	25	10	100	
EV5N0603L151							0603	N/A	4	5	N/A	N/A	N/A	N/A	7.6	12	25	10	150	
EV5N0603L221							0603	N/A	4	5	N/A	N/A	N/A	N/A	7.6	12	25	10	220	
EV5N0603L331							0603	N/A	4	5	N/A	N/A	N/A	N/A	7.6	12	25	10	330	
EV5N0603L471							0603	N/A	4	5	N/A	N/A	N/A	N/A	7.6	12	25	10	470	
EV9N0603L5R0							0603	N/A	6.5	9	N/A	N/A	N/A	N/A	11	17	35	10	5	
EV9N0603L220							0603	N/A	6.5	9	N/A	N/A	N/A	N/A	11	17	35	10	22	
EV18N0603L5R0							0603	N/A	14	18	N/A	N/A	N/A	N/A	46	60	110	10	10	
EV18N0603L120							0603	N/A	14	18	N/A	N/A	N/A	N/A	46	60	110	10	12	
EV18N0603L220							0603	N/A	14	18	N/A	N/A	N/A	N/A	46	60	110	10	22	
EV26N0603L220							0603	N/A	20	26	N/A	N/A	N/A	N/A				10	22	
EV30N0603L040							0603	N/A	25	30	N/A	N/A	N/A	N/A	38	46	65	10	40	
EV42N0603L150							0603	N/A	38	42	N/A	N/A	N/A	N/A				10	15	

NOTES:

Appendix A lists the single-pulse peak current and energy ratings on file with the Safety Agencies.

Maximum transient rating specified in this table are valid. They may differ from those shown in Appendix A.

A = UL1449 File E321173 - Surge Protective Devices

D = VDE File 40017480

B = cUL File E321173 - Surge Protective Devices

E = SEV - 96.7 70250.01

C = CSA C22.2 File 033468

EV SERIES for ESD PROTECTION

Level 4 ESD protection to 8kV direct, 15kV air discharge

Maida Style Number	Length (L) (in)	Length Tolerance (L) (in)	Width (W) (in)	Width Tolerance (W) (in)	MAX. Height (H) (in)	Land Pad Length (PL) (in)	Land Pad Width (PW) (in)	Land Pad Thickness (PT) (in)	Typical Wire Diameter (d) (in)
EV5N0402L1R0	0.039	0.004	0.020	0.004	0.020	0.088	0.028	0.035	N/A
EV5N0402L3R0	0.039	0.004	0.020	0.004	0.020	0.088	0.028	0.035	N/A
EV5N0402L5R0	0.039	0.004	0.020	0.004	0.020	0.088	0.028	0.035	N/A
EV5N0402L100	0.039	0.004	0.020	0.004	0.020	0.088	0.028	0.035	N/A
EV5N0402L150	0.039	0.004	0.020	0.004	0.020	0.088	0.028	0.035	N/A
EV5N0402L220	0.039	0.004	0.020	0.004	0.020	0.088	0.028	0.035	N/A
EV5N0402L330	0.039	0.004	0.020	0.004	0.020	0.088	0.028	0.035	N/A
EV5N0402L470	0.039	0.004	0.020	0.004	0.020	0.088	0.028	0.035	N/A
EV5N0402L680	0.039	0.004	0.020	0.004	0.020	0.088	0.028	0.035	N/A
EV5N0402L820	0.039	0.004	0.020	0.004	0.020	0.088	0.028	0.035	N/A
EV5N0402L101	0.039	0.004	0.020	0.004	0.020	0.088	0.028	0.035	N/A
EV9N0402L220	0.039	0.004	0.020	0.004	0.020	0.088	0.028	0.035	N/A
EV18N0402L5R0	0.039	0.004	0.020	0.004	0.020	0.088	0.028	0.035	N/A
EV18N0402L100	0.039	0.004	0.020	0.004	0.020	0.088	0.028	0.035	N/A
EV18N0402L220	0.039	0.004	0.020	0.004	0.020	0.088	0.028	0.035	N/A
EV42N0402L3R0	0.039	0.004	0.020	0.004	0.020	0.088	0.028	0.035	N/A
EV5N0603L1R0	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
EV5N0603L3R0	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
EV5N0603L5R0	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
EV5N0603L100	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
EV5N0603L150	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
EV5N0603L220	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
EV5N0603L330	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
EV5N0603L470	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
EV5N0603L680	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
EV5N0603L820	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
EV5N0603L101	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
EV5N0603L151	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
EV5N0603L221	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
EV5N0603L331	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
EV5N0603L471	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
EV9N0603L5R0	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
EV9N0603L220	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
EV18N0603L5R0	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
EV18N0603L120	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
EV18N0603L220	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
EV26N0603L220	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
EV30N0603L040	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
EV42N0603L150	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A

SV SERIES

Standard MLV

Maida Style Number	Recognitions To Safety Agency Standards						Nominal Size	Minimum Marking	Maximum Ratings						Electrical Characteristics								
									Applied Voltage		Continuous		Transient				Peak Current 8 x 20 μ sec # Pulses		Varistor Voltage @1 mA DC		Max Clamping Voltage (@Test Current)		Typical Cap.
											Energy												
											10 x 1000 μ sec	8 x 20 μ sec	1	2	Vmin	Vmax							
	A	B	C	D	E	F			(EIA)	(AC)	(DC)	(J)	(J)	(A)	(A)	(V)	(V)	(V)	(A)	1 V rms @1kHz (pF)			
SV5R5N0402271							0402	N/A	4	5.5	0.1	0.1	20	20	6.9	9.3	19	1	270				
SV9N0402131							0402	N/A	6.5	9	0.1	0.1	20	20	11.3	15.2	32	1	130				
SV11N0402121							0402	N/A	8	11	0.1	0.1	20	20	12.7	17.3	33	1	120				
SV11N0402400							0402	N/A	8	11	0.1	0.1	10	10	12.7	17.3	33	1	40				
SV14N0603900							0402	N/A	11	14	0.1	0.1	20	20	16.2	19.8	38	1	90				
SV14N0603330							0402	N/A	11	14	0.1	0.1	10	10	16.2	19.8	42	1	33				
SV18N0603850							0402	N/A	14	18	0.1	0.1	20	20	19.8	24.2	45	1	85				
SV3R5N0603181							0603	N/A	2.5	3.3	0.1	0.1	20	20	4.4	6.6	13	1	180				
SV5R5N0603271							0603	N/A	4	5.5	0.1	0.1	30	30	6.9	9.3	16	1	270				
SV8N0603141							0603	N/A	6	8	0.1	0.1	30	30	8.8	13.2	29	1	140				
SV9N0603211							0603	N/A	7	9	0.1	0.1	30	30	10	15	27	1	210				
SV11N0603201							0603	N/A	8	11	0.1	0.1	30	30	13	18	27	1	200				
SV14N0603101							0603	N/A	11	14	0.1	0.1	30	30	16.2	19.8	35	1	100				
SV14N0603151							0603	N/A	11	14	0.1	0.1	30	30	16.2	19.8	35	1	150				
SV18N0603131							0603	N/A	14	18	0.1	0.1	30	30	19.8	24.2	40	1	130				
SV26N0603101							0603	N/A	20	26	0.1	0.1	30	30	27.9	34.1	58	1	100				
SV30N0603040							0603	N/A	25	30	0.1	0.1	30	30	38	46	65	1	40				
SV39N0603030							0603	N/A	30	39	0.1	0.1	30	30	42	52	80	1	30				
SV5R5N0805102							0805	N/A	4	5.5	0.3	0.3	120	120	6.9	9.3	15	2	1000				
SV9N0805641							0805	N/A	6.5	9	0.3	0.3	120	120	11.3	15.2	24	2	640				
SV11N0805581							0805	N/A	8	11	0.3	0.3	120	120	13	18	27	2	580				
SV14N0805501							0805	N/A	10	14	0.3	0.3	120	120	17.5	23.7	30	2	500				
SV18N0805401							0805	N/A	14	18	0.3	0.3	120	120	23	30	40	2	400				
SV22N0805361							0805	N/A	17	22	0.3	0.3	120	120	28	34	50	2	360				
SV26N0805281							0805	N/A	20	26	0.3	0.3	120	120	33	40	58	2	280				
SV30N0805201							0805	N/A	25	30	0.3	0.3	120	120	38	46	65	2	200				
SV39N0805151							0805	N/A	30	39	0.3	0.3	120	120	42	52	80	2	150				
SV5R5N1206312							1206	N/A	4	5.5	0.4	0.4	100	100	7.5	10.5	20	10	3100				
SV9N1206222							1206	N/A	6.5	9	0.4	0.4	150	150	11.3	15.2	25	10	2200				
SV14N1206172							1206	N/A	10	14	0.4	0.4	150	150	17.5	23.7	30	10	1700				
SV18N1206102							1206	N/A	14	18	0.4	0.4	150	150	23	30	40	10	1000				
SV26N1206941							1206	N/A	20	26	0.4	0.4	150	150	33	40	58	10	940				
SV30N1206891							1206	N/A	25	30	0.4	0.4	150	150	38	46	66	10	890				
SV42N1206641							1206	N/A	30	42	0.4	0.4	150	150	46	60	180	10	640				
SV48N1206601							1206	N/A	40	48	0.4	0.4	150	150	55	66	100	10	600				
SV56N1206181							1206	N/A	40	56	0.4	0.4	150	150	63	77	120	10	180				
SV18N1210172							1210	N/A	14	18	0.9	0.9	220	220	23	30	40	10	1700				
SV26N1210122							1210	N/A	20	26	0.9	0.9	220	220	33	40	58	10	1200				
SV30N1210901							1210	N/A	25	30	0.9	0.9	220	220	38	46	66	10	900				
SV38N1210781							1210	N/A	30	38	0.9	0.9	250	250	42.3	51.7	77	10	780				
SV48N1210451							1210	N/A	40	48	0.9	0.9	250	250	55	66	100	10	450				
SV60N1210601							1210	N/A	50	60	0.9	0.9	250	250	69	83	120	10	600				

NOTES:

Appendix A lists the single-pulse peak current and energy ratings on file with the Safety Agencies.

Maximum transient rating specified in this table are valid. They may differ from those shown in Appendix A.

A = UL1449 File E321173 - Surge Protective Devices

D = VDE File 40017480

B = cUL File E321173 - Surge Protective Devices

E = SEV - 96.7 70250.01

C = CSA C22.2 File 033468

SV SERIES
Standard MLV

Maida Style Number	Length (L) (in)	Length Tolerance (L) (in)	Width (W) (in)	Width Tolerance (W) (in)	MAX. Height (H) (in)	Land Pad Length (PL) (in)	Land Pad Width (PW) (in)	Land Pad Thickness (PT) (in)	Typical Wire Diameter (d) (in)
SV5R5N0402271	0.039	0.004	0.020	0.004	0.020	0.088	0.028	0.035	N/A
SV9N0402131	0.039	0.004	0.020	0.004	0.020	0.088	0.028	0.035	N/A
SV11N0402121	0.039	0.004	0.020	0.004	0.020	0.088	0.028	0.035	N/A
SV11N0402400	0.039	0.004	0.020	0.004	0.020	0.088	0.028	0.035	N/A
SV14N0603900	0.039	0.004	0.020	0.004	0.020	0.088	0.028	0.035	N/A
SV14N0603330	0.039	0.004	0.020	0.004	0.020	0.088	0.028	0.035	N/A
SV18N0603850	0.039	0.004	0.020	0.004	0.020	0.088	0.028	0.035	N/A
SV3R5N0603181	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
SV5R5N0603271	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
SV8N0603141	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
SV9N0603211	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
SV11N0603201	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
SV14N0603101	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
SV14N0603151	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
SV18N0603131	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
SV26N0603101	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
SV30N0603040	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
SV39N0603030	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
SV5R5N0805102	0.079	0.008	0.049	0.008	0.043	0.125	0.600	0.045	N/A
SV9N0805641	0.079	0.008	0.049	0.008	0.043	0.125	0.600	0.045	N/A
SV11N0805581	0.079	0.008	0.049	0.008	0.043	0.125	0.600	0.045	N/A
SV14N0805501	0.079	0.008	0.049	0.008	0.043	0.125	0.600	0.045	N/A
SV18N0805401	0.079	0.008	0.049	0.008	0.043	0.125	0.600	0.045	N/A
SV22N0805361	0.079	0.008	0.049	0.008	0.043	0.125	0.600	0.045	N/A
SV26N0805281	0.079	0.008	0.049	0.008	0.043	0.125	0.600	0.045	N/A
SV30N0805201	0.079	0.008	0.049	0.008	0.043	0.125	0.600	0.045	N/A
SV39N0805151	0.079	0.008	0.049	0.008	0.043	0.125	0.600	0.045	N/A
SV5R5N1206312	0.126	0.012	0.063	0.012	0.067	0.175	0.068	0.065	N/A
SV9N1206222	0.126	0.012	0.063	0.012	0.067	0.175	0.068	0.065	N/A
SV14N1206172	0.126	0.012	0.063	0.012	0.067	0.175	0.068	0.065	N/A
SV18N1206102	0.126	0.012	0.063	0.012	0.067	0.175	0.068	0.065	N/A
SV26N1206941	0.126	0.012	0.063	0.012	0.067	0.175	0.068	0.065	N/A
SV30N1206891	0.126	0.012	0.063	0.012	0.067	0.175	0.068	0.065	N/A
SV42N1206641	0.126	0.012	0.063	0.012	0.067	0.175	0.068	0.065	N/A
SV48N1206601	0.126	0.012	0.063	0.012	0.067	0.175	0.068	0.065	N/A
SV56N1206181	0.126	0.012	0.063	0.012	0.067	0.175	0.068	0.065	N/A
SV18N1210172	0.126	0.012	0.098	0.012	0.071	0.175	0.110	0.065	N/A
SV26N1210122	0.126	0.012	0.098	0.012	0.071	0.175	0.110	0.065	N/A
SV30N1210901	0.126	0.012	0.098	0.012	0.071	0.175	0.110	0.065	N/A
SV38N1210781	0.126	0.012	0.098	0.012	0.071	0.175	0.110	0.065	N/A
SV48N1210451	0.126	0.012	0.098	0.012	0.071	0.175	0.110	0.065	N/A
SV60N1210601	0.126	0.012	0.098	0.012	0.071	0.175	0.110	0.065	N/A

TV SERIES

Low Capacitance MLV

Maida Style Number	Recognitions To Safety Agency Standards						Nominal Size	Minimum Marking	Maximum Ratings						Electrical Characteristics					
									Applied Voltage		Energy		Peak Current 8 x 20 μ sec # Pulses		Varistor Voltage @1 mA DC		Max Clamping Voltage (@Test Current)		Typical Cap.	
											10 x 1000 μ sec	8 x 20 μ sec	1	2						Vmin
	(AC)	(DC)	(J)	(J)	(A)	(A)	(V)		(V)	(V)	(A)	(pF)								
TV5R5N0603						0603	N/A	4	5.5	0.05	0.05	20	20	6.9	9.3	20	1	210		
TV9N0603						0603	N/A	6.5	9	0.05	0.05	20	20	11	15	25	1	180		
TV11N0603						0603	N/A	8	11	0.05	0.05	20	20	13	17	30	1	170		
TV14N0603						0603	N/A	10	14	0.05	0.05	25	25	16.5	20.5	35	1	150		
TV18N0603						0603	N/A	14	18	0.05	0.05	25	25	22	27	45	1	120		
TV22N0603						0603	N/A	17	22	0.05	0.05	30	30	26	32	50	1	90		
TV26N0603						0603	N/A	20	26	0.05	0.05	30	30	32	38	60	1	60		
TV5R5N0805						0805	N/A	4	5.5	0.1	0.1	40	40	6.9	9.3	15	2	510		
TV9N0805						0805	N/A	6.5	9	0.15	0.15	40	40	11.3	15.2	20	2	320		
TV11N0805						0805	N/A	8	11	0.15	0.15	40	40	13	17	25	2	290		
TV14N0805						0805	N/A	10	14	0.15	0.15	40	40	17.5	23.7	30	2	250		
TV18N0805						0805	N/A	14	18	0.15	0.15	40	40	23	30	40	2	200		
TV22N0805						0805	N/A	17	22	0.15	0.15	40	40	28	34	50	2	180		
TV26N0805						0805	N/A	20	26	0.15	0.15	40	40	33	40	60	2	100		

NOTES:

Appendix A lists the single-pulse peak current and energy ratings on file with the Safety Agencies.

Maximum transient rating specified in this table are valid. They may differ from those shown in Appendix A.

A = UL1449 File E321173 - Surge Protective Devices

D = VDE File 40017480

B = cUL File E321173 - Surge Protective Devices

E = SEV - 96.7 70250.01

C = CSA C22.2 File 033468

TV SERIES
Low Capacitance MLV

Maida Style Number	Length (L) (in)	Length Tolerance (L) (in)	Width (W) (in)	Width Tolerance (W) (in)	MAX. Height (H) (in)	Land Pad Length (PL) (in)	Land Pad Width (PW) (in)	Land Pad Thickness (PT) (in)	Typical Wire Diameter (d) (in)
TV5R5N0603	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
TV9N0603	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
TV11N0603	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
TV14N0603	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
TV18N0603	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
TV22N0603	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
TV26N0603	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
TV5R5N0805	0.079	0.008	0.049	0.008	0.043	0.125	0.600	0.045	N/A
TV9N0805	0.079	0.008	0.049	0.008	0.043	0.125	0.600	0.045	N/A
TV11N0805	0.079	0.008	0.049	0.008	0.043	0.125	0.600	0.045	N/A
TV14N0805	0.079	0.008	0.049	0.008	0.043	0.125	0.600	0.045	N/A
TV18N0805	0.079	0.008	0.049	0.008	0.043	0.125	0.600	0.045	N/A
TV22N0805	0.079	0.008	0.049	0.008	0.043	0.125	0.600	0.045	N/A
TV26N0805	0.079	0.008	0.049	0.008	0.043	0.125	0.600	0.045	N/A

PV SERIES

Power MLV

Maida Style Number	Recognitions To Safety Agency Standards						Nominal Size	Minimum Marking	Maximum Ratings						Electrical Characteristics					
									Applied Voltage		Energy		Peak Current 8 x 20 μ sec # Pulses		Varistor Voltage @1 mA DC		Max Clamping Voltage (@Test Current)		Typical Cap.	
											10 x 1000 μ sec	8 x 20 μ sec	1	2						Vmin
	(AC)	(DC)	(J)	(J)	(A)	(A)	(V)		(V)	(V)	(A)	(pF)								
PV5R5N0603							0603	N/A	4	5.5	0.15	0.15	40	40	6.9	9.3	15.5	2	800	
PV14N0603							0603	N/A	10	14	0.15	0.15	40	40	17.5	23.7	30	2	450	
PV18N0603							0603	N/A	14	18	0.15	0.15	40	40	23	30	40	2	380	
PV22N0603							0603	N/A	17	22	0.15	0.15	40	40	28	34	58	2	290	
PV5R5N0805							0805	N/A	4	5.5	0.4	0.4	120	120	6.9	9.3	15.5	5	1530	
PV14N0805							0805	N/A	10	14	0.4	0.4	150	150	16.5	20.5	30	5	750	
PV18N0805							0805	N/A	14	18	0.4	0.4	150	150	23	30	40	5	640	
PV22N0805							0805	N/A	17	22	0.4	0.4	150	150	28	34	50	5	540	
PV26N0805							0805	N/A	20	26	0.4	0.4	150	150	33	40	58	5	480	
PV30N0805							0805	N/A	25	30	0.4	0.4	150	150	38	46	65	5	250	
PV3R5N1206							1206	N/A	2.5	3.3	0.7	0.7	150	150	4.4	6.6	13	10	7400	
PV5R5N1206							1206	N/A	4	5.5	0.7	0.7	150	150	6.9	9.3	15.5	10	4800	
PV14N1206							1206	N/A	10	14	0.7	0.7	200	200	17.5	23.7	30	10	2200	
PV18N1206							1206	N/A	14	18	0.7	0.7	200	200	23	30	40	10	1700	
PV26N1206							1206	N/A	20	26	0.7	0.7	200	200	33	40	58	10	1550	
PV30N1206							1206	N/A	25	30	0.7	0.7	200	200	38	46	66	10	1430	
PV48N1206							1206	N/A	40	48	0.7	0.7	200	200	55	66	100	10	1070	
PV18N1210							1210	N/A	14	18	1.5	1.5	500	500	23	30	40	10	2680	
PV26N1210							1210	N/A	20	26	1.5	1.5	300	300	33	40	58	10	2100	
PV30N1210							1210	N/A	25	30	1.5	1.5	250	250	38	46	66	10	1900	
PV48N1210							1210	N/A	40	48	1.5	1.5	250	250	55	66	100	10	1600	
PV60N1210							1210	N/A	50	60	1.5	1.5	250	250	69	83	140	10	1230	
PV85N1210							1210	N/A	67	85	1.5	1.5	250	250	98	118	160	10	590	
PV18N1812							1812	N/A	14	18	2.5	2.5	500	500	23	30	40	10	3800	
PV26N1812							1812	N/A	20	26	3.0	3.0	500	500	33	40	58	10	2950	
PV30N1812							1812	N/A	25	30	3.7	3.7	500	500	38	46	66	10	2820	
PV48N1812							1812	N/A	40	48	4.0	4.0	400	400	55	66	100	10	2740	
PV60N1812							1812	N/A	50	60	4.5	4.5	400	400	69	83	140	10	2220	
PV85N1812							1812	N/A	67	85	5.8	5.8	400	400	98	118	160	10	1400	
PV5R5N2220							2220	N/A	4	5.5	2	2	1000	1000	6.9	9.3	15.5	10	15000	
PV14N2220							2220	N/A	10	14	2.5	2.5	1200	1200	17.5	23.7	30	10	9600	
PV18N2220							2220	N/A	14	18	3	3	1200	1200	23	30	40	10	6400	
PV26N2220							2220	N/A	20	26	5	5	1200	1200	33	40	58	10	6200	
PV30N2220							2220	N/A	25	30	6	6	1200	1200	38	46	66	10	5700	
PV38N2220							2220	N/A	30	38	6	6	1200	1200	42	52	77	10	5500	
PV48N2220							2220	N/A	40	48	8	8	1200	1200	55	66	100	10	5200	

NOTES:

Appendix A lists the single-pulse peak current and energy ratings on file with the Safety Agencies.

Maximum transient rating specified in this table are valid. They may differ from those shown in Appendix A.

A = UL1449 File E321173 - Surge Protective Devices

D = VDE File 40017480

B = cUL File E321173 - Surge Protective Devices

E = SEV - 96.7 70250.01

C = CSA C22.2 File 033468

PV SERIES
Power MLV

Maida Style Number	Length (L) (in)	Length Tolerance (L) (in)	Width (W) (in)	Width Tolerance (W) (in)	MAX. Height (H) (in)	Land Pad Length (PL) (in)	Land Pad Width (PW) (in)	Land Pad Thickness (PT) (in)	Typical Wire Diameter (d) (in)
PV5R5N0603	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
PV14N0603	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
PV18N0603	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
PV22N0603	0.063	0.006	0.032	0.006	0.035	0.110	0.380	0.040	N/A
PV5R5N0805	0.079	0.008	0.049	0.008	0.043	0.125	0.600	0.045	N/A
PV14N0805	0.079	0.008	0.049	0.008	0.043	0.125	0.600	0.045	N/A
PV18N0805	0.079	0.008	0.049	0.008	0.043	0.125	0.600	0.045	N/A
PV22N0805	0.079	0.008	0.049	0.008	0.043	0.125	0.600	0.045	N/A
PV26N0805	0.079	0.008	0.049	0.008	0.043	0.125	0.600	0.045	N/A
PV30N0805	0.079	0.008	0.049	0.008	0.043	0.125	0.600	0.045	N/A
PV3R5N1206	0.126	0.012	0.063	0.012	0.067	0.175	0.068	0.065	N/A
PV5R5N1206	0.126	0.012	0.063	0.012	0.067	0.175	0.068	0.065	N/A
PV14N1206	0.126	0.012	0.063	0.012	0.067	0.175	0.068	0.065	N/A
PV18N1206	0.126	0.012	0.063	0.012	0.067	0.175	0.068	0.065	N/A
PV26N1206	0.126	0.012	0.063	0.012	0.067	0.175	0.068	0.065	N/A
PV30N1206	0.126	0.012	0.063	0.012	0.067	0.175	0.068	0.065	N/A
PV48N1206	0.126	0.012	0.063	0.012	0.067	0.175	0.068	0.065	N/A
PV18N1210	0.126	0.012	0.098	0.012	0.071	0.175	0.110	0.065	N/A
PV26N1210	0.126	0.012	0.098	0.012	0.071	0.175	0.110	0.065	N/A
PV30N1210	0.126	0.012	0.098	0.012	0.071	0.175	0.110	0.065	N/A
PV48N1210	0.126	0.012	0.098	0.012	0.071	0.175	0.110	0.065	N/A
PV60N1210	0.126	0.012	0.098	0.012	0.071	0.175	0.110	0.065	N/A
PV85N1210	0.126	0.012	0.098	0.012	0.071	0.175	0.110	0.065	N/A
PV18N1812	0.177	0.014	0.126	0.012	0.079	0.230	0.135	0.075	N/A
PV26N1812	0.177	0.014	0.126	0.012	0.079	0.230	0.135	0.075	N/A
PV30N1812	0.177	0.014	0.126	0.012	0.079	0.230	0.135	0.075	N/A
PV48N1812	0.177	0.014	0.126	0.012	0.079	0.230	0.135	0.075	N/A
PV60N1812	0.177	0.014	0.126	0.012	0.079	0.230	0.135	0.075	N/A
PV85N1812	0.177	0.014	0.126	0.012	0.079	0.230	0.135	0.075	N/A
PV5R5N2220	0.224	0.014	0.197	0.014	0.098	0.275	0.225	0.085	N/A
PV14N2220	0.224	0.014	0.197	0.014	0.098	0.275	0.225	0.085	N/A
PV18N2220	0.224	0.014	0.197	0.014	0.098	0.275	0.225	0.085	N/A
PV26N2220	0.224	0.014	0.197	0.014	0.098	0.275	0.225	0.085	N/A
PV30N2220	0.224	0.014	0.197	0.014	0.098	0.275	0.225	0.085	N/A
PV38N2220	0.224	0.014	0.197	0.014	0.098	0.275	0.225	0.085	N/A
PV48N2220	0.224	0.014	0.197	0.014	0.098	0.275	0.225	0.085	N/A

AV SERIES

Array series for multiple ESD protection

Maida Style Number	Recognitions To Safety Agency Standards						Nominal Size	Minimum Marking	Maximum Ratings						Electrical Characteristics					
									Applied Voltage		Energy		Peak Current 8 x 20 μ sec # Pulses		Varistor Voltage @1 mA DC		Max Clamping Voltage (@Test Current)		Typical Cap.	
											10 x 1000 μ sec		8 x 20 μ sec							
	(AC)	(DC)	(J)	(J)	(A)	(A)	(V)	(V)	(V)	(A)	(pF)									
	AV40805N5R5100							0805	N/A	4	5.5	0.01	0.01	5	5	9.6	14.4	34	1	10
AV40805N5R5330							0805	N/A	4	5.5	0.01	0.01	10	10	9.6	14.4	28	1	33	
AV40805N5R5500							0805	N/A	4	5.5	0.01	0.01	10	10	9.6	14.4	27	1	50	
AV40805N18150							0805	N/A	14	18	0.01	0.01	5	5	25	31	58	1	15	
AV41206N18040							1206	N/A	14	<18	N/A	N/A	120	120	22	31	48	1	40	
AV41206N18120							1206	N/A	14	<18	N/A	N/A	150	150	22	31	45	1	120	

NOTES:

Appendix A lists the single-pulse peak current and energy ratings on file with the Safety Agencies.

Maximum transient rating specified in this table are valid. They may differ from those shown in Appendix A.

A = UL1449 File E321173 - Surge Protective Devices

D = VDE File 40017480

B = cUL File E321173 - Surge Protective Devices

E = SEV - 96.7 70250.01

C = CSA C22.2 File 033468

AV SERIES
Array series for multiple ESD protection

Maida Style Number	Length (L) (in)	Length Tolerance (L) (in)	Width (W) (in)	Width Tolerance (W) (in)	MAX. Height (H) (in)	Land Pad Length (PL) (in)	Land Pad Width (PW) (in)	Land Pad Thickness (PT) (in)	Typical Wire Diameter (d) (in)
AV40805N5R5100	0.079	0.008	0.049	0.008	0.043	(1)	(1)	(1)	N/A
AV40805N5R5330	0.079	0.008	0.049	0.008	0.043	(1)	(1)	(1)	N/A
AV40805N5R5500	0.079	0.008	0.049	0.008	0.043	(1)	(1)	(1)	N/A
AV40805N18150	0.079	0.008	0.049	0.008	0.043	(1)	(1)	(1)	N/A
AV41206N18040	0.126	0.012	0.063	0.012	0.067	(1)	(1)	(1)	N/A
AV41206N18120	0.126	0.012	0.063	0.012	0.067	(1)	(1)	(1)	N/A

(1) : Please contact Maida for details.