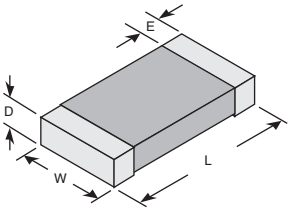
LITTELFUSE Varistors - SMD

RoHS Compliant This product is RoHS compliant.

Littelfuse SURFACE MOUNT ML SERIES VARISTORS

The ML Series family of Transient Voltage Surge Suppressions devices is based on the Littelfuse Multilayer fabrication technology. These components are designed to suppress a variety of transient events, including those specified in IEC 61000-4-2 or other standards used for Electromagnetic Compliance (EMC). The ML Series is typically applied to protect integrated circuits and other components at the circuit board level.



Features:

- Leadless Chip Size: 0402, 0603, 0805, 1206 and 1210
- Multilayer Ceramic Construction Technology
- Operating Temperature Range: -55°C to +125°C
- Operating Voltage Range: V_M(DC) = 3.5V to 120V

Applications:

- Suppression of inductive switching or other transient events such as EFT
- Provides on-board transient voltage protection for ICs and transistors
- Used to help achieve electromagnetic compliance of end products
- Replace larger surface mount TVS Zeners in many applications

Chip Dimensions	1210		1206		0805		0603		0402		0201	
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm
D Max.	0.113	2.87	0.071	1.8	0.043	1.1	0.04	1	0.024	0.6	0.014	0.35
E	0.02±0.01	0.5±0.25	0.02±0.01	0.5±0.25	0.02±0.01	0.5±0.25	0.15±0.008	0.4±0.2	0.01±0.006	0.25±0.15	0.008±0.004	0.20±0.10
L	0.125±0.012	3.2±0.3	0.125±0.012	3.2±0.3	0.079±0.008	2.01±0.2	0.063±0.006	1.6±0.15	0.039±0.004	1±0.1	0.024±0.002	0.60±0.05
W	0.1±0.012	2.54±0.3	0.06±0.011	1.6±0.28	0.049±0.008	1.25±0.2	0.032±0.06	0.8±0.15	0.02±0.004	0.5±0.1	0.012±0.002	0.30±0.05

For quantities greater than listed, call for quote.

MOUSER STOCK NO.		Package Size	Maximum Ratings (125°C)						Specifications (25°C)			Price Each			Reel Qty	Price Per Piece
			Max. Cont. Working Voltage		Max. Non-repetitive Surge Curr. (8/20μs)	Max. Non-repetitive Surge Engy. (10/1000μs)	Max. Clamping Voltage (8/20μs)		Norm. Volt. @ 1mADC Test Current		Typical Capacitance @ f=1MHz					
Mfr.	Mfr. Part No.		V_M (DC)	V_M (AC)	I_{TM}	W_{TM}	V_C		$V_{N(DG)}$ Min.	$V_{N(DG)}$ Max.	C	1	10	100		
			Volts	Volts	Amps	Joules	Volts	Amps	Volts	Volts	pF					
576—	V3.5MLA0603H	0603	3.5	2.5	30	0.1	13	1	3.7	7	1270	.30	.26	.25	2500	.19
576—	V3.5MLA0805LH	0805	3.5	2.5	40	0.1	13	1	3.7	7	1380	.33	.30	.29	2500	.22
576—	V3.5MLA1206H	1206	3.5	2.5	100	0.3	13	1	3.7	7	6000	.69	.65	.625	2500	.42
576—	V3.5MLA0805H	0805	3.5	2.5	120	0.3	13	1	3.7	7	2530	.33	.30	.29	2500	.22
576—	V5.5MLA020133NR	0201	5.5	4	1	-	28	-	8	14	33	.12	.111	.11	15000	.082
576—	V5.5MLA020147NR	0201	5.5	4	1	-	26	-	8	14	47	.12	.111	.11	15000	.082
576—	V5.5MLA020164NR	0201	5.5	4	1	-	26	-	8	14	64	.12	.111	.11	15000	.082
576—	V5.5MLA0402NR	0402	5.5	4	20	0.05	21	1	7.1	10.8	220	.22	.205	.195	10000	.13
576—	V5.5MLA0603H	0603	5.5	4	30	0.1	17.5	1	7.1	9.3	500	.30	.26	.25	2500	.19
576—	V5.5MLA0805LH	0805	5.5	4	40	0.1	17.5	1	7.1	9.3	990	.33	.30	.29	2500	.22
576—	V5.5MLA0805LNH	0805	5.5	4	40	0.1	17.5	1	7.1	9.3	990	.36	.34	.325	2500	.245
576—	V5.5MLA0805H	0805	5.5	4	120	0.3	17.5	1	7.1	9.3	1840	.33	.30	.29	2500	.22
576—	V5.5MLA1206H	1206	5.5	4	150	0.4	17.5	1	7.1	9.3	3500	.85	.795	.764	2500	.52
576—	V5.5MLA1206NH	1206	5.5	4	150	0.4	17.5	1	7.1	9.3	3500	.69	.65	.625	2500	.42
576—	V9MLA0402LNH	0402	9	6.5	4	0.02	35	1	11	16	33	.19	.183	.173	10000	.112
576—	V9MLA0603H	0603	9	6.5	30	0.1	25.5	1	11	16	490	.30	.26	.25	2500	.19
576—	V9MLA0603NH	0603	9	6.5	30	0.1	25.5	1	11	16	490	.30	.29	.28	2500	.213
576—	V9MLA0805LH	0805	9	6.5	40	0.1	25.5	1	11	16	520	.33	.30	.29	2500	.22
576—	V12MLA0805LNH	0805	12	9	40	0.1	29	1	14	18.5	410	.36	.34	.325	2500	.245
576—	V12MLA0805LH	0805	12	9	40	0.1	29	1	14	18.5	410	.30	.29	.28	2500	.256
576—	V14MLA0603H	0603	14	10	30	0.1	34.5	1	15.9	21.5	180	.30	.26	.25	2500	.19
576—	V14MLA0603NH	0603	14	10	30	0.1	34.5	1	15.9	21.5	180	.30	.29	.28	2500	.213
576—	V14MLA0805LNH	0805	14	10	40	0.1	32	1	15.9	20.3	320	.36	.34	.325	2500	.245
576—	V14MLA0805LH	0805	14	10	40	0.1	32	1	15.9	20.3	320	.33	.30	.29	2500	.22
576—	V14MLA1206H	1206	14	10	150	0.4	32	1	15.9	20.3	1400	.69	.65	.625	2500	.42
576—	V14MLA1206NH	1206	14	10	150	0.4	32	1	15.9	20.3	1400	.69	.65	.625	2500	.42
576—	V18MLA0402NH	0402	18	14	20	0.05	50	1	22	28	40	.22	.205	.195	10000	.13
576—	V18MLA0603H	0603	18	14	30	0.1	50	1	22	28	120	.30	.26	.25	2500	.19
576—	V18MLA0805LH	0805	18	14	40	0.1	44	1	22	28	290	.33	.30	.29	2500	.22
576—	V18MLA0805LNH	0805	18	14	40	0.1	44	1	22	28	290	.36	.34	.325	2500	.245
576—	V18MLA0805H	0805	18	14	120	0.3	44	1	22	28	520	.33	.30	.29	2500	.22
576—	V18MLA1206H	1206	18	14	150	0.4	44	1	22	28	1270	.67	.63	.605	2500	.45
576—	V18MLA1210H	1210	18	14	500	2.5	44	2.5	22	28	1440	1.79	1.67	1.61	2000	1.79
576—	V26MLA0603H	0603	26	20	30	0.1	60	1	31	38	110	.30	.26	.25	2500	.19
576—	V26MLA0805LH	0805	26	20	40	0.1	60	1	29.5	38.5	140	.33	.30	.29	2500	.22
576—	V26MLA0805H	0805	26	20	100	0.3	60	1	29.5	38.5	220	.33	.30	.29	2500	.22
576—	V26MLA1206H	1206	26	20	150	0.6	60	1	29.5	38.5	600	.62	.59	.56	2500	.38
576—	V26MLA1206NH	1206	26	20	150	0.6	60	1	29.5	38.5	600	.69	.65	.625	2500	.42
576—	V26MLA1210A	1210	26	20	300	1.2	60	2.5	29.5	38.5	1040	.74	.695	.67	2000	.46
576—	V26MLA1210H	1210	26	20	300	1.2	60	2.5	29.5	38.5	1040	.74	.695	.67	2000	.46
576—	V30MLA0603H	0603	30	25	30	0.1	74	1	37	46	90	.30	.26	.25	2500	.19
576—	V30MLA0805LH	0805	30	25	30	0.1	72	1	37	46	90	.33	.30	.29	2500	.22
576—	V30MLA1210H	1210	30	25	280	1.2	68	2.5	35	43	1820	.74	.695	.67	2000	.46
576—	V33MLA1206NH	1206	33	26	180	0.8	75	1	38	49	500	.69	.65	.625	2500	.42
576—	V42MLA1206H	1206	42	30	180	0.8	92	1	46	60	425	.62	.59	.56	2500	.38
576—	V42MLA1206NH	1206	42	30	180	0.8	92	1	46	60	425	.69	.65	.625	2500	.42
576—	V48MLA1210H	1210	48	40	250	1.2	105	2.5	54.5	66.5	520	.74	.695	.67	2000	.46
576—	V56MLA1206H	1206	56	40	180	1	120	1	61	77	180	.62	.59	.56	2500	.38
576—	V60MLA1210H	1210	60	50	250	1.5	130	2.5	67	83	440	.74	.695	.67	2000	.46
576—	V68MLA1206H	1206	68	50	180	1	140	1	76	90	100	.62	.59	.56	2500	.38
576—	V68MLA1206NH	1206	68	50	180	1	140	1	76	90	100	.69	.65	.625	2500	.42
576—	V85MLA1210H	1210	85	67	250	2.5	180	2.5	95	115	260	.74	.695	.67	2000	.46
576—	V85MLA1210NH	1210	85	67	250	2.5	180	2.5	95	115	260	.78	.74	.70	2000	.54
576—	V120MLA1210H	1210	120	107	125	2	260	2.5	135	165	80	.74	.695	.67	2000	.46

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