

# LITTELFUSE Metal Oxide Varistors



This product is RoHS compliant.

## LITTELFUSE TMOV34S SERIES THERMALLY PROTECTED VARISTORS

- US Patent for thermally protected MOV
- Operating Temperature: -55°C to +85°C
- High peak current rating
- RoHS Compliant



**NEW!**  
TECHNOLOGY

For quantities of 250 and up, call for quote.

MOUSER STOCK NO.	Littelfuse Part No.	Package / Case	ACV Max.	DCV Max.	Current Surge	Varistor Voltage	Number of Circuits	Price Each		
								1	10	100
576-TMOV34S151EP	TMOV34S151EP	34mm Square 2 Leaded	150	200	40kA	268	1	17.31	16.45	15.58
576-TMOV34S271EP	TMOV34S271EP	34mm Square 2 Leaded	275	369	40kA	473	1	17.31	16.45	15.58
576-TMOV34S321EP	TMOV34S321EP	34mm Square 2 Leaded	320	420	40kA	561	1	17.31	16.45	15.58

## LITTELFUSE METAL OXIDE VARISTORS ZA SERIES



- Wide Operating Voltage Range Vm (AC) MS: 4V to 460V
  - 5 Model Sizes Available: 5,7,10,14 and 20mm
  - DC Voltage Ratings: 5.5V to 615V
  - Radial-Lead Package Design
  - No Derating up to 85°C Ambient
- The ZA Series of transient voltage surge suppressors are radial-lead varistors (MOVs) designed for use in the protection of low and medium voltage circuits and systems. Typical applications include motor control, telecom, automotive systems, solenoid, and power supply circuits to protect circuit board components and maintain data integrity.

\* Energy rating for impulse duration of 30ms minimum to one half of peak current (auto load dump). \*\* 10mA DC test current.

For quantities of 500 and up, call for quote.

MOUSER STOCK NO.	Model Size Disc Dia. (mm)	Device Model Number Brand	Maximum Ratings (85°C)				Specifications (25°C)				Typical Capacitance f=1MHz	Price Each				
			Continuous		Transient		Varistor Voltage @ 1mA DC Test Current		Max. Clamping Voltage 8 x 20µs			C	1	10	100	250
			V <sub>RMS</sub>	V <sub>DC</sub>	Energy (10/1000µs)	Peak Cur. (8/20µs)	V <sub>NOM</sub> Min.	V <sub>NOM</sub> Max.	V <sub>C</sub>	I <sub>PK</sub>						
			V <sub>M</sub> (AC) Volts	V <sub>M</sub> (DC) Volts	W <sub>TM</sub> Joules	I <sub>TM</sub> Amps	V <sub>NOM</sub> Min. Volts	V <sub>NOM</sub> Max. Volts	V <sub>C</sub> Volts	I <sub>PK</sub> Amps						
576-V8ZA05P	5	Z08	4	5.5	0.1	50	6	11	30	1	1400	.26	.25	.23	.22	
576-V8ZA1P	7	08Z1	4	5.5	0.4	100	6	11	22	2.5	3000	.26	.25	.23	.22	
576-V8ZA2P	10	08Z2	4	5.5	0.8	250	6	11	20	5	7500	.24	.23	.21	.20	
576-V12ZA05P	5	Z12	6	8	0.14	50	9	16	37	1	1200	.26	.25	.23	.22	
576-V12ZA2P	10	12Z2	6	8	1.2	250	9	16	30	5	6000	.24	.23	.21	.20	
576-V18ZA05P	5	Z18	10	14	0.17	100	14.4	21.6	36	1	1000	.24	.23	.21	.20	
576-V18ZA1P	7	18Z1	10	14	0.8	250	14.4	21.6	36	2.5	2000	.24	.23	.21	.20	
576-V18ZA2P	10	18Z2	10	14	1.5	500	14.4	21.6	36	5	5000	.24	.23	.21	.20	
576-V18ZA3P	14	18Z3	10	14	3.5	1000	14.4	21.6	36	10	11000	.31	.28	.27	.25	
576-V18ZA40P	20	18Z40	10	14	80	2000	14.4	21.6	37	20	22000	.48	.44	.42	.40	
576-V22ZA05P	5	Z22	14	18	0.2	100	18.7	26	43	1	800	.17	.16	.15	.145	
576-V22ZA1P	7	22Z1	14	18	0.9	250	18.7	26	43	2.5	1800	.17	.16	.15	.145	
576-V22ZA2P	10	22Z2	14	18	2	500	18.7	26	43	5	4000	.24	.23	.21	.20	
576-V22ZA3P	14	22Z3	14	18	4	1000	18.7	26	43	10	9000	.39	.37	.35	.33	
576-V24ZA50P	20	24Z50	14	18	100	2000	19.2	26	43	20	18000	.48	.44	.42	.40	
576-V27ZA05P	5	Z27	17	22	0.25	100	23	31.1	53	1	600	.17	.16	.15	.145	
576-V47ZA20P	20	47Z20	30	38	23	2000	42	52	93	20	11000	.48	.44	.42	.40	
576-V47ZA7P	14	47Z7	30	38	8.8	1000	42	52	93	10	4500	.31	.28	.27	.25	
576-V47ZA3P	10	47Z3	30	38	4.5	500	42	52	93	5	2000	.24	.23	.21	.20	
576-V56ZA2P	7	56Z2	35	45	2.3	250	50	62	110	2.5	700	.17	.16	.15	.145	
576-V56ZA8P	14	56Z8	35	45	10	1000	50	62	110	10	3900	.31	.28	.27	.25	
576-V68ZA2P	7	68Z2	40	56	3	250	61	75	135	2.5	600	.17	.16	.15	.145	
576-V68ZA3P	10	68Z3	40	56	6.5	500	61	75	135	5	1500	.24	.23	.21	.20	
576-V68ZA10P	14	68Z10	40	56	13	1000	61	75	135	10	3300	.31	.28	.27	.25	
576-V82ZA4P	10	82Z4	50	68	8	2500	73	91	135	25	1100	.42	.38	.36	.34	
576-V82ZA12P	14	82Z12	50	68	15	4500	73	91	145	50	2500	.39	.37	.35	.33	
576-V100ZA3P	5	Z100	60	81	2.5	400	90	117	165	5	180	.17	.16	.15	.145	
576-V100ZA15P	14	100Z15	60	81	20	4500	90	110	175	50	2000	.30	.29	.27	.26	
576-V150ZA20P	20	150Z20	95	127	45	6500	135	165	250	100	1000	.48	.44	.42	.40	
576-V180ZA1P	7	180Z	115	153	10	1200	162	198	300	10	200	.17	.16	.15	.145	
576-V180ZA5P	10	180Z5	115	153	18	2500	162	198	300	25	500	.24	.23	.21	.20	
576-V180ZA10P	14	180Z10	115	153	35	4500	162	198	300	50	1100	.30	.29	.27	.26	
576-V220ZA05P	5	Z220	140	180	6	400	198	253	360	5	90	.32	.31	.29	.28	
576-V330ZA05P	5	Z330	210	275	9	400	297	380	540	5	60	.32	.31	.29	.28	
576-V390ZA05P	5	Z390	250	330	10	400	351	449	650	5	50	.32	.31	.29	.28	

## LITTELFUSE METAL OXIDE VARISTORS LA SERIES

- Wide voltage / energy range
- Low standby power
- Excellent clamp ratio
- No follow-on current
- Fast response time
- Line voltage operation
- UL recognized



Littelfuse varistors are voltage dependent, symmetrical, metal-oxide semiconductor devices. Their characteristics enable them to protect against high transient voltage spikes (when properly selected) to meet anticipated loads. When the protected equipment or circuit encounters high voltage spikes, the varistor impedance changes from a very high standby value to a very low conducting value, thus clamping the transient voltage to a protective level. The excess energy of the incoming high voltage pulse is absorbed by the Harris varistor, protecting voltage sensitive components against damage.

For quantities of 500 and up, call for quote.

MOUSER STOCK NO.	Model Size Disc Dia. (mm)	Device Model Number Brand	Maximum Ratings (85°C)				Specifications (25°C)				Typical Capacitance @ f=1MHz (pF)	Price Each			
			Continuous		Transient		V <sub>NOM</sub> Varistor Peak Voltage		Max. Clamping Voltage V <sub>C</sub> @ Test Current (8x20µs)			1	10	100	250
			RMS Voltage	DC Voltage	Energy (10/1000µs)	Peak Cur. (8/20µs)	Max @ 1mA DC	Max @ 1mA AC	V <sub>C</sub>	I <sub>p</sub>					
			Volts	Volts	Joules	Amps	Volts	Volts	Volts	Volts					
576-V130LA1P	7	1301	130	175	11	1200	184	255	390	10	180	.17	.16	.15	.145
576-V130LA2P	7	1302	130	175	11	1200	184	228	340	10	180	.17	.16	.15	.145
576-V130LA5P	10	1305	130	175	20	2500	184	228	340	25	450	.24	.23	.21	.20
576-V130LA10AP	14	130L10	130	175	38	4500	184	228	340	50	1000	.30	.29	.27	.26
576-V130LA20AP	20	130L20	130	175	70	6500	184	228	340	100	1900	.48	.44	.425	.40
576-V130LA20BP	20	130L20B	130	175	70	6500	184	220	325	100	1900	.48	.44	.42	.40
576-V140LA5P	10	1405	140	180	22	2500	198	242	360	25	400	.24	.23	.21	.20
576-V140LA10AP	14	140L10	140	180	42	4500	198	242	360	50	900	.31	.28	.27	.25
576-V150LA1P	7	1501	150	200	13	1200	212	284	430	10	150	.17	.16	.15	.145
576-V150LA2P	7	1502	150	200	13	1200	212	268	395	10	150	.17	.16	.15	.145
576-V150LA5P	10	1505	150	200	25	2500	212	268	395	25	360	.24	.23	.21	.20
576-V150LA10AP	14	150L10	150	200	45	4500	212	268	395	50	800	.31	.28	.27	.25
576-V150LA20AP	20	150L20	150	200	80	6500	212	268	395	100	1600	.48	.45	.43	.40
576-V150LA20BP	20	150L20B	150	200	80	6500	212	243	360	100	1600	.48	.44	.42	.40
576-V250LA10P	10	250L	250	330	40	2500	354	429	650	25	220	.24	.23	.21	.20
576-V275LA2P	7	2752	275	369	23	1200	389	515	775	10	80	.17	.16	.15	.145
576-V275LA40AP	20	275L40	275	369	140	6500	389	473	710	100	900	.48	.44	.42	.40
576-V275LA40BP	20	275L40B	275	369	140	6500	389	453	680	100	900	.48	.44	.42	.40
576-V320LA20AP	14	320L20	320	420	80	4500	462	565	850	50	380	.31	.28	.27	.25
576-V320LA40BP	20	320L40	320	420	150	6500	462	540	810	100	750	.48	.44	.42	.40
576-V420LA20AP	14	420L20	420	560	90	4500	610	748	1120	50	300	.31	.28	.27	.25
576-V420LA40BP	20	420L40	420	560	160	6500	610	720	1060	100	600	.56	.53	.51	.48
576-V480LA40AP	14	480L40	480	640	105	4500	670	825	1240	50	270	.42	.38	.36	.34
576-V480LA80BP	20	480L80	480	640	180	6500	670	790	1160	100	550	.65	.62	.58	.55
576-V510LA40AP	14	510L40	510	675	110	4500	735	910	1350	50	250	.65	.62	.58	.55
576-V510LA80BP	20	510L80	510	675	190	6500	735	860	1280	100	500	.82	.78	.74	.70
576-V575LA40AP	14	575L40	575	730	120	4500	805	1000	1500	50	220	.65	.62	.58	.55
576-V575LA80BP	20	575L80	575	730	220	6500	805	960	1410	100	450	1.08	1.02	.97	.92
576-V1000LA160BP	20	1000L160	1000	1200	360	6500	1425	1600	2420	100	250	2.05	1.95	1.84	1.74

