

ZA Series

► Average Power Dissipation of Transients Not to Exceed 0.2 W, 0.25 W, 0.4 W, 0.6 W, or 1 W for Model Sizes 5 mm, 7 mm, 10 mm, 14 mm, and 20 mm Respectively

► ZA Series Varistors Are Listed Under UL File No. E135010 as a UL Recognized Component

Mfr.'s Type	Model Size Disc Dia. (mm)	Device Marking	Maximum Rating (85°C)				Characteristics (25°C)				
			Continuous		Transient		Varistor Voltage @ 1 mA DC Test Current		Maximum Clamping Voltage 8 × 20 µs		Typical Capacitance
			RMS Volts	DC Volts	Energy 10 × 1000 µs	Peak Current 8 × 20 µs					
			V _{M(AC)}	V _{M(DC)}	W _{TM}	I _{TM}	V _{NOM} Min.	V _{NOM} Max.	V _C	I _{PK}	f=1 MHz
			Volts	Volts	Joules	Amps	Volts	Volts	Volts	Amps	Picofarads
V8ZA05	5	Z08	4	5.5	0.10	50	6.0	11.0	30	1.0	1400
V8ZA1	7	08Z1	4	5.5	0.40	100	6.0	11.0	22	2.5	3000
V8ZA2	10	08Z2	4	5.5	0.80	250	6.0	11.0	20	5.0	7500
V12ZA05	5	Z12	6	8.0	0.14	50	9.0	16.0	37	1.0	1200
V12ZA2	10	12Z2	6	8.0	1.20	250	9.0	16.0	30	5.0	6000
V18ZA05	5	Z18	10	14.0	0.17	100	14.4	21.6	36	1.0	1000
V18ZA1	7	18Z1	10	14.0	0.80	250	14.4	21.6	36	2.5	2000
V18ZA2	10	18Z2	10	14.0	1.50	500	14.4	21.6	36	5.0	5000
V18ZA3	14	18Z3	10	14.0	3.50	1000	14.4	21.6	36	10.0	11000
V18ZA40	20	18Z40	10	14.0	80.00¹	2000	14.4²	21.6	37	20.0	22000
V22ZA2	10	22Z2	14	18.0	2.00	500	18.7	26.0	43	5.0	4000
V22ZA3	14	22Z3	14	18.0	4.00	1000	18.7	26.0	43	10.0	9000
V24ZA50	20	24Z50	14	18.0²	100.00¹	2000	19.2²	26.0	43	20.0	15000
V27ZA05	5	Z27	17	22.0	0.25	100	23.0	31.1	53	1.0	600
V27ZA1	7	27Z1	17	22.0	1.00	250	23.0	31.1	53	2.5	1300
V27ZA4	14	27Z4	17	22.0	5.00	1000	23.0	31.1	53	10.0	7000
V27ZA60	20	27Z60	17	22.0	120.00¹	2000	23.0²	31.1	50	20.0	13000
V33ZA5	14	33Z5	20	26.0	6.00	1000	29.5	36.5	65	10.0	6000
V33ZA70	20	33Z70	21	27.0	150.00¹	2000	29.5²	36.5	58	20.0	13000
V36ZA80	20	36Z80	23	31.0	160.00¹	2000	32.0²	40.0	63	20.0	12000
V39ZA05	5	Z39	25	31.0	0.30	100	35.0	46.0	79	1.0	500
V39ZA1	7	39Z1	25	31.0	1.20	250	35.0	43.0	79	2.5	1100
V39ZA3	10	39Z3	25	31.0	3.00	500	35.0	43.0	76	5.0	2700
V39ZA6	14	39Z6	25	31.0	6.00	1000	35.0	43.0	76	10.0	6000
V47ZA1	7	47Z1	30	38.0	1.80	250	42.0	52.0	93	2.5	800
V47ZA7	14	47Z7	30	38.0	8.80	1000	42.0	52.0	93	10.0	4500
V56ZA2	7	56Z2	35	45.0	2.30	250	50.0	62.0	110	2.5	700
V56ZA8	14	56Z8	35	45.0	10.00	1000	50.0	62.0	110	10.0	3900
V68ZA2	7	68Z2	40	45.0	3.00	250	61.0	75.0	135	2.5	600
V68ZA3	10	68Z3	40	68.0	6.50	500	61.0	75.0	135	5.0	1500
V68ZA10	14	68Z10	40	68.0	13.00	1000	61.0	75.0	135	10.0	3300
V82ZA12	14	82Z12	50	82.0	15.00	4500	73.0	91.0	145	50.0	2500
V100ZA15	14	100Z15	60	100.0	20.00	4500	90.0	110.0	175	50.0	2000
V180ZA1	7	180Z	115	153.0	10.00	1200	162.0	198.0	300	10.0	200
V180ZA5	10	180Z5	115	153.0	18.00	2500	162.0	198.0	300	25.0	500
V180ZA10	14	180Z10	115	153.0	35.00	4500	162.0	198.0	300	50.0	1100
V220ZA05	5	Z220	140	180.0	6.00	400	198.0	253.0	360	5.0	90
V330ZA05	5	Z330	210	275.0	9.00	400	297.0	380.0	540	5.0	60
V390ZA05	5	Z390	250	330.0	10.00	400	351.0	449.0	650	5.0	50

Notes: ¹Energy rating for impulse duration of 30 ms minimum to one half of peak current. ²10 mA DC test current. ³Also rated to withstand 24 V for five minutes.

LA Series

► LA Series Varistors Are Listed Under UL File No. E75961 and E56529 as a UL Recognized Component

► LA Series Varistors Are Listed Under CSA File No. LR91788 as a CSA Recognized Component

► Average Power Dissipation of Transients Not to Exceed 0.25 W, 0.4 W, 0.6 W or 1 W for Model Sizes 7 mm, 10 mm, 14 mm, and 20 mm Respectively

Mfr.'s Type	Model Size Disc Dia. (mm)	Device Marking	Maximum Rating (85°C)				Characteristics (25°C)				
			Continuous		Transient		Varistor Voltage @ 1 mA DC Test Current		Maximum Clamping Voltage 8 × 20 µs		Typical Capacitance
			RMS Volts	DC Volts	Energy 10 × 1000 µs	Peak Current 8 × 20 µs					
			V _{M(AC)}	V _{M(DC)}	W _{TM}	I _{TM}	V _{NOM} Min.	V _{NOM} Max.	V _C	I _{PK}	f=1 MHz
			Volts	Volts	Joules	Amps	Volts	Volts	Volts	Amps	Picofarads
V130LA1	7	1301	130	175	11	1200	184	255	390	10	180
V130LA2	7	1302	130	175	11	1200	184	228	340	10	180
V130LA5	10	1305	130	175	20	2500	184	228	340	25	450
V130LA10A	14	130L10	130	175	38	4500	184	228	340	50	1000
V130LA20A	20	130L20	130	175	70	6500	184	228	340	100	1900
V130LA20B	20	130L20B	130	175	70	6500	184	220	325	100	1900
V140LA5	10	1405	140	180	22	2500	198	242	360	25	400
V140LA10A	14	140L10	140	180	42	4500	198	242	360	50	900
V150LA1	7	1501	150	200	13	1200	212	284	430	10	150
V150LA2	7	1502	150	200	13	1200	212	268	395	10	150
V150LA10A	14	150L10	150	200	45	4500	212	268	395	50	800
V150LA20A	20	150L20	150	200	80	6500	212	268	395	100	1600
V150LA20B	20	150L20B	150	200	80	6500	212	243	360	100	1600
V175LA10A	14	175L10	175	225	55	4500	247	303	455	50	700
V320LA20A	14	230L20	230	300	70	4500	324	396	595	50	550
V250LA2	7	2502	250	330	21	1200	354	473	730	10	90
V250LA4	7	2504	250	330	21	1200	354	429	650	10	90
V250LA20A	14	250L20	250	330	72	4500	354	429	650	50	500
V250LA40A	20	250L40	250	330	130	6500	354	429	650	100	1000
V250LA40B	20	250L40B	250	330	130	6500	354	413	620	100	1000
V275LA4	7	2754	275	369	23	1200	389	473	710	10	80
V275LA10	10	275L	275	369	45	2500	389	473	710	25	200
V275LA20A	14	275L20	275	369	75	4500	389	473	710	50	450
V275LA40A	20	275L40	275	369	140	6500	389	473	710	100	900
V275LA40B	20	275L40B	275	369	140	6500	389	453	680	100	900
V320LA20A	14	320L20	320	420	80	4500	462	565	850	50	380
V320LA40B	20	320L40	320	420	150	6500	462	540	810	100	750
V420LA20A	14	420L20	420	560	90	4500	610	748	1120	50	300
V420LA40B	20	420L40	420	560	160	6500	610	720	1060	100	600
V480LA40A	14	480L40	480	640	105	4500	670	825	1240	50	270
V480LA80B	20	480L80	480	640	180	6500	670	790	1160	100	550
V510LA40A	14	510L40	510	675	110	4500	735	910	1350	50	250
V510LA80B	20	510L80	510	675	190	6500	735	860	1280	100	500
V575LA40A	14	575L40	575	730	120	4500	805	1000	1500	50	220
V575LA80B	20	575L80	575	730	220	6500	805	960	1410	100	450
V1000LA80A	14	1000L80	1000	1200	220	4500	1425	1800	2700	50	130
V1000LA160B	20	1000L160	1000	1200	360	6500	1425	1600	2420	100	250