

Multilayer Chip Varistor for Voltage Surge Suppression – SDVL Series

Operating Temp. : -55°C~+85°C



FEATURES

- SMD type, small size suitable for high density mounting
- Excellent clamping ratio and strong capability of voltage surge suppression
- Excellent solderability (Ni, Sn plating)

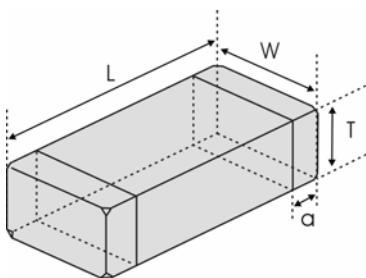
APPLICATIONS

- Transient voltage protection and voltage surge suppression for LED lighting
- Transient voltage protection for security system, PLC, Automotive electronics etc.
- Industrial instrument, smart meters, etc.
- Portable equipment protection, such as mobile phone, PDA, etc

PRODUCT IDENTIFICATION

<u>SDVL</u> ①	<u>4532</u> ②	<u>S</u> ③	<u>D</u> ④	<u>140</u> ⑤	<u>P</u> ⑥	<u>T</u> ⑦
① Type SDVL Chip Varistor for Voltage Surge Suppression	② External Dimensions (L×W) (mm) 3216 [1206] 3.2×1.6 3225 [1210] 3.2×2.5 4532 [1812] 4.5×3.2 5650 [2220] 5.7×5.0	③ Tolerance of Varistor Voltage S Special	④ Type of Working Voltage D DC Working Voltage	⑤ Max. Continuous Working Voltage Example 140 14V 480 48V	⑥ Terminal Code P Ni, Sn Plating	⑦ Packing T Tape & Reel

SHAPE AND DIMENSIONS



Unit: mm [inch]

Type	L	W	T	a
SDVL3216 [1206]	3.2±0.2 [0.126±0.008]	1.6±0.2 [0.063±0.008]	1.05 Max. [0.041]	0.2~0.8 [0.008~0.031]
SDVL3225 [1210]	3.2±0.3 [0.126±0.012]	2.5±0.25 [0.098±0.010]	1.7 Max. [0.067]	0.25~0.75 [0.010~0.029]
SDVL4532 [1812]	4.5±0.4 [0.177±0.016]	3.2±0.3 [0.126±0.012]	2.5 Max. [0.098]	0.25~1.0 [0.010±0.039]
SDVL5650 [2220]	5.7±0.4 [0.224±0.016]	5.0±0.4 [0.197±0.016]	2.5 Max. [0.098]	0.25~1.0 [0.010±0.039]

SPECIFICATIONS

SDVL3216 TYPE

Part Number	Max. Working Voltage		Varistor Voltage	Max. Clamping Voltage		Rated Single Pulse Transient		Typical Capacitance
Test Condition	<20 μ A		@1mA DC	8/20 μ s		Energy 10/1000 μ s	Peak Current 8/20 μ s	@1V _{rms} , 1kHz
	DC	AC RMS						
Units	Volts	Volts	Volts	Volts	Amps	Joules	Amps	pF
Symbol	V _{WDC}	V _{WAC}	V _B	V _C	I _C	E _T	I _P	C
SDVL3216SD5R5PT	5.5	4.0	10.0-14.0	18	5.0	0.5	250	1700
SDVL3216SD090PT	9	6.4	12.0-16.0	20	5.0	0.5	250	1400
SDVL3216SD120PT	12	8.5	13.0-19.0	25	5.0	0.5	250	1100
SDVL3216SD140PT	14	10.0	16.0-22.0	30	5.0	0.5	250	1050
SDVL3216SD180PT	18	12.7	22.0-28.0	40	5.0	0.5	250	900
SDVL3216SD220PT	22	15.6	26.0-34.0	45	5.0	0.6	250	750
SDVL3216SD260PT	26	18.4	31.0-38.0	58	5.0	0.7	200	620
SDVL3216SD300PT	30	21.3	37.0-46.0	65	5.0	0.7	200	550
SDVL3216SD380PT	38	30.0	46.0-54.0	75	5.0	0.7	200	330
SDVL3216SD480PT	48	34.1	54.0-67.0	100	5.0	0.5	150	200
SDVL3216SD560PT	56	40.0	61.0-75.0	120	5.0	0.5	150	170
SDVL3216SD600PT	60	46.0	69.0-83.0	130	5.0	0.5	150	140
SDVL3216SD650PT	65	50.0	73.0-91.0	140	5.0	0.6	150	110
SDVL3216SD750PT	75	55.0	85.0-103.0	160	5.0	0.6	150	95
SDVL3216SD850PT	85	60.0	90.0-110.0	170	5.0	0.7	150	80
SDVL3216SD101PT	100	75.0	108.0-132.0	200	5.0	0.7	150	60

SDVL3225 TYPE

Part Number	Max. Working Voltage		Varistor Voltage	Max. Clamping Voltage		Rated Single Pulse Transient		Typical Capacitance
Test Condition	<20 μ A		@1mA DC	8/20 μ s		Energy 10/1000 μ s	Peak Current 8/20 μ s	Test Condition DC
	DC	AC RMS						
Units	Volts	Volts	Volts	Volts	Amps	Units	Volts	Volts
Symbol	V _{WDC}	V _{WAC}	V _B	V _C	I _C	Symbol	V _{WDC}	V _{WAC}
SDVL3225SD5R5PT	5.5	4.0	10.0-14.0	18	5.0	0.7	400	3500
SDVL3225SD090PT	9	6.4	12.0-16.0	20	5.0	0.9	400	2800
SDVL3225SD120PT	12	8.5	13.0-19.0	25	5.0	1.0	400	2000
SDVL3225SD140PT	14	10.0	16.0-22.0	30	5.0	1.2	400	1800
SDVL3225SD180PT	18	12.7	22.0-28.0	40	5.0	1.5	400	1400
SDVL3225SD220PT	22	15.6	26.0-34.0	45	5.0	1.7	400	1100
SDVL3225SD260PT	26	18.4	31.0-38.0	58	5.0	1.9	400	900
SDVL3225SD300PT	30	21.3	37.0-46.0	65	5.0	1.7	300	800
SDVL3225SD380PT	38	30.0	46.0-54.0	75	5.0	2.0	300	700
SDVL3225SD480PT	48	34.1	54.0-67.0	100	5.0	2.0	300	600
SDVL3225SD560PT	56	40.0	61.0-75.0	120	5.0	2.3	300	500
SDVL3225SD600PT	60	46.0	69.0-83.0	130	5.0	2.0	300	450
SDVL3225SD650PT	65	50.0	73.0-91.0	140	5.0	1.6	300	350
SDVL3225SD750PT	75	55.0	85.0-103.0	160	5.0	1.6	200	300
SDVL3225SD850PT	85	60.0	90.0-110.0	170	5.0	2.0	200	250
SDVL3225SD101PT	100	75.0	108.0-132.0	200	5.0	1.6	200	150

SPECIFICATIONS

SDVL4532 TYPE

Part Number	Max. Working Voltage		Varistor Voltage	Max. Clamping Voltage		Rated Single Pulse Transient		Typical Capacitance
Test Condition	<20 μ A		@1mA DC	8/20 μ s		Energy 10/1000 μ s	Peak Current 8/20 μ s	Test Condition DC
	DC	AC RMS						
Units	Volts	Volts	Volts	Volts	Amps	Units	Volts	Volts
Symbol	V _{WDC}	V _{WAC}	V _B	V _C	I _C	Symbol	V _{WDC}	V _{WAC}
SDVL4532SD5R5PT	5.5	4.0	10.0-14.0	18	5.0	1.0	800	5500
SDVL4532SD090PT	9	6.4	12.0-16.0	20	5.0	1.2	800	4800
SDVL4532SD120PT	12	8.5	13.0-19.0	25	5.0	1.5	800	4200
SDVL4532SD140PT	14	10.0	16.0-22.0	30	5.0	1.9	800	3800
SDVL4532SD180PT	18	12.7	22.0-28.0	40	5.0	2.3	800	3200
SDVL4532SD220PT	22	15.6	26.0-34.0	45	5.0	2.5	800	2400
SDVL4532SD260PT	26	18.4	31.0-38.0	58	5.0	3.0	800	2000
SDVL4532SD300PT	30	21.3	37.0-46.0	65	5.0	3.7	800	1500
SDVL4532SD380PT	38	30.0	46.0-54.0	75	5.0	4.2	800	1100
SDVL4532SD480PT	48	34.1	54.0-67.0	100	5.0	4.0	600	900
SDVL4532SD560PT	56	40.0	61.0-75.0	120	5.0	4.3	600	800
SDVL4532SD600PT	60	46.0	69.0-83.0	130	5.0	4.3	600	600
SDVL4532SD650PT	65	50.0	73.0-91.0	140	5.0	4.0	600	500
SDVL4532SD750PT	75	55.0	85.0-103.0	160	5.0	4.0	500	400
SDVL4532SD850PT	85	60.0	90.0-110.0	170	5.0	4.0	500	300
SDVL4532SD101PT	100	75.0	108.0-132.0	200	5.0	4.0	500	200

SDVL5650 TYPE

Part Number	Max. Working Voltage		Varistor Voltage	Max. Clamping Voltage		Rated Single Pulse Transient		Typical Capacitance
Test Condition	<20 μ A		@1mA DC	8/20 μ s		Energy 10/1000 μ s	Peak Current 8/20 μ s	Test Condition DC
	DC	AC RMS						
Units	Volts	Volts	Volts	Volts	Amps	Units	Volts	Volts
Symbol	V _{WDC}	V _{WAC}	V _B	V _C	I _C	Symbol	V _{WDC}	V _{WAC}
SDVL5650SD5R5PT	5.5	4	10.0-14.0	18	10.0	1.4	1200	8000
SDVL5650SD090PT	9	6.4	12.0-16.0	20	10.0	2.7	1200	7000
SDVL5650SD120PT	12	8.5	13.0-19.0	25	10.0	3.2	1200	6400
SDVL5650SD140PT	14	10.0	16.0-22.0	30	10.0	5.4	1200	6000
SDVL5650SD180PT	18	12.7	22.0-28.0	40	10.0	5.8	1200	5000
SDVL5650SD220PT	22	15.6	26.0-34.0	45	10.0	6.5	1200	4500
SDVL5650SD260PT	26	18.4	31.0-38.0	58	10.0	7.8	1200	4000
SDVL5650SD300PT	30	21.3	37.0-46.0	65	10.0	9.6	1200	3000
SDVL5650SD380PT	38	30.0	46.0-54.0	75	10.0	12.0	1200	2200
SDVL5650SD480PT	48	34.1	54.0-67.0	100	10.0	7.7	900	1500
SDVL5650SD560PT	56	40.0	61.0-75.0	120	10.0	9.0	900	1300
SDVL5650SD600PT	60	46.0	69.0-83.0	130	10.0	6.5	900	1100
SDVL5650SD650PT	65	50.0	73.0-91.0	140	10.0	5.6	900	900
SDVL5650SD750PT	75	55.0	85.0-103.0	160	10.0	6.0	800	800
SDVL5650SD850PT	85	60.0	90.0-110.0	170	10.0	6.8	800	700
SDVL5650SD101PT	100	75.0	108.0-132.0	200	10.0	6.0	800	400

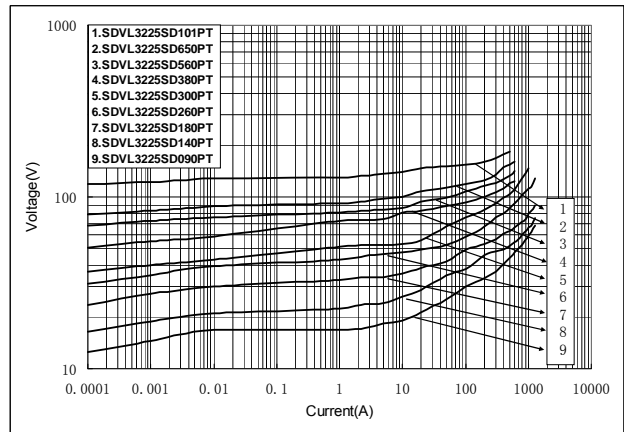
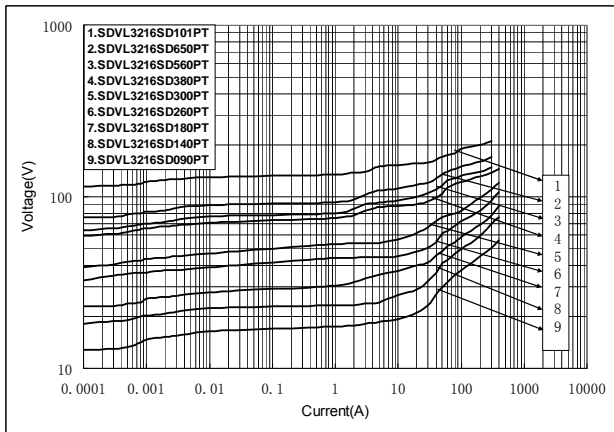
※ Products with other electrical characteristics can be provided upon customer's request. Please contact your local sales.

TYPICAL ELECTRICAL CHARACTERISTICS

V/I characteristic curves of chip varistor for voltage surge

SDVL3216 series

SDVL3225 series



SDVL4532 series

SDVL5650 series

