Multilayer Chip Varistor – SDV Series

Operating Temp. : -55℃~+125℃

FEATURES

- SMD type suitable for high density mounting
- Excellent clamping ratio and quick response time (<0.5ns)
- Excellent solderability (Ni, Sn plating)

APPLICATIONS

- Transient voltage protection for IC and transistor
- ESD and I/O protection
- EFT and burst protection
- Portable equipment protection, such as mobile phone, PDA, etc.

PRODUCT IDENTIFICATION

SDV	1608	A	180	C121	N	P	T	F
①	②	③	④	⑤	⑥	⑦	⑧	⑨

①

Type	
SDV	Chip Varistor

②

External Dimensions (L×W) (mm)	
0603 [0201]	0.6×0.3
1005 [0402]	1.0×0.5
1608 [0603]	1.6×0.8
2012 [0805]	2.0×1.25

③

Feature Code	
A	For General Use
E	For ESD
H	For High Speed
S	For Special Request

④

Maximum Continuous Working Voltage	
Example	Nominal Value
5R5	5.5V
180	18V

⑤

Capacitance @1MHz	
Example	Nominal Value
C121	120pF
C152	1500pF

⑥

Tolerance of Capacitance	
N	±30%
Y	+100%~-50%
G	Maximum

⑦

Terminal Code	
P	Ni, Sn Plating

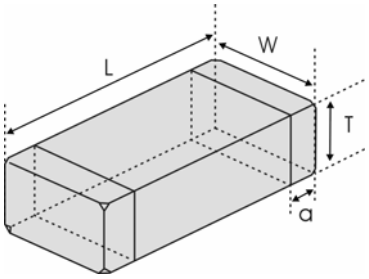
⑧

Packing	
T	Tape & Reel

⑨

Hazardous Substance Free Products
F

SHAPE AND DIMENSIONS



Unit: mm [inch]

Type	L	W	T	a
SDV0603 [0201]	0.6±0.05 [.024±.002]	0.3±0.05 [.012±.002]	0.3±0.05 [.012±.002]	0.15±0.05 [.006±.002]
SDV1005 [0402]	1.0±0.15 [.039±.006]	0.5±0.15 [.020±.006]	0.5±0.15 [.020±.006]	0.25±0.1 [.010±.004]
SDV1608 [0603]	1.6±0.15 [.063±.006]	0.8±0.15 [.031±.006]	0.8±0.15 [.031±.006]	0.3±0.2 [.012±.008]
SDV2012 [0805]	2.0±0.2 [.079±.008]	1.25±0.2 [.049±.008]	0.85±0.2 [.033±.008]	0.5±0.3 [.020±.012]

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SPECIFICATIONS

SDV1005A TYPE

Part Number	Max. Working Voltage		Varistor Voltage	Max. Clamping Voltage		Rated Single Pulse Transient		Typical Capacitance
Test Condition	<20μA DC	<20μA AC RMS	@1mA DC	8/20μs	ESD	Energy 10/1000μs	Peak Current 8/20μs	@0.5V_{rms}, 1MHz
Units	Volts	Volts	Volts	Volts	Volts	Joules	Amps	pF
Symbol	V_{WDC}	V_{WAC}	V_B	V_C *1	V_C *2	E_T	I_P	C
SDV1005A5R5C181☐PTF	5.5	4.0	10.0-14.0	18	23	0.05	20	180
SDV1005A5R5C231☐PTF	5.5	4.0	10.0-14.0	18	23	0.05	20	230
SDV1005A5R5C361☐PTF	5.5	4.0	10.0-14.0	18	23	0.05	20	360
SDV1005A090C121☐PTF	9.0	6.4	11.0-16.0	20	26	0.05	20	120
SDV1005A090C151☐PTF	9.0	6.4	11.0-16.0	20	26	0.05	20	150
SDV1005A090C231☐PTF	9.0	6.4	11.0-16.0	20	26	0.05	20	230
SDV1005A140C121☐PTF	14.0	10.0	16.0-22.0	30	39	0.05	20	120
SDV1005A140C161☐PTF	14.0	10.0	16.0-22.0	30	39	0.05	20	160

SDV1608A TYPE

Part Number	Max. Working Voltage		Varistor Voltage	Max. Clamping Voltage		Rated Single Pulse Transient		Typical Capacitance
Test Condition	<20μA DC	<20μA AC RMS	@1mA DC	8/20μs	ESD	Energy 10/1000μs	Test Condition DC	<20μA AC RMS
Units	Volts	Volts	Volts	Volts	Volts	Units	Volts	Volts
Symbol	V_{WDC}	V_{WAC}	V_B	V_C *1	V_C *2	Symbol	V_{WDC}	V_{WAC}
SDV1608A5R5C121☐PTF	5.5	4.0	10.0-14.0	18	23	0.05	20	120
SDV1608A5R5C141☐PTF	5.5	4.0	10.0-14.0	18	23	0.05	20	140
SDV1608A5R5C231☐PTF	5.5	4.0	10.0-14.0	18	23	0.1	30	230
SDV1608A5R5C361☐PTF	5.5	4.0	10.0-14.0	18	23	0.1	30	360
SDV1608A5R5C551☐PTF	5.5	4.0	10.0-14.0	18	23	0.1	30	550
SDV1608A5R5C821☐PTF	5.5	4.0	10.0-14.0	18	23	0.1	30	820
SDV1608A090C121☐PTF	9.0	6.4	11.0-16.0	20	26	0.05	20	120
SDV1608A090C141☐PTF	9.0	6.4	11.0-16.0	20	26	0.05	20	140
SDV1608A090C231☐PTF	9.0	6.4	11.0-16.0	20	26	0.1	30	230
SDV1608A090C361☐PTF	9.0	6.4	11.0-16.0	20	26	0.1	30	360
SDV1608A090C551☐PTF	9.0	6.4	11.0-16.0	20	26	0.1	30	550
SDV1608A090C821☐PTF	9.0	6.4	11.0-16.0	20	26	0.1	30	820
SDV1608A140C121☐PTF	14.0	10.0	16.0-22.0	30	39	0.05	20	120
SDV1608A140C141☐PTF	14.0	10.0	16.0-22.0	30	39	0.05	20	140
SDV1608A140C251☐PTF	14.0	10.0	16.0-22.0	30	39	0.1	30	250
SDV1608A140C361☐PTF	14.0	10.0	16.0-22.0	30	39	0.1	30	360
SDV1608A140C551☐PTF	14.0	10.0	16.0-22.0	30	39	0.1	30	550
SDV1608A180C121☐PTF	18.0	12.7	22.0-28.0	40	48	0.05	20	120
SDV1608A180C141☐PTF	18.0	12.7	22.0-28.0	40	48	0.05	20	140
SDV1608A180C231☐PTF	18.0	12.7	22.0-28.0	40	48	0.1	30	230
SDV1608A180C361☐PTF	18.0	12.7	22.0-28.0	40	48	0.1	30	360
SDV1608A220C121☐PTF	22.0	15.6	26.0-34.0	45	54	0.05	20	120
SDV1608A220C141☐PTF	22.0	15.6	26.0-34.0	45	54	0.05	20	140
SDV1608A220C161☐PTF	22.0	15.6	26.0-34.0	45	54	0.1	30	160
SDV1608A220C231☐PTF	22.0	15.6	26.0-34.0	45	54	0.1	30	230
SDV1608A220C361☐PTF	22.0	15.6	26.0-34.0	45	54	0.1	30	360
SDV1608A260C121☐PTF	26.0	18.4	31.0-38.0	58	70	0.1	30	120
SDV1608A260C161☐PTF	26.0	18.4	31.0-38.0	58	70	0.1	30	160
SDV1608A300C121☐PTF	30.0	21.3	37.0-46.0	65	78	0.1	30	120
SDV1608A300C141☐PTF	30.0	21.3	37.0-46.0	65	78	0.1	30	140

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SPECIFICATIONS

SDV2012A TYPE

Part Number	Max. Working Voltage		Varistor Voltage	Max. Clamping Voltage	Rated Single Pulse Transient		Typical Capacitance
Test Condition	<20μA DC	<20μA AC RMS	@1mA DC	8/20μs	ESD	Energy 10/1000μs	Test Condition DC
Units	Volts	Volts	Volts	Volts	Volts	Units	Volts
Symbol	V_{WDC}	V_{WAC}	V_B	V_C *1	V_C *2	Symbol	V_{WDC}
SDV2012A5R5C901□PTF	5.5	4.0	10.0-14.0	18	0.2	60	900
SDV2012A5R5C122□PTF	5.5	4.0	10.0-14.0	18	0.3	120	1200
SDV2012A5R5C202□PTF	5.5	4.0	10.0-14.0	18	0.4	150	2000
SDV2012A090C701□PTF	9.0	6.4	11.0-16.0	20	0.2	60	700
SDV2012A090C102□PTF	9.0	6.4	11.0-16.0	20	0.3	120	1000
SDV2012A090C162□PTF	9.0	6.4	11.0-16.0	20	0.4	150	1600
SDV2012A140C401□PTF	14.0	10.0	16.0-22.0	30	0.2	60	400
SDV2012A140C701□PTF	14.0	10.0	16.0-22.0	30	0.3	120	700
SDV2012A140C901□PTF	14.0	10.0	16.0-22.0	30	0.4	150	900
SDV2012A180C301□PTF	18.0	12.7	22.0-28.0	40	0.2	60	300
SDV2012A180C501□PTF	18.0	12.7	22.0-28.0	40	0.3	120	500
SDV2012A180C701□PTF	18.0	12.7	22.0-28.0	40	0.4	150	700
SDV2012A220C251□PTF	22.0	15.6	26.0-34.0	45	0.2	60	250
SDV2012A220C401□PTF	22.0	15.6	26.0-34.0	45	0.3	120	400
SDV2012A220C501□PTF	22.0	15.6	26.0-34.0	45	0.3	120	500
SDV2012A260C251□PTF	26.0	18.4	31.0-38.0	58	0.2	60	250
SDV2012A260C401□PTF	26.0	18.4	31.0-38.0	58	0.3	120	400
SDV2012A300C181□PTF	30.0	21.3	37.0-46.0	65	0.2	60	180
SDV2012A300C301□PTF	30.0	21.3	37.0-46.0	65	0.3	120	300

SDV0603E TYPE

Part Number	Max. Working Voltage		Varistor Voltage	Max. Clamping Voltage		Rated Single Pulse Transient		Typical Capacitance
Test Condition	<20μA DC	<20μA AC RMS	@1mA DC	8/20μs	ESD	Energy 10/1000μs	Test Condition DC	<20μA AC RMS
Units	Volts	Volts	Volts	Volts	Volts	Units	Volts	Volts
Symbol	V_{WDC}	V_{WAC}	V_B	V_C *1	V_C *2	Symbol	V_{WDC}	V_{WAC}
SDV0603E5R5C150□PTF	5.5	4.0	10.0-14.0	18	23	0.005	1	15
SDV0603E5R5C220□PTF	5.5	4.0	10.0-14.0	18	23	0.005	1	22
SDV0603E5R5C330□PTF	5.5	4.0	10.0-14.0	18	23	0.01	3	33
SDV0603E5R5C400□PTF	5.5	4.0	10.0-14.0	18	23	0.01	5	40
SDV0603E5R5C500□PTF	5.5	4.0	10.0-14.0	18	23	0.01	5	50
SDV0603E5R5C700□PTF	5.5	4.0	10.0-14.0	18	23	0.01	5	70
SDV0603E5R5C800□PTF	5.5	4.0	10.0-14.0	18	23	0.02	10	80
SDV0603E090C150□PTF	9.0	6.4	11.0-16.0	20	26	0.005	1	15
SDV0603E090C220□PTF	9.0	6.4	11.0-16.0	20	26	0.005	1	22
SDV0603E090C330□PTF	9.0	6.4	11.0-16.0	20	26	0.01	3	33
SDV0603E090C400□PTF	9.0	6.4	11.0-16.0	20	26	0.01	5	40
SDV0603E090C500□PTF	9.0	6.4	11.0-16.0	20	26	0.01	5	50
SDV0603E140C150□PTF	14.0	10.0	16.0-22.0	30	39	0.005	1	15

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SPECIFICATIONS

SDV1005E TYPE

Part Number	Max. Working Voltage		Varistor Voltage	Max. Clamping Voltage		Rated Single Pulse Transient		Typical Capacitance
Test Condition	<20μA DC	<20μA AC RMS	@1mA DC	8/20μs	ESD	Energy 10/1000μs	Test Condition DC	<20μA AC RMS
Units	Volts	Volts	Volts	Volts	Volts	Units	Volts	Volts
Symbol	V_{WDC}	V_{WAC}	V_B	V_C *1	V_C *2	Symbol	V_{WDC}	V_{WAC}
SDV1005E5R5C180□PTF	5.5	4.0	10.0-14.0	18	23	0.005	3	18
SDV1005E5R5C300□PTF	5.5	4.0	10.0-14.0	18	23	0.005	5	30
SDV1005E5R5C500□PTF	5.5	4.0	10.0-14.0	18	23	0.01	10	50
SDV1005E5R5C800□PTF	5.5	4.0	10.0-14.0	18	23	0.02	10	80
SDV1005E5R5C101□PTF	5.5	4.0	10.0-14.0	18	23	0.05	20	100
SDV1005E090C180□PTF	9.0	6.4	11.0-16.0	20	26	0.005	3	18
SDV1005E090C300□PTF	9.0	6.4	11.0-16.0	20	26	0.005	5	30
SDV1005E090C500□PTF	9.0	6.4	11.0-16.0	20	26	0.01	10	50
SDV1005E090C800□PTF	9.0	6.4	11.0-16.0	20	26	0.02	15	80
SDV1005E090C101□PTF	9.0	6.4	11.0-16.0	20	26	0.05	20	100
SDV1005E140C180□PTF	14.0	10.0	16.0-22.0	30	39	0.005	3	18
SDV1005E140C300□PTF	14.0	10.0	16.0-22.0	30	39	0.01	5	30
SDV1005E140C500□PTF	14.0	10.0	16.0-22.0	30	39	0.02	10	50
SDV1005E140C800□PTF	14.0	10.0	16.0-22.0	30	39	0.03	15	80
SDV1005E140C101□PTF	14.0	10.0	16.0-22.0	30	39	0.05	20	100
SDV1005E180C150□PTF	18.0	12.7	22.0-28.0	40	48	0.005	2	15
SDV1005E180C180□PTF	18.0	12.7	22.0-28.0	40	48	0.01	5	18
SDV1005E180C300□PTF	18.0	12.7	22.0-28.0	40	48	0.02	10	30
SDV1005E180C500□PTF	18.0	12.7	22.0-28.0	40	48	0.02	10	50
SDV1005E180C800□PTF	18.0	12.7	22.0-28.0	40	48	0.03	15	80
SDV1005E180C101□PTF	18.0	12.7	22.0-28.0	40	48	0.05	20	100
SDV1005E220C150□PTF	22.0	15.6	26.0-34.0	45	54	0.005	2	15
SDV1005E220C180□PTF	22.0	15.6	26.0-34.0	45	54	0.01	5	18
SDV1005E220C300□PTF	22.0	15.6	26.0-34.0	45	54	0.02	10	30
SDV1005E220C500□PTF	22.0	15.6	26.0-34.0	45	54	0.02	10	50
SDV1005E260C180□PTF	26.0	18.4	31.0-38.0	58	70	0.02	5	18
SDV1005E260C300□PTF	26.0	18.4	31.0-38.0	58	70	0.03	10	30
SDV1005E260C500□PTF	26.0	18.4	31.0-38.0	58	70	0.03	10	50

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SPECIFICATIONS

SDV1608E TYPE

Part Number	Max. Working Voltage		Varistor Voltage	Max. Clamping Voltage		Rated Single Pulse Transient		Typical Capacitance
Test Condition	<20μA DC	<20μA AC RMS	@1mA DC	8/20μs	ESD	Energy 10/1000μs	Test Condition DC	<20μA AC RMS
Units	Volts	Volts	Volts	Volts	Volts	Units	Volts	Volts
Symbol	V_{WDC}	V_{WAC}	V_B	V_C *1	V_C *2	Symbol	V_{WDC}	V_{WAC}
SDV1608E5R5C180□PTF	5.5	4.0	10.0-14.0	18	23	0.005	3	18
SDV1608E5R5C300□PTF	5.5	4.0	10.0-14.0	18	23	0.005	5	30
SDV1608E5R5C500□PTF	5.5	4.0	10.0-14.0	18	23	0.01	10	50
SDV1608E5R5C800□PTF	5.5	4.0	10.0-14.0	18	23	0.02	10	80
SDV1608E5R5C101□PTF	5.5	4.0	10.0-14.0	18	23	0.05	20	100
SDV1608E090C180□PTF	9.0	6.4	11.0-16.0	20	26	0.005	3	18
SDV1608E090C300□PTF	9.0	6.4	11.0-16.0	20	26	0.005	5	30
SDV1608E090C500□PTF	9.0	6.4	11.0-16.0	20	26	0.01	10	50
SDV1608E090C800□PTF	9.0	6.4	11.0-16.0	20	26	0.02	15	80
SDV1608E090C101□PTF	9.0	6.4	11.0-16.0	20	26	0.05	20	100
SDV1608E140C180□PTF	14.0	10.0	16.0-22.0	30	39	0.005	3	18
SDV1608E140C300□PTF	14.0	10.0	16.0-22.0	30	39	0.01	5	30
SDV1608E140C500□PTF	14.0	10.0	16.0-22.0	30	39	0.02	10	50
SDV1608E140C800□PTF	14.0	10.0	16.0-22.0	30	39	0.03	15	80
SDV1608E140C101□PTF	14.0	10.0	16.0-22.0	30	39	0.05	20	100
SDV1608E180C180□PTF	18.0	12.7	22.0-28.0	40	48	0.005	5	18
SDV1608E180C300□PTF	18.0	12.7	22.0-28.0	40	48	0.02	10	30
SDV1608E180C600□PTF	18.0	12.7	22.0-28.0	40	48	0.02	10	60
SDV1608E180C800□PTF	18.0	12.7	22.0-28.0	40	48	0.03	15	80
SDV1608E180C101□PTF	18.0	12.7	22.0-28.0	40	48	0.05	20	100
SDV1608E220C180□PTF	22.0	15.6	26.0-34.0	45	54	0.005	5	18
SDV1608E220C300□PTF	22.0	15.6	26.0-34.0	45	54	0.02	10	30
SDV1608E220C500□PTF	22.0	15.6	26.0-34.0	45	54	0.02	10	50
SDV1608E220C600□PTF	22.0	15.6	26.0-34.0	45	54	0.02	10	60
SDV1608E220C800□PTF	22.0	15.6	26.0-34.0	45	54	0.03	15	80
SDV1608E220C101□PTF	22.0	15.6	26.0-34.0	45	54	0.05	20	100
SDV1608E260C180□PTF	26.0	18.4	31.0-38.0	58	70	0.02	5	18
SDV1608E260C300□PTF	26.0	18.4	31.0-38.0	58	70	0.03	10	30
SDV1608E260C500□PTF	26.0	18.4	31.0-38.0	58	70	0.03	10	50

SDV2012E TYPE

Part Number	Max. Working Voltage		Varistor Voltage	Max. Clamping Voltage		Rated Single Pulse Transient		Typical Capacitance
Test Condition	<20μA DC	<20μA AC RMS	@1mA DC	8/20μs	ESD	Energy 10/1000μs	Test Condition DC	<20μA AC RMS
Units	Volts	Volts	Volts	Volts	Volts	Units	Volts	Volts
Symbol	V_{WDC}	V_{WAC}	V_B	V_C *1	V_C *2	Symbol	V_{WDC}	V_{WAC}
SDV2012E5R5C180□PTF	5.5	4.0	10.0-14.0	18	23	0.005	3	18
SDV2012E180C101□PTF	18.0	12.7	22.0-28.0	40	48	0.05	20	100
SDV2012E220C101□PTF	22.0	15.6	26.0-34.0	45	54	0.05	20	100
SDV2012E260C800□PTF	26.0	18.4	31.0-38.0	58	70	0.05	20	80
SDV2012E300C500□PTF	30.0	21.3	37.0-46.0	65	78	0.05	15	50

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SPECIFICATIONS

SDV0603H TYPE

Part Number	Max. Working Voltage		Varistor Voltage	Max. Clamping Voltage		Rated Single Pulse Transient		Typical Capacitance
Test Condition	<20μA DC	<20μA AC RMS	@1mA DC	8/20μs	ESD	Energy 10/1000μs	Test Condition DC	<20μA AC RMS
Units	Volts	Volts	Volts	Volts	Volts	Units	Volts	Volts
Symbol	V_{WDC}	V_{WAC}	V_B	V_C *1	V_C *2	Symbol	V_{WDC}	V_{WAC}
SDV0603H180C050YPTF	18.0	12.7	22.0-28.0	40	48	0.003	1	5
SDV0603H180C100□PTF	18.0	12.7	22.0-28.0	40	48	0.005	1	10
SDV0603H220C050YPTF	22.0	15.6	26.0-34.0	40	48	0.003	1	5
SDV0603H220C100□PTF	22.0	15.6	26.0-34.0	40	48	0.005	1	10
SDV0603H260C030YPTF	26.0	18.4	31.0-38.0	58	70	0.003	1	3
SDV0603H260C050YPTF	26.0	18.4	31.0-38.0	58	70	0.003	1	5

SDV1005H TYPE

Part Number	Max. Working Voltage		Varistor Voltage	Max. Clamping Voltage		Rated Single Pulse Transient		Typical Capacitance
Test Condition	<20μA DC	<20μA AC RMS	@1mA DC	8/20μs	ESD	Energy 10/1000μs	Test Condition DC	<20μA AC RMS
Units	Volts	Volts	Volts	Volts	Volts	Units	Volts	Volts
Symbol	V_{WDC}	V_{WAC}	V_B	V_C *1	V_C *2	Symbol	V_{WDC}	V_{WAC}
SDV1005H140C100□PTF	14.0	10.0	16.0-22.0	30	39	0.005	2	10
SDV1005H140C120□PTF	14.0	10.0	16.0-22.0	30	39	0.005	2	12
SDV1005H180C050YPTF	18.0	12.7	22.0-28.0	40	48	0.005	2	5
SDV1005H180C100□PTF	18.0	12.7	22.0-28.0	40	48	0.005	2	10
SDV1005H220C030YPTF	22.0	15.6	26.0-34.0	45	54	0.003	1	3
SDV1005H220C050YPTF	22.0	15.6	26.0-34.0	45	54	0.005	2	5
SDV1005H220C100□PTF	22.0	15.6	26.0-34.0	45	54	0.005	2	10
SDV1005H220C120□PTF	22.0	15.6	26.0-34.0	45	54	0.005	2	12
SDV1005H260C030YPTF	26.0	18.4	31.0-38.0	58	70	0.003	1	3
SDV1005H260C100□PTF	26.0	18.4	31.0-38.0	58	70	0.005	2	10
SDV1005H260C120□PTF	26.0	18.4	31.0-38.0	58	70	0.005	2	12

SDV1608H TYPE

Part Number	Max. Working Voltage		Varistor Voltage	Max. Clamping Voltage		Rated Single Pulse Transient		Typical Capacitance
Test Condition	<20μA DC	<20μA AC RMS	@1mA DC	8/20μs	ESD	Energy 10/1000μs	Test Condition DC	<20μA AC RMS
Units	Volts	Volts	Volts	Volts	Volts	Units	Volts	Volts
Symbol	V_{WDC}	V_{WAC}	V_B	V_C *1	V_C *2	Symbol	V_{WDC}	V_{WAC}
SDV1608H140C100□PTF	14.0	10.0	16.0-22.0	30	39	0.005	2	10
SDV1608H140C120□PTF	14.0	10.0	16.0-22.0	30	39	0.005	2	12
SDV1608H180C050YPTF	18.0	12.7	22.0-28.0	40	48	0.003	1	5
SDV1608H180C100□PTF	18.0	12.7	22.0-28.0	40	48	0.005	2	10
SDV1608H180C120□PTF	18.0	12.7	22.0-28.0	40	48	0.005	2	12
SDV1608H220C030YPTF	22.0	15.6	26.0-34.0	45	54	0.003	1	3
SDV1608H220C050YPTF	22.0	15.6	26.0-34.0	45	54	0.003	1	5
SDV1608H220C100□PTF	22.0	15.6	26.0-34.0	45	54	0.005	2	10
SDV1608H220C120□PTF	22.0	15.6	26.0-34.0	45	54	0.005	2	12
SDV1608H260C030YPTF	26.0	18.4	31.0-38.0	58	70	0.003	1	3
SDV1608H260C100□PTF	26.0	18.4	31.0-38.0	58	70	0.005	2	10
SDV1608H260C120□PTF	26.0	18.4	31.0-38.0	58	70	0.005	2	12

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SPECIFICATIONS

SDV0603S TYPE

Part Number	Max. Working Voltage		Varistor Voltage	Max. Clamping Voltage		Rated Single Pulse Transient		Typical Capacitance
Test Condition	<20μA DC	<20μA AC RMS	@1mA DC	8/20μs	ESD	Energy 10/1000μs	Test Condition DC	<20μA AC RMS
Units	Volts	Volts	Volts	Volts	Volts	Units	Volts	Volts
Symbol	V_{WDC}	V_{WAC}	V_B	V_C *1	V_C *2	Symbol	V_{WDC}	V_{WAC}
SDV0603S5R5C030YPTF	5.5	4.0	31.0-38.0	58	70	0.003	1	3
SDV0603S5R5C050YPTF	5.5	4.0	31.0-38.0	58	70	0.003	1	5
SDV0603S5R5C100□PTF	5.5	4.0	22.0-28.0	40	48	0.005	1	10
SDV0603S090C030YPTF	9.0	6.4	31.0-38.0	58	70	0.003	1	3
SDV0603S090C050YPTF	9.0	6.4	31.0-38.0	58	70	0.003	1	5
SDV0603S090C100□PTF	9.0	6.4	22.0-28.0	40	48	0.005	1	10

SDV1005S TYPE

Part Number	Max. Working Voltage		Varistor Voltage	Max. Clamping Voltage		Rated Single Pulse Transient		Typical Capacitance
Test Condition	<20μA DC	<20μA AC RMS	@1mA DC	8/20μs	ESD	Energy 10/1000μs	Test Condition DC	<20μA AC RMS
Units	Volts	Volts	Volts	Volts	Volts	Units	Volts	Volts
Symbol	V_{WDC}	V_{WAC}	V_B	V_C *1	V_C *2	Symbol	V_{WDC}	V_{WAC}
SDV1005S5R5C030YPTF	5.5	4.0	31.0-38.0	58	70	0.003	1	3
SDV1005S5R5C050YPTF	5.5	4.0	22.0-28.0	40	48	0.003	1	5
SDV1005S5R5C100□PTF	5.5	4.0	22.0-28.0	40	48	0.005	2	10
SDV1005S5R5C120□PTF	5.5	4.0	22.0-28.0	40	48	0.005	2	12
SDV1005S090C030YPTF	9.0	6.4	31.0-38.0	58	70	0.003	1	3
SDV1005S090C050YPTF	9.0	6.4	22.0-28.0	40	48	0.003	1	5
SDV1005S090C100□PTF	9.0	6.4	22.0-28.0	40	48	0.005	2	10
SDV1005S090C120□PTF	9.0	6.4	22.0-28.0	40	48	0.005	2	12
SDV1005S140C030YPTF	14.0	10.0	31.0-38.0	58	70	0.003	1	3
SDV1005S140C050YPTF	14.0	10.0	22.0-28.0	40	48	0.003	1	5
SDV1005S180C030YPTF	18.0	12.7	31.0-38.0	58	70	0.003	1	3
SDV1005S220C030YPTF	22.0	15.6	26.0-34.0	45	54	0.003	1	3

SDV1608S TYPE

Part Number	Max. Working Voltage		Varistor Voltage	Max. Clamping Voltage		Rated Single Pulse Transient		Typical Capacitance
Test Condition	<20μA DC	<20μA AC RMS	@1mA DC	8/20μs	ESD	Energy 10/1000μs	Test Condition DC	<20μA AC RMS
Units	Volts	Volts	Volts	Volts	Volts	Units	Volts	Volts
Symbol	V_{WDC}	V_{WAC}	V_B	V_C *1	V_C *2	Symbol	V_{WDC}	V_{WAC}
SDV1608S5R5C030YPTF	5.5	4.0	31.0-38.0	58	70	0.003	1	3
SDV1608S5R5C050YPTF	5.5	4.0	22.0-28.0	40	48	0.003	1	5
SDV1608S5R5C100□PTF	5.5	4.0	22.0-28.0	40	48	0.005	2	10
SDV1608S5R5C120□PTF	5.5	4.0	22.0-28.0	40	48	0.005	2	12
SDV1608S090C030YPTF	9.0	6.4	31.0-38.0	58	70	0.003	1	3
SDV1608S090C050YPTF	9.0	6.4	22.0-28.0	40	48	0.003	1	5
SDV1608S090C100□PTF	9.0	6.4	22.0-28.0	40	48	0.005	2	10
SDV1608S090C120□PTF	9.0	6.4	22.0-28.0	40	48	0.005	2	12
SDV1608S140C030YPTF	14.0	10.0	31.0-38.0	58	70	0.003	1	3
SDV1608S140C050YPTF	14.0	10.0	22.0-28.0	40	48	0.003	1	5
SDV1608S180C030YPTF	18.0	12.7	31.0-38.0	58	70	0.003	1	3

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SPECIFICATIONS

SDV1608S TYPE

Part Number	Max. Working Voltage		Varistor Voltage	Max. Clamping Voltage		Rated Single Pulse Transient		Typical Capacitance
Test Condition	<20μA		@1mA DC	8/20μs	ESD	Energy 10/1000μs	Test Condition DC	<20μA AC RMS
	DC	AC RMS						
Units	Volts	Volts	Volts	Volts	Volts	Units	Volts	Volts
Symbol	V_{WDC}	V_{WAC}	V_B	V_C *1	V_C *2	Symbol	V_{WDC}	V_{WAC}
SDV1608S220C030YPTF	22.0	15.6	26.0-34.0	45	54	0.003	1	3

※*1: Vc, Maximum peak voltage across the varistor measured at a specified pulse current and waveform.

Energy Rating	Pulse & Waveform
0.00-0.05 Joule	1A, 8/20μs
0.10 Joule	2A, 8/20μs
0.20-0.50 Joule	5A, 8/20μs

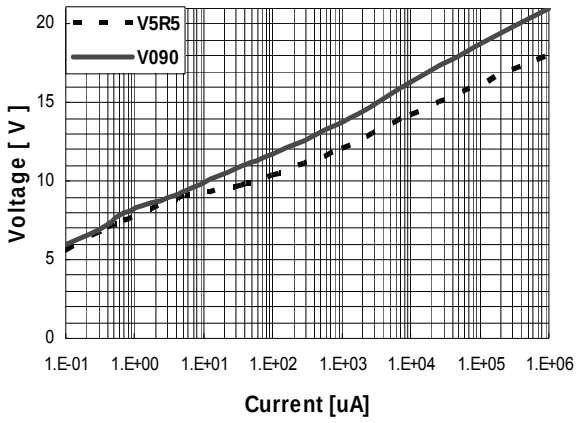
※*2: Vc, Maximum peak voltage across the varistor measured at 30ns after initiation of pulse on IEC61000-4-2 30A/8kV.

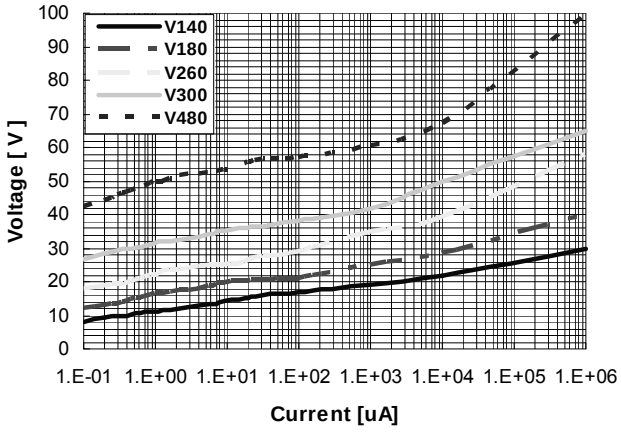
※□: Please specify the capacitance tolerance code (N=±30%, Y=+100%~-50%, G=Maximum).

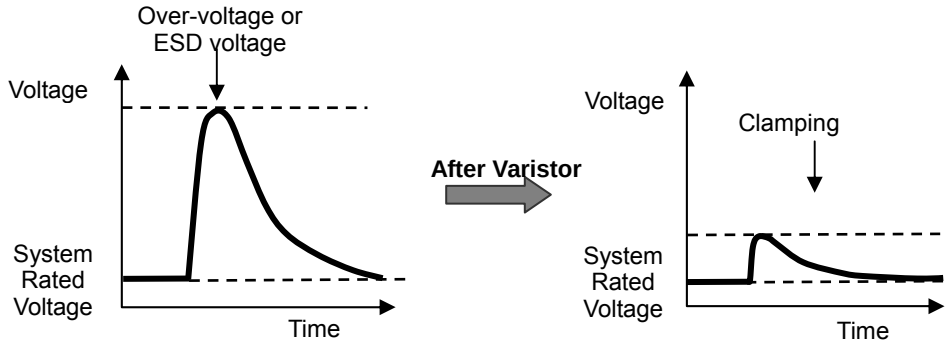
And products with other electrical characteristics can be provided upon customer's request. Please contact your local sales.

TYPICAL ELECTRICAL CHARACTERISTICS

SDV-A/E/H series







SPECIFICATIONS

Ultra low capacitance type (C=0.5pF, 1pF or 2pF)

Part Number	Max. Working Voltage		Varistor Voltage	Typical Capacitance	Min. Cut-off Frequency
Test Condition	<20μA		@1mA DC	@0.5V_{rms}, 1MHz	@-3dB
	DC	AC RMS			
Units	Volts	Volts	Volts	pF	MHz
Symbol	V_{WDC}	V_{WAC}	V_B	C	f_0
SDV0603S5R5C0R5YPTF	5.5	4.0	100-160	0.5	2000
SDV0603S5R5C010YPTF	5.5	4.0	100-160	1	1250
SDV0603S5R5C020YPTF	5.5	4.0	60-80	2	600
SDV0603S090C0R5YPTF	9.0	6.4	100-160	0.5	2000
SDV0603S090C010YPTF	9.0	6.4	100-160	1	1250
SDV0603S090C020YPTF	9.0	6.4	60-80	2	600
SDV1005H260C0R5YPTF	26.0	18.4	100-160	0.5	2000
SDV1005H260C010YPTF	26.0	18.4	100-160	1	1250
SDV1005H260C020YPTF	26.0	18.4	60-80	2	600
SDV1005S5R5C0R5YPTF	5.5	4.0	100-160	0.5	2000
SDV1005S5R5C010YPTF	5.5	4.0	100-160	1	1250
SDV1005S5R5C020YPTF	5.5	4.0	60-80	2	600
SDV1005S090C0R5YPTF	9.0	6.4	100-160	0.5	2000
SDV1005S090C010YPTF	9.0	6.4	100-160	1	1250
SDV1005S090C020YPTF	9.0	6.4	60-80	2	600
SDV1005S140C0R5YPTF	14.0	10.0	100-160	0.5	2000
SDV1005S140C010YPTF	14.0	10.0	100-160	1	1250
SDV1005S140C020YPTF	14.0	10.0	60-80	2	600
SDV1005S180C0R5YPTF	18.0	12.7	100-160	0.5	2000
SDV1005S180C010YPTF	18.0	12.7	100-160	1	1250
SDV1005S180C020YPTF	18.0	12.7	60-80	2	600
SDV1608H260C0R5YPTF	26.0	18.4	100-160	0.5	2000
SDV1608H260C010YPTF	26.0	18.4	100-160	1	1250
SDV1608H260C020YPTF	26.0	18.4	60-80	2	600
SDV1608S5R5C0R5YPTF	5.5	4.0	100-160	0.5	2000
SDV1608S5R5C010YPTF	5.5	4.0	100-160	1	1250
SDV1608S5R5C020YPTF	5.5	4.0	60-80	2	600
SDV1608S090C0R5YPTF	9.0	6.4	100-160	0.5	2000
SDV1608S090C010YPTF	9.0	6.4	100-160	1	1250
SDV1608S090C020YPTF	9.0	6.4	60-80	2	600
SDV1608S140C0R5YPTF	14.0	10.0	100-160	0.5	2000
SDV1608S140C010YPTF	14.0	10.0	100-160	1	1250
SDV1608S140C020YPTF	14.0	10.0	60-80	2	600
SDV1608S180C0R5YPTF	18.0	12.7	100-160	0.5	2000
SDV1608S180C010YPTF	18.0	12.7	100-160	1	1250
SDV1608S180C020YPTF	18.0	12.7	60-80	2	600
SDV1608S180C020YPTF	18.0	12.7	60-80	2	600

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

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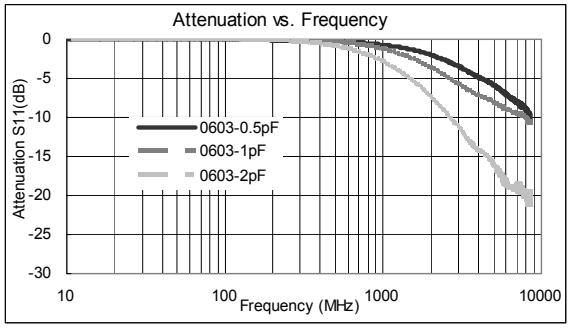
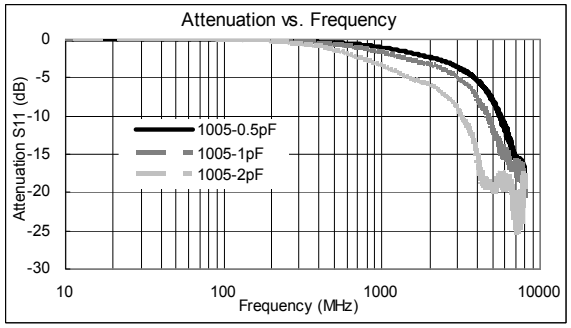
TYPICAL ELECTRICAL CHARACTERISTICS

Ultra low capacitance type: SDV0603/SDV1005/SDV1608 series, C=0.5pF, 1pF, 2pF

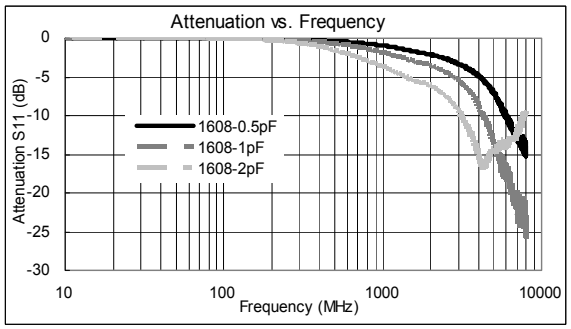
SDV0603 series



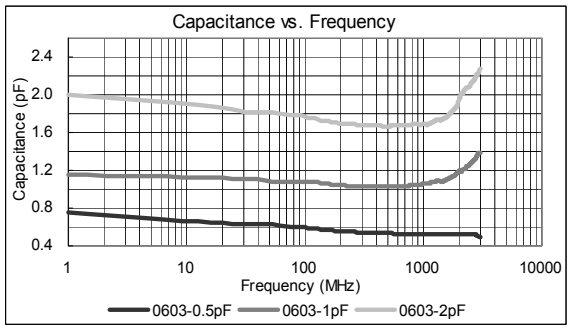
SDV1005 series



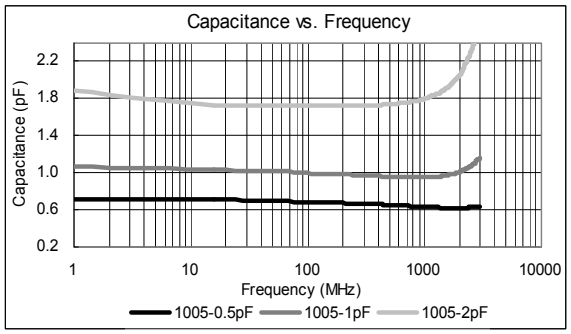
SDV1608 series



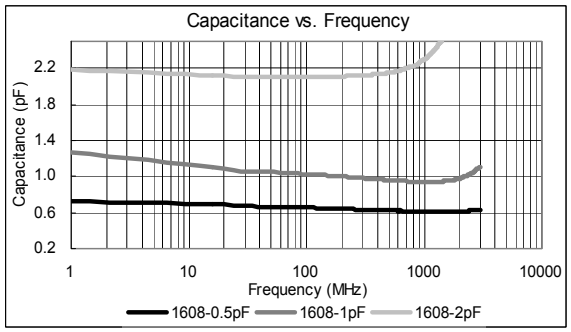
SDV0603 series



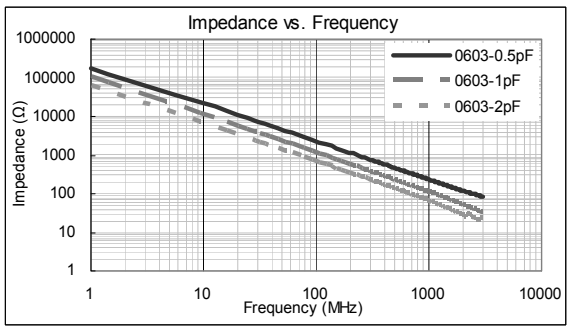
SDV1005 series



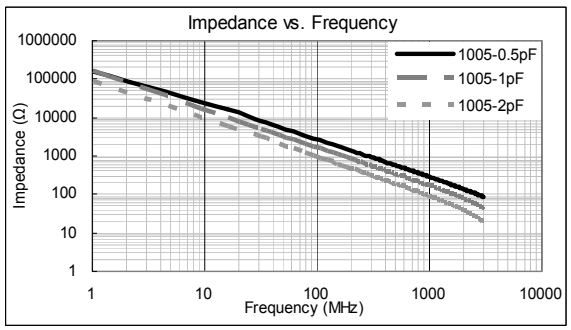
SDV1608 series



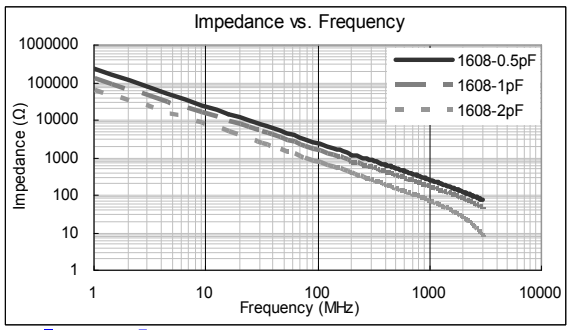
SDV0603 series



SDV1005 series



SDV1608 series



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