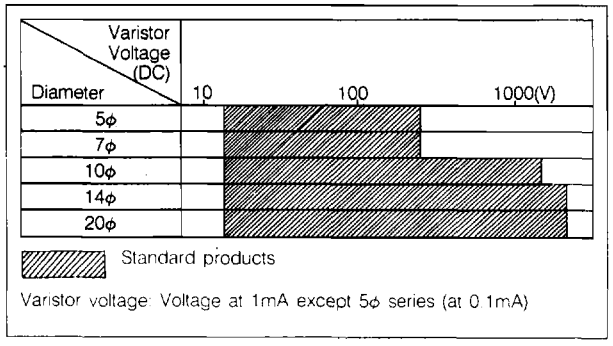
CERAMIC SURGE ABSORBERS (VARISTORS)

SVC

SELECTION GUIDE

BROAD VARISTOR FROM 18 TO 1800V



Varistor voltage: Voltage at 1mA except 5φ series (at 0.1mA)

Items	Radial lead style
Operating ambient temperature	−40°C to +85°C
Storage temperature	−40°C to +125°C
Voltage temperature coefficient	−0.05%/°C
Insulation resistance (at 500V)	Over 1000MΩ
Max. steady state applied Voltage	11 ~ 1000 ACrms Volts

TYPE DESIGNATION (HOW TO ORDER)

SVC 271 D − 14 A

Basic type
ZnO Varistor

Varistor nominal voltage

180:18V	820:82V	361:360V	751:750V
220:22V	101:100V	391:390V	781:780V
270:27V	121:120V	431:430V	821:820V
330:33V	151:150V	471:470V	911:910V
390:39V	201:200V	561:560V	102:1000V
470:47V	221:220V	621:620V	112:1100V
560:56V	241:240V	681:680V	182:1800V
680:68V	271:270V		

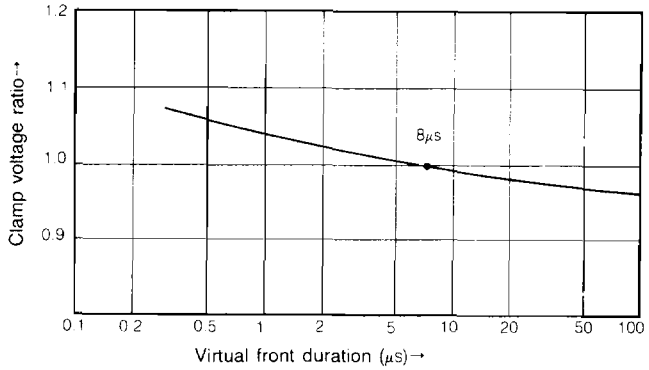
style
D: Disk type varistor

Classification
A: High voltage
B: Low voltage

Chip element size (Dia.)
05: φ 5mm 14: φ 14mm
07: φ 7mm 20: φ 20mm
10: φ 10mm

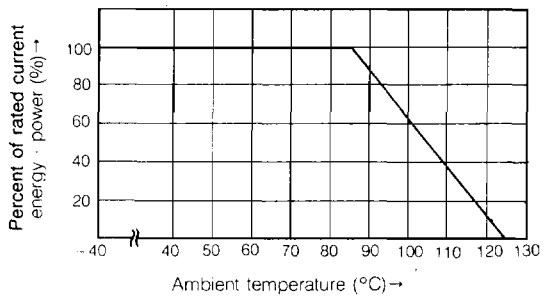
SVC CHARACTERISTIC CURVES

• Response of current waveform



Peak current range: 30—800A

• Current, power and energy rating vs. temperature



Response of current waveform
This indicates the clamping voltage characteristics based on a virtual front duration duration of 8μs. This results in the increasing ratio of the clamping voltage which stays at approximately 10% even when a shorter current impulse in the order of 100ns is reached.

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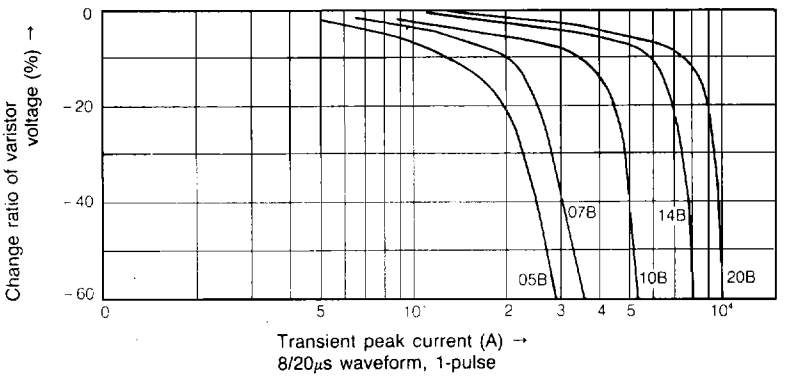
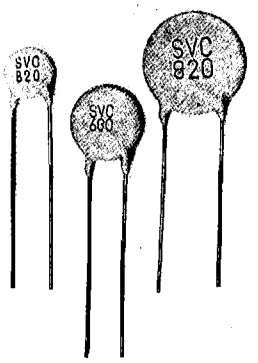
B TYPE

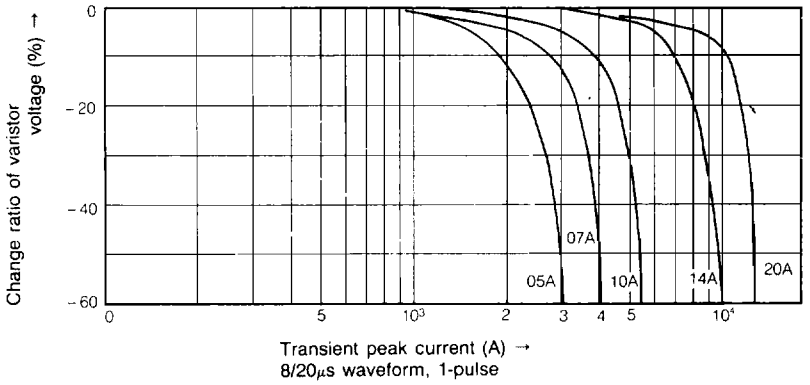
• Withstand discharge impulse current characteristics (Typical)

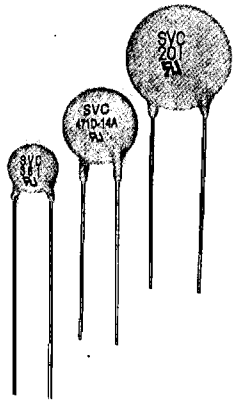




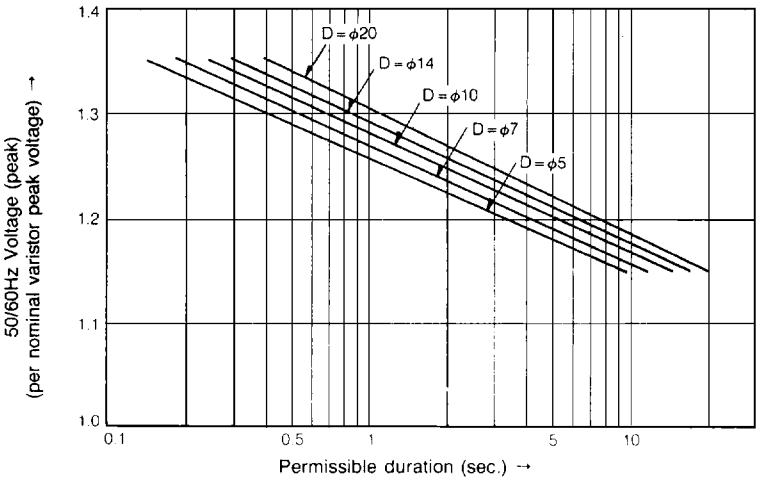
A TYPE

• Withstand discharge impulse current characteristics (Typical)





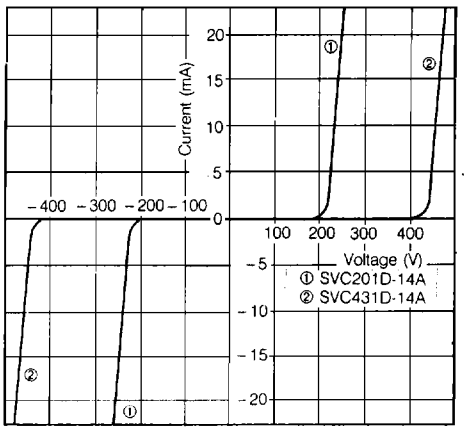
• Temporary power frequency overvoltage capability



D: Chip element size (Dia.) (mm)

V-I CURVE

• Small-current region of V-I curve



Notes: Since the V-I curve is symmetrical SVC's are capable of absorting surges having both Positive and negative polarities with a similar suppression performance.

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SPECIFICATION

Device type	Chip element size	Maximum ratings					Characteristics					
		Applied voltage①		Transient			Nominal varistor ④ peak voltage			Max. clamping ⑤ voltage @ test current (8/20μs)		Typical capacitance
		RMS 50/60Hz (25°C)	DC (25°C)	Energy ②	Average power dissipation	Peak ③ current (8/20μs)		Tolerance				
	Dia. (mm)	Vacm (Volts)	Vdcm (Volts)	Wtm (Joules)	Ptam (Watts)	Itm (Amps)	Vnom (Volts)	Min. (Volts)	Max. (Volts)	Vc (Volts)	Ip (Amps)	f = 1kHz (pF)
SVC180D-05B	5	11	14	0.3	0.01	125	18	14	20	40	1	1700
SVC180D-07B	7			0.8	0.02	250				36	2.5	3500
SVC180D-10B	10			1.5	0.05	500				36	5	7000
SVC180D-14B	14			3.5	0.1	1000				36	10	14000
SVC180D-20B	20			10.0	0.2	2000				36	20	28000
* SVC220D-05B	5	14	18	0.4	0.01	125	22	17	24	48	1	1200
SVC220D-07B	7			0.9	0.02	250				43	2.5	2500
SVC220D-10B	10			2.0	0.05	500				43	5	5000
SVC220D-14B	14			4.0	0.1	1000				43	10	11000
SVC220D-20B	20			13.0	0.2	2000				43	20	22000
SVC270D-05B	5	17	22	0.5	0.01	125	27	20	30	60	1	1100
SVC270D-07B	7			1.0	0.02	250				53	2.5	200
SVC270D-10B	10			2.5	0.05	500				53	5	4500
SVC270D-14B	14			5.0	0.1	1000				54	10	9000
SVC270D-20B	20			15.0	0.2	2000				53	20	18000
SVC330D-05B	5	20	26	0.6	0.01	125	33	26	36	73	1	1000
SVC330D-07B	7			1.2	0.02	250				65	2.5	2000
SVC330D-10B	10			3.0	0.05	500				65	5	4000
SVC330D-14B	14			6.0	0.1	1000				65	10	8000
SVC330D-20B	20			20.0	0.2	2000				65	20	16000
SVC390D-05B	5	25	31	0.8	0.01	125	39	30	43	86	1	800
SVC390D-07B	7			1.5	0.02	250				77	2.5	1600
SVC390D-10B	10			3.5	0.05	500				77	5	3200
SVC390D-14B	14			7.0	0.1	1000				77	10	6500
SVC390D-20B	20			24.0	0.2	2000				77	20	13000
SVC470D-05B	5	30	38	1.0	0.01	125	47	37	52	104	1	700
SVC470D-07B	7			1.8	0.02	250				93	2.5	1400
SVC470D-10B	10			4.5	0.05	500				93	5	2800
SVC470D-14B	14			8.5	0.1	1000				93	10	5500
SVC470D-20B	20			30.0	0.2	2000				93	20	11000
SVC560D-05B	5	35	45	1.0	0.01	125	56	44	62	123	1	600
SVC560D-07B	7			2.2	0.02	250				110	2.5	1300
SVC560D-10B	10			5.5	0.05	500				110	5	2500
SVC560D-14B	14			10.0	0.1	1000				110	10	5000
SVC560D-20B	20			35.0	0.2	2000				110	20	10000
SVC680D-05B	5	40	56	1.2	0.01	125	68	54	75	150	1	500
SVC680D-07B	7			2.5	0.02	250				135	2.5	1000
SVC680D-10B	10			6.5	0.05	500				135	5	2000
SVC680D-14B	14			12.0	0.1	1000				135	10	4000
SVC680D-20B	20			40.0	0.02	2000				135	20	8000
SVC820D-05A	5	50	65	1.7	0.1	250	82	68	90	145	5	400
SVC820D-07A	7			3.5	0.25	600				135	10	800
SVC820D-10A	10			8.0	0.4	1250				135	25	1500
SVC820D-14A	14			14.0	0.6	2500				135	50	3000
SVC820D-20A	20			27.0	1.0	4000				135	100	6000
SVC101D-05A	5	60	85	2.0	0.1	250	100	82	110	175	5	350
SVC101D-07A	7			4.0	0.25	600				165	10	700
SVC101D-10A	10			10.0	0.4	1250				165	25	1500
SVC101D-14A	14			18.0	0.6	2500				165	50	3000
SVC101D-20A	20			30.0	1.0	4000				165	100	6000
SVC121D-05A	5	75	100	2.5	0.1	250	120	108	132	210	5	350
SVC121D-07A	7			5.0	0.25	600				200	10	700
SVC121D-10A	10			12.0	0.4	1250				200	25	1300
SVC121D-14A	14			20.0	0.6	2500				200	50	2600
SVC121D-20A	20			40.0	1.0	4000				200	100	5200
SVC151D-05A	5	95	125	3.0	0.1	250	150	135	165	260	5	250
SVC151D-07A	7			6.0	0.25	600				250	10	500
SVC151D-10A	10			16.0	0.4	1250				250	25	1000
SVC151D-14A	14			25.0	0.6	2500				250	50	2000
SVC151D-20A	20			50.0	1.0	4000				250	100	4000
SVC201D-05A	5	130	170	4.0	0.1	250	200	185	225	355	5	200
SVC201D-07A	7			10.0	0.25	600				340	10	400
SVC201D-10A	10			20.0	0.4	1250				340	25	800
SVC201D-14A	14			35.0	0.6	2500				340	50	1600
SVC201D-20A	20			70.0	1.0	4000				340	100	3200
SVC221D-05A	5	140	180	4.5	0.1	250	220	198	242	380	5	170
SVC221D-07A	7			10.0	0.25	600				360	10	350
SVC221D-10A	10			23.0	0.4	1250				360	25	700
SVC221D-14A	14			40.0	0.6	2500				360	50	1400
SVC221D-20A	20			75.0	1.0	4000				360	100	2800
SVC241D-05A	5	150	200	5.0	0.1	250	240	216	264	415	5	170
SVC241D-07A	7			10.0	0.25	600				395	10	350
SVC241D-10A	10			25.0	0.4	1250				395	25	700
SVC241D-14A	14			40.0	0.6	2500				395	50	1300
SVC241D-20A	20			80.0	1.0	4000				395	100	2600

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Device type	Dia. (mm)	Vacm (Volts)	Vdcm (Volts)	Wtm (Joules)	Ptam (Watts)	Itm (Amps)	Vnom (Volts)	Tolerance		Vc (Volts)	Ip (Amps)	f=1kHz (pF)
								Min. (Volts)	Max. (Volts)			
SVC271D-05A	5	175	225	6.0	0.1	250	270	247	303	475	5	150
SVC271D-07A	7			12.0	0.25	600				455	10	300
SVC271D-10A	10			30.0	0.4	1250				455	25	600
SVC271D-14A	14			50.0	0.6	2500				455	50	1200
SVC271D-20A	20			90.0	1.0	4000				455	100	2400
SVC361D-05A	5	230	300	7.5	0.1	250	360	324	396	620	5	120
SVC361D-07A	7			15.0	0.25	600				595	10	250
SVC361D-10A	10			35.0	0.4	1250				595	25	500
SVC361D-14A	14			65.0	0.6	2500				595	50	1000
SVC361D-20A	20			120.0	1.0	4000				595	100	2000
SVC391D-05A	5	250	320	8.0	0.1	250	390	351	429	675	5	110
SVC391D-07A	7			17.0	0.25	600				650	10	220
SVC391D-10A	10			40.0	0.4	1250				650	25	450
SVC391D-14A	14			70.0	0.6	2500				650	50	900
SVC391D-20A	20			130.0	1.0	4000				650	100	1800
SVC431D-05A	5	275	350	9.0	0.1	250	430	387	473	745	5	100
SVC431D-07A	7			20.0	0.25	600				710	10	200
SVC431D-10A	10			45.0	0.4	1250				710	25	400
SVC431D-14A	14			75.0	0.6	2500				710	50	800
SVC431D-20A	20			140.0	1.0	4000				710	100	1600
SVC471D-05A	5	300	385	10.0	0.1	250	470	423	517	810	5	80
SVC471D-07A	7			20.0	0.25	600				775	10	170
SVC471D-10A	10			45.0	0.4	1250				775	25	350
SVC471D-14A	14			80.0	0.6	2500				775	50	700
SVC471D-20A	20			150.0	1.0	4000				775	100	1400
SVC561D-10A	10	350	460	45.0	0.4	1250	560	504	616	920	25	300
SVC561D-14A	14			85.0	0.6	2500				920	50	600
SVC561D-20A	20			150.0	1.0	4000				920	100	1200
SVC621D-10A	10	385	550	45.0	0.4	1250	620	558	682	1025	25	270
SVC621D-14A	14			85.0	0.6	2500				1025	50	550
SVC621D-20A	20			150.0	1.0	4000				1025	100	1100
SVC681D-10A	10	420	560	45.0	0.4	1250	680	612	748	1120	25	250
SVC681D-14A	14			90.0	0.6	2500				1120	50	500
SVC681D-20A	20			160.0	1.0	4000				1120	100	1000
SVC751D-10A	10	460	615	50.0	0.4	1250	750	675	825	1240	25	220
SVC751D-14A	14			100.0	0.6	2500				1240	50	450
SVC751D-20A	20			175.0	1.0	4000				1240	100	900
SVC781D-10A	10	485	640	50.0	0.4	1250	780	702	858	1290	25	220
SVC781D-14A	14			105.0	0.6	2500				1290	50	440
SVC781D-20A	20			180.0	1.0	4000				1290	100	880
SVC821D-10A	10	510	670	55.0	0.4	1250	820	738	902	1355	25	210
SVC821D-14A	14			110.0	0.6	2500				1355	50	420
SVC821D-20A	20			190.0	1.0	4000				1355	100	840
SVC911D-10A	10	550	745	60.0	0.4	1250	910	819	1001	1500	25	180
SVC911D-14A	14			120.0	0.6	2500				1500	50	380
SVC911D-20A	20			215.0	1.0	4000				1500	100	750
SVC102D-10A	10	625	825	65.0	0.4	1250	1000	900	1100	1650	25	180
SVC102D-14A	14			130.0	0.6	2500				1650	50	350
SVC102D-20A	20			230.0	1.0	4000				1650	100	700
SVC112D-10A	10	680	895	70.0	0.4	1250	1100	990	1210	1815	25	150
SVC112D-14A	14			140.0	0.6	2500				1815	50	300
SVC112D-20A	20			250.0	1.0	4000				1815	100	600
SVC182D-14A	14	1000	1465	240.0	0.6	2500	1800	1620	1980	2970	50	200
SVC182D-20A	20			400.0	1.0	4000				2970	100	400

Notes:

①The waveform of the maximum DC applied voltage is flat. When a ripple voltage as from a rectifier source is supplied make sure that the peak voltage is kept under the Vdcm.
An AC applied voltage (50/60Hz) forms a since waveshape.
When the distortion in the waveform is extensive make sure that the peak voltage is less than $\sqrt{2}$ times the Vacm.

②Energy: Wtm
Transient energy ratings are given in the Wtm column of the specifications in Joules (watt-second).
The rating is the maximum allowable energy for a single impulse of 2ms square-waveform current with continuous voltage applied. Energy ratings are based on a shift of Vnom of less than ±10% of initial value.

③Transient peak current (Itm)
The peak current rating, itm, of varistor is based on an 8/20μs test impulse waveshape.
This peak current is the maximum peak current in which the nominal varistor voltage shift does not exceed ±10% when the test impulse is applied twice at 5 minutes intervals.

④Nominal varistor voltage: Vnom
Indicates the varistor terminal voltage measured with a 1mA DC applied.—0.1mA DC in the case of the 05A and 05B series.

⑤Maximum clamping voltage: Vc
Indicates the peak terminal voltage measured with an 8/20μs impulse current applied.

- Operating ambient temperature: −40°C to +85°C
- Storage temperature: −40°C to +125°C
- UL and CSA recognized (UL1449, UL49713 or UL1414, CSA)

SVC varistors have been tested by Underwriter's Laboratories, Inc. and Canadian Standards Association
UL File No. E97754, E151195, E154171.
CSA File No. LR78923.

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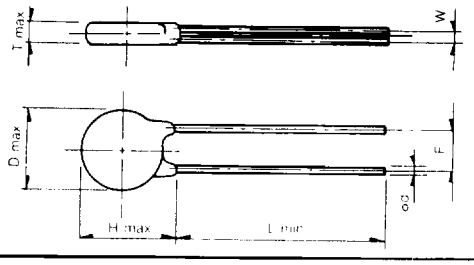
DIMENSIONS (Unit: mm)



B TYPE

TYPE	T	W	D	H	L	F	φd
SVC180D-05B	4.5	1.7±1	7.5	10.0	25	5.0±1	0.6
SVC220D-05B	4.5	1.7±1	7.5	10.0	25	5.0±1	0.6
SVC270D-05B	4.5	1.7±1	7.5	10.0	25	5.0±1	0.6
SVC330D-05B	4.5	1.7±1	7.5	10.0	25	5.0±1	0.6
SVC390D-05B	4.5	1.7±1	7.5	10.0	25	5.0±1	0.6
SVC470D-05B	4.5	1.7±1	7.5	10.0	25	5.0±1	0.6
SVC560D-05B	4.5	1.7±1	7.5	10.0	25	5.0±1	0.6
SVC680D-05B	4.5	1.7±1	7.5	10.0	25	5.0±1	0.6
SVC180D-07B	4.5	1.7±1	7.5	10.0	25	5.0±1	0.6
SVC220D-07B	4.5	1.7±1	7.5	10.0	25	5.0±1	0.6
SVC270D-07B	4.5	1.7±1	7.5	10.0	25	5.0±1	0.6
SVC330D-07B	4.5	1.7±1	7.5	10.0	25	5.0±1	0.6
SVC390D-07B	4.5	1.7±1	7.5	10.0	25	5.0±1	0.6
SVC470D-07B	4.5	1.7±1	7.5	10.0	25	5.0±1	0.6
SVC560D-07B	4.5	1.7±1	7.5	10.0	25	5.0±1	0.6
SVC680D-07B	4.5	1.7±1	7.5	10.0	25	5.0±1	0.6
SVC180D-10B	4.6	1.6±1	13.5	16.5	25	7.5±1	0.8
SVC220D-10B	4.7	1.9±1	13.5	16.5	25	7.5±1	0.8
SVC270D-10B	4.8	2.2±1	13.5	16.5	25	7.5±1	0.8
SVC330D-10B	5.0	1.6±1	13.5	16.5	25	7.5±1	0.8
SVC390D-10B	5.0	1.8±1	13.5	16.5	25	7.5±1	0.8
SVC470D-10B	5.0	2.0±1	13.5	16.5	25	7.5±1	0.8
SVC560D-10B	5.0	1.7±1	13.5	16.5	25	7.5±1	0.8
SVC680D-10B	5.3	1.9±1	13.5	16.5	25	7.5±1	0.8
SVC180D-14B	4.6	1.6±1	17.0	20.0	25	7.5±1	0.8
SVC220D-14B	4.7	1.9±1	17.0	20.0	25	7.5±1	0.8
SVC270D-14B	4.8	2.2±1	17.0	20.0	25	7.5±1	0.8
SVC330D-14B	5.0	1.6±1	17.0	20.0	25	7.5±1	0.8
SVC390D-14B	5.0	1.8±1	17.0	20.0	25	7.5±1	0.8
SVC470D-14B	5.0	2.0±1	17.0	20.0	25	7.5±1	0.8
SVC560D-14B	5.0	1.7±1	17.0	20.0	25	7.5±1	0.8
SVC680D-14B	5.3	1.9±1	17.0	20.0	25	7.5±1	0.8
SVC180D-20B	5.1	1.9±1	23.0	27.0	30	10.0±1	0.8
SVC220D-20B	5.2	2.1±1	23.0	27.0	30	10.0±1	0.8
SVC270D-20B	5.3	2.4±1	23.0	27.0	30	10.0±1	0.8
SVC330D-20B	5.5	1.8±1	23.0	27.0	30	10.0±1	0.8
SVC390D-20B	5.5	2.0±1	23.0	27.0	30	10.0±1	0.8
SVC470D-20B	5.6	2.2±1	23.0	27.0	30	10.0±1	0.8
SVC560D-20B	5.7	1.9±1	23.0	27.0	30	10.0±1	0.8
SVC680D-20B	5.8	2.1±1	23.0	27.0	30	10.0±1	0.8

A TYPE

TYPE	T	W	D	H	L	F	φd
SVC820D-05A	4.5	1.7±1	7.0	10.0	25	5.0±1	0.6
SVC101D-05A	4.7	1.5±1	7.0	10.0	25	5.0±1	0.6
SVC121D-05A	4.8	1.5±1	7.0	10.0	25	5.0±1	0.6
SVC151D-05A	5.0	1.5±1	7.0	10.0	25	5.0±1	0.6
SVC201D-05A	5.2	2.0±1	7.0	10.0	25	5.0±1	0.6
SVC221D-05A	5.3	2.0±1	7.0	10.0	25	5.0±1	0.6
SVC241D-05A	5.4	2.0±1	7.0	10.0	25	5.0±1	0.6
SVC271D-05A	5.6	2.2±1	7.0	10.0	25	5.0±1	0.6
SVC361D-05A	6.2	3.0±1	7.0	10.0	25	5.0±1	0.6
SVC391D-05A	6.4	3.0±1	7.0	10.0	25	5.0±1	0.6
SVC431D-05A	6.7	3.5±1	7.0	10.0	25	5.0±1	0.6
SVC471D-05A	7.0	3.5±1	7.0	10.0	25	5.0±1	0.6
SVC820D-07A	4.5	1.7±1	9.0	12.0	25	5.0±1	0.6
SVC101D-07A	4.7	1.5±1	9.0	12.0	25	5.0±1	0.6
SVC121D-07A	4.8	1.5±1	9.0	12.0	25	5.0±1	0.6
SVC151D-07A	5.0	1.5±1	9.0	12.0	25	5.0±1	0.6

A TYPE

TYPE	T	W	D	H	L	F	φd
SVC201D-07A	5.2	2.0±1	9.0	12.0	25	5.0±1	0.6
SVC221D-07A	5.3	2.0±1	9.0	12.0	25	5.0±1	0.6
SVC241D-07A	5.4	2.0±1	9.0	12.0	25	5.0±1	0.6
SVC271D-07A	5.6	2.2±1	9.0	12.0	25	5.0±1	0.6
SVC361D-07A	6.2	3.0±1	9.0	12.0	25	5.0±1	0.6
SVC391D-07A	6.4	3.0±1	9.0	12.0	25	5.0±1	0.6
SVC431D-07A	6.7	3.5±1	9.0	12.0	25	5.0±1	0.6
SVC471D-07A	7.0	3.5±1	9.0	12.0	25	5.0±1	0.6
SVC820D-10A	5.0	2.2±1	13.5	16.5	25	7.5±1	0.8
SVC101D-10A	5.1	1.5±1	13.5	16.5	25	7.5±1	0.8
SVC121D-10A	5.2	1.6±1	13.5	16.5	25	7.5±1	0.8
SVC151D-10A	5.5	1.8±1	13.5	16.5	25	7.5±1	0.8
SVC201D-10A	5.6	2.1±1	13.5	16.5	25	7.5±1	0.8
SVC221D-10A	5.7	2.3±1	13.5	16.5	25	7.5±1	0.8
SVC241D-10A	5.8	2.4±1	13.5	16.5	25	7.5±1	0.8
SVC271D-10A	6.1	2.6±1	13.5	16.5	25	7.5±1	0.8
SVC361D-10A	6.7	3.2±1	14.0	17.0	25	7.5±1	0.8
SVC391D-10A	6.8	3.4±1	14.0	17.0	25	7.5±1	0.8
SVC431D-10A	7.2	3.7±1	14.0	17.0	25	7.5±1	0.8
SVC471D-10A	7.5	3.9±1	14.0	17.0	25	7.5±1	0.8
SVC561D-10A	7.5	4.0±1	14.0	17.0	25	7.5±1	0.8
SVC621D-10A	7.2	4.1±1	14.0	17.0	25	7.5±1	0.8
SVC681D-10A	7.5	4.4±1	14.0	17.0	25	7.5±1	0.8
SVC751D-10A	8.0	4.8±1	14.0	17.0	25	7.5±1	0.8
SVC781D-10A	8.2	5.0±1	14.0	17.0	25	7.5±1	0.8
SVC821D-10A	8.5	5.2±1	14.0	17.0	25	7.5±1	0.8
SVC911D-10A	9.0	5.7±1	14.0	17.0	25	7.5±1	0.8
SVC102D-10A	9.5	6.2±1	14.0	17.0	25	7.5±1	0.8
SVC112D-10A	10.5	6.7±1	14.0	17.0	25	7.5±1	0.8
SVC820D-14A	5.0	2.2±1	17.0	20.0	25	7.5±1	0.8
SVC101D-14A	5.1	1.5±1	17.0	20.0	25	7.5±1	0.8
SVC121D-14A	5.2	1.6±1	17.0	20.0	25	7.5±1	0.8
SVC151D-14A	5.5	1.8±1	17.0	20.0	25	7.5±1	0.8
SVC201D-14A	5.6	2.1±1	17.0	20.0	25	7.5±1	0.8
SVC221D-14A	5.7	2.3±1	17.0	20.0	25	7.5±1	0.8
SVC241D-14A	5.8	2.4±1	17.0	20.0	25	7.5±1	0.8
SVC271D-14A	6.1	2.6±1	17.0	20.0	25	7.5±1	0.8
SVC361D-14A	6.7	3.2±1	17.5	21.0	25	7.5±1	0.8
SVC391D-14A	6.8	3.4±1	17.5	21.0	25	7.5±1	0.8
SVC431D-14A	7.2	3.7±1	17.5	21.0	25	7.5±1	0.8
SVC471D-14A	7.5	3.9±1	17.5	21.0	25	7.5±1	0.8
SVC561D-14A	7.5	4.0±1	17.5	21.0	25	7.5±1	0.8
SVC621D-14A	7.2	4.1±1	17.5	21.0	25	7.5±1	0.8
SVC681D-14A	7.5	4.4±1	17.5	21.0	25	7.5±1	0.8
SVC751D-14A	8.0	4.8±1	17.5	21.0	25	7.5±1	0.8
SVC781D-14A	8.2	5.0±1	17.5	21.0	25	7.5±1	0.8
SVC821D-14A	8.5	5.2±1	17.5	21.0	25	7.5±1	0.8
SVC911D-14A	9.0	5.7±1	17.5	21.0	25	7.5±1	0.8
SVC102D-14A	9.5	6.2±1	17.5	21.0	25	7.5±1	0.8
SVC112D-14A	10.5	6.7±1	17.5	21.0	25	7.5±1	0.8
SVC182D-14A	15.0	9.5±1	17.5	21.0	25	7.5±1	0.8
SVC820D-20A	5.5	2.4±1	23.0	27.0	30	10.0±1	0.8
SVC101D-20A	5.6	1.7±1	23.0	27.0	30	10.0±1	0.8
SVC121D-20A	5.7	1.8±1	23.0	27.0	30	10.0±1	0.8
SVC151D-20A	5.9	2.0±1	23.0	27.0	30	10.0±1	0.8
SVC201D-20A	6.0	2.3±1	23.0	27.0	30	10.0±1	0.8
SVC221D-20A	6.2	2.5±1	23.0	27.0	30	10.0±1	0.8
SVC241D-20A	6.3	2.6±1	23.0	27.0	30	10.0±1	0.8
SVC271D-20A	6.5	2.8±1	23.0	27.0	30	10.0±1	0.8
SVC361D-20A	7.2	3.4±1	24.0	28.0	30	10.0±1	0.8
SVC391D-20A	7.4	3.6±1	24.0	28.0	30	10.0±1	0.8
SVC431D-20A	7.7	3.9±1	24.0	28.0	30	10.0±1	0.8
SVC471D-20A	8.0	4.1±1	24.0	28.0	30	10.0±1	0.8
SVC561D-20A	8.0	4.2±1	24.0	28.0	30	10.0±1	0.8
SVC621D-20A	8.0	4.3±1	24.0	28.0	30	10.0±1	0.8
SVC681D-20A	8.2	4.6±1	24.0	28.0	30	10.0±1	0.8
SVC751D-20A	8.5	5.0±1	24.0	28.0	30	10.0±1	0.8
SVC781D-20A	8.6	5.3±1	24.0	28.0	30	10.0±1	0.8
SVC821D-20A	8.8	5.4±1	24.0	28.0	30	10.0±1	0.8
SVC911D-20A	9.3	5.9±1	24.0	28.0	30	10.0±1	0.8
SVC102D-20A	9.7	6.3±1	24.0	28.0	30	10.0±1	0.8
SVC112D-20A	10.8	6.9±1	24.0	28.0	30	10.0±1	0.8
SVC182D-20A	15.5	10.2±1	24.0	28.0	30	10.0±1	0.8

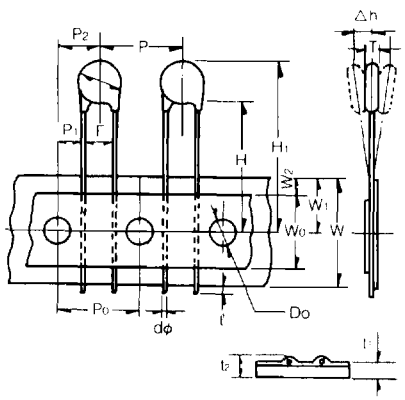
CERAMIC SURGE ABSORBERS (VARISTORS)

SVC

TAPING

■ DESIGN AND DIMENSIONS

(Element Sizes of φ5, φ7, φ10, available)



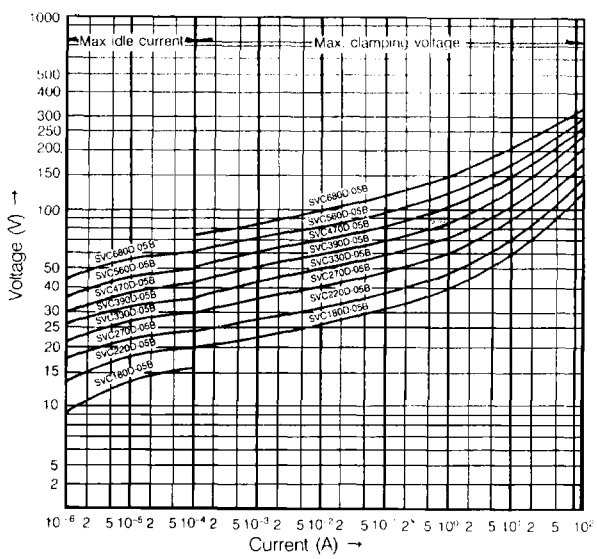
Item	Code	Dimensions (mm)
Body Diameter	D	Page 39
Body Thickness	T	
Lead Diameter	dφ	0.6±0.05 0.8±0.05
Pitch of Sprocket Hole	P_0	12.7±0.3 15.0±0.3
Pitch of Component	P	12.7±1.0 15.0±1.0
Lead Length from Hole Center to Lead	P_1	3.85±0.7 3.75±0.7
Lead Length from Hole Center to Component Center	P_2	6.35±1.3, 7.5±1.5
Lead Spacing	F	$5.0^{+0.8}_{-0.2}$, 7.5±1.0
Deviation across Tape	Δh	0±2.0
Carrier tape Width	W	$18.0\pm^{+1.0}_{-0.5}$
Hold down Tape Width	W_0	5.0 Min
Position of sprocket Hole	W_1	9.0±0.5
Hold Down Tape Position	W_2	3.0 Max
Height of Component From Hole Center	H	$20.0^{+1.5}_{-1.0}$
Component Height	H_1	35 Lower
Lead Protrusion	ℓ	1.0 Max
Diameter of Sprocket Hole	D_0	4.0±0.2
Total Tape Thickness	t_1	0.7±0.2
Total Thickness Tape and Lead Wire	t_2	1.5 Max

CHAR, CURVES AND LIFETIME

■ TRANSIENT V-I CHARACTERISTIC CURVES

Current waveform Under 10^{-2}A: DC
Over 10^{-1}A: 8/20 μs

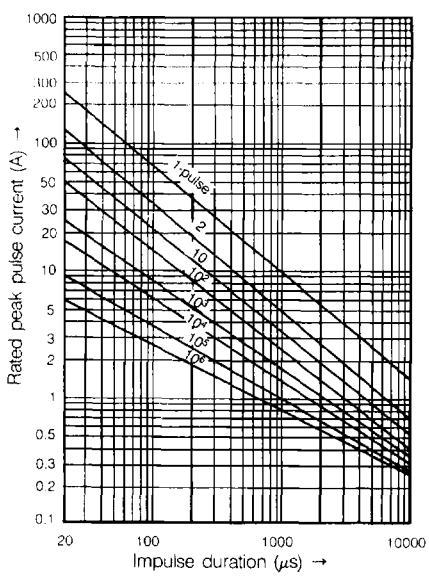
•05B (SVC180D-05B to SVC680D-05B)



■ PULSE LIFETIME RATINGS

Notes: 2-pulse: 5-minute interval
3 to 10-pulse: 2-minute interval
Up to 10^6-pulse: 10-second interval

•05B (SVC180D-05B to SVC680D-05B)



CERAMIC SURGE ABSORBERS (VARISTORS)

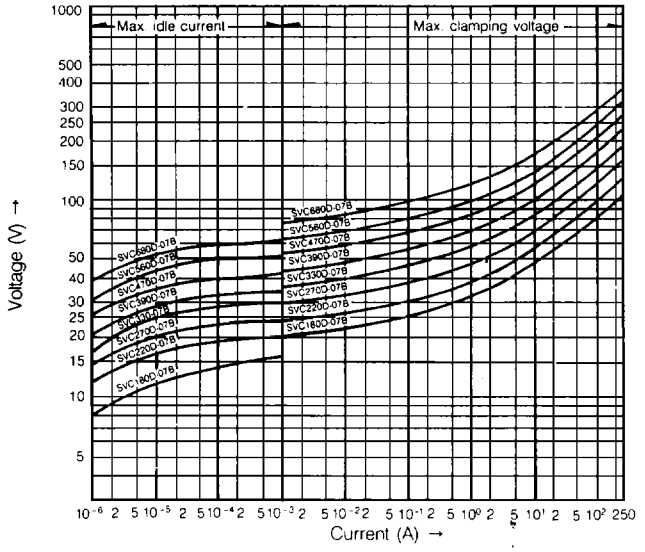
CERAMIC SURGE ABSORBERS (VARISTORS)

SVC

■ TRANSIENT V-I CHARACTERISTIC CURVES

Cunent waveform Under 10^{-2}A: DC
Over 10^{-1}A: 8/20 μs

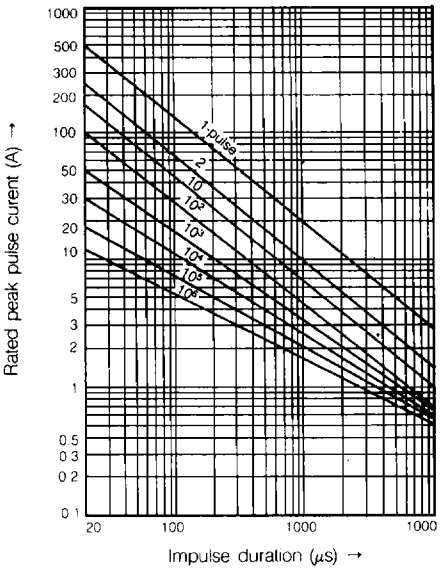
•07B (SVC180D-07B to SVC680D-07B)



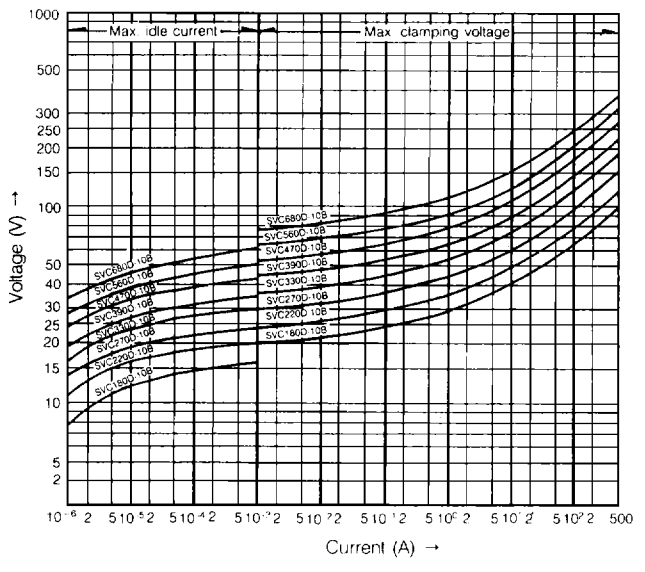
■ PULSE LIFETIME RATINGS

Notes: 2-pulse: 5-minute interval
3 to 10-pulse: 2-minute interval
Up to 10^6-pulse: 10-second interval

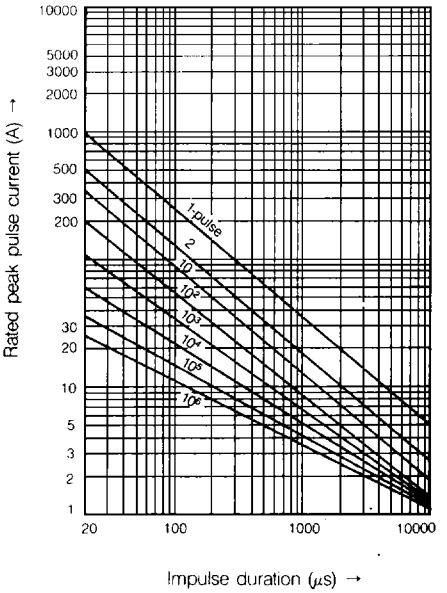
•07B (SVC180D-07B to SVC680D-07B)



•10B (SVC180D-10B to SVC680D-10B)



•10B (SVC180D-10B to SVC680D-10B)



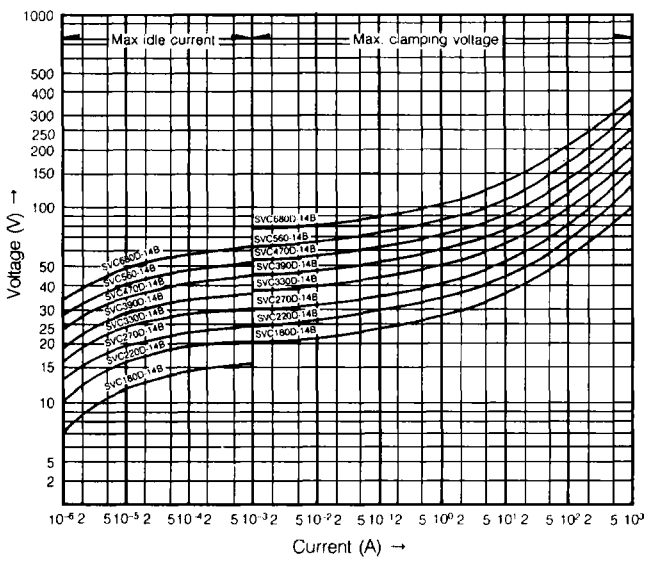
CERAMIC SURGE ABSORBERS (VARISTORS)

SVC

■ TRANSIENT V-I CHARACTERISTIC CURVES

Current waveform Under 10^{-2}A: DC
Over 10^{-1}A: 8/20 μs

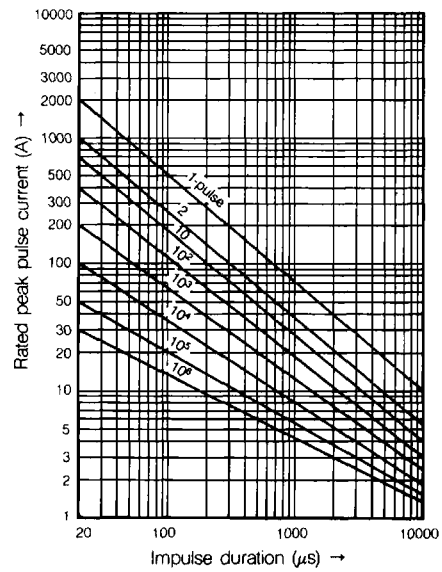
•14B (SVC180D-14B to ENC680D-14B)



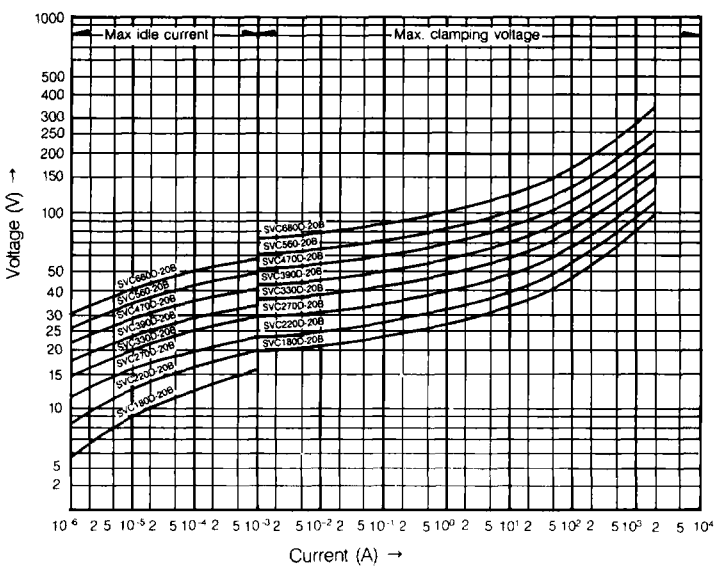
■ PULSE LIFETIME RATINGS

Notes: 2-pulse: 5-minute interval
3 to 10-pulse: 2-minute interval
Up to 10^6-pulse: 10-second interval

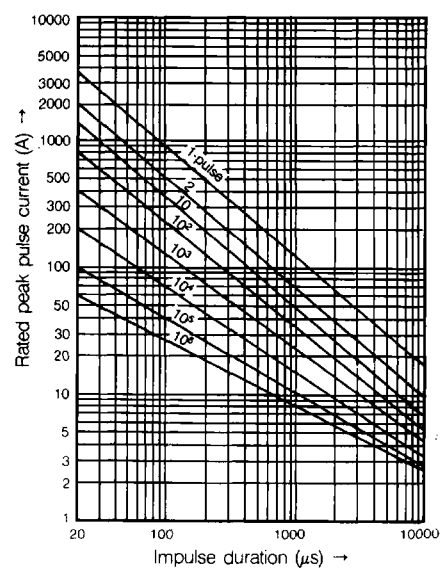
•14B (SVC180D-14B to SVC680D-14B)



•20B (SVC180-20B to SVC680D-20B)



•20B (SVC180D-20B to SVC680D-20B)



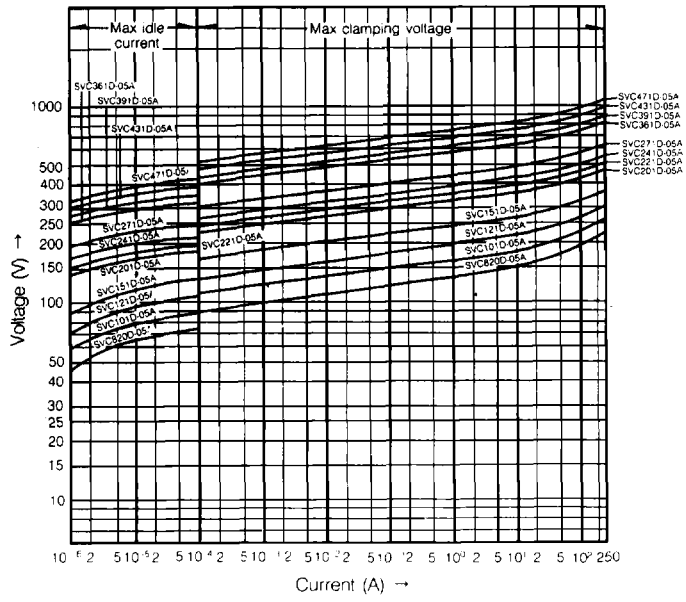
CERAMIC SURGE ABSORBERS (VARISTORS)

SVC

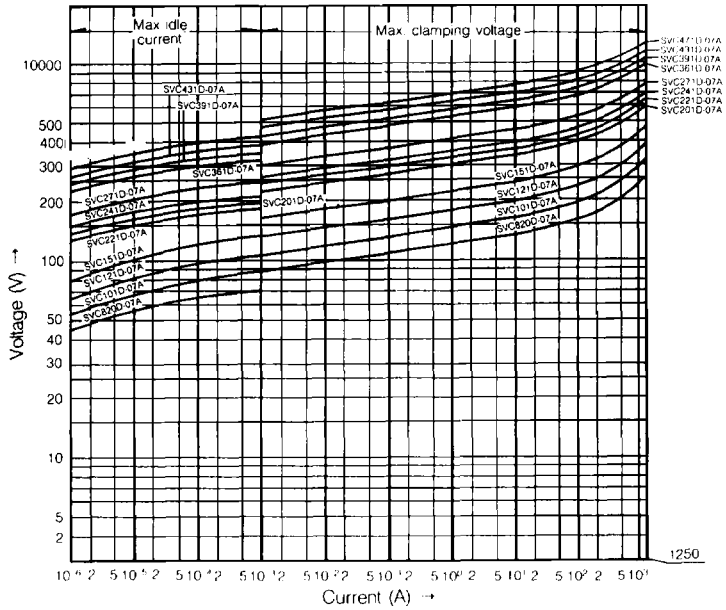
■ TRANSIENT V-I CHARACTERISTIC CURVES

Current waveform Under 10^{-2}A: DC
Over 10^{-1}A: 8/20 μs

•05A (SVC820D-05A to SVC471D-05A)



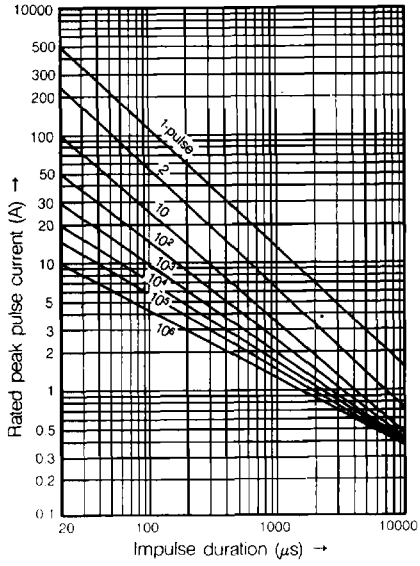
•07A (SVC820D-07A to SVC471D-07A)



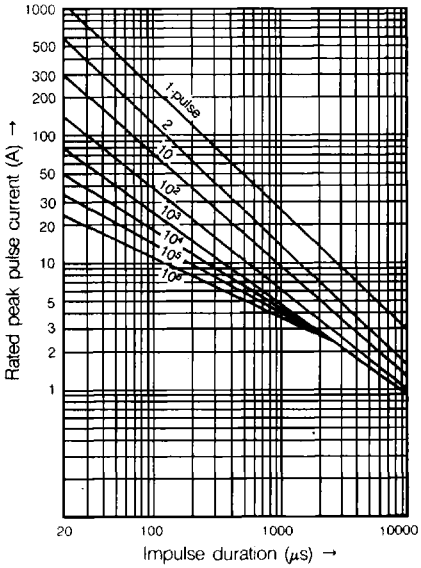
■ PULSE LIFETIME RATINGS

Notes: 2-pulse: 5-minute interval
3 to 10-pulse: 2-minute interval
Up to 10^6-pulse: 10-second interval

•05A (SVC820D-05A to SVC 471D-05A)



•07A (SVC820D-07A to SVC471D-07A)



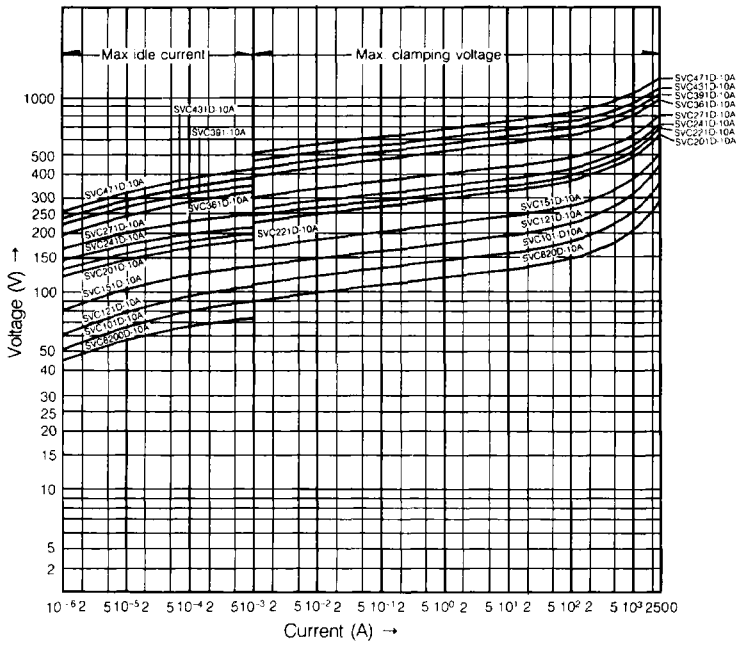
CERAMIC SURGE ABSORBERS (VARISTORS)

SVC

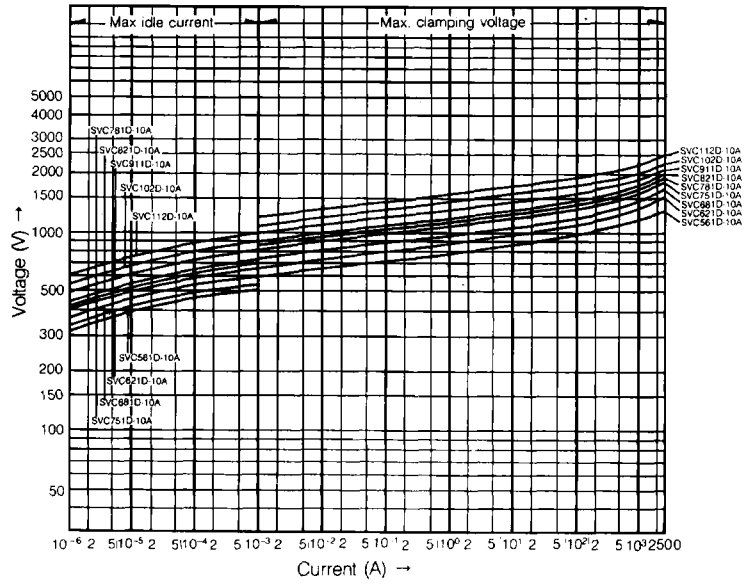
■ TRANSIENT V-I CHARACTERISTIC CURVES

Current waveform Under 10^{-2}A: DC
Over 10^{-1}A: 8/20 μs

•10A (SVC820D-10A to SVC471D-10A)



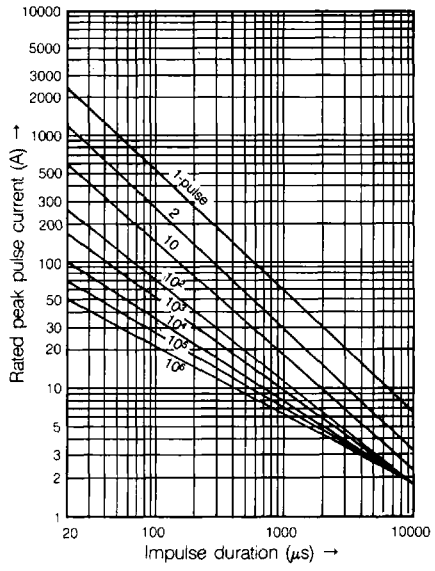
•10A (SVC561D-10A to SVC112D-10A)



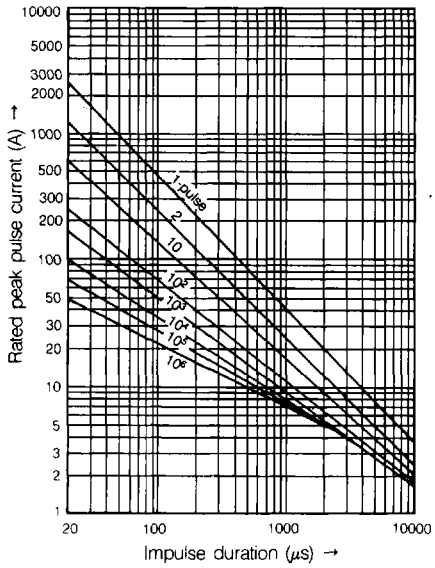
■ PULSE LIFETIME RATINGS

Notes: 2-pulse: 5-minute interval
3 to 10-pulse: 2-minute interval
Up to 10^6-pulse: 10-second interval

•10A (SVC820D-10A to SVC471D-10A)



•10A (SVC561D-10A to SVC112D-10A)



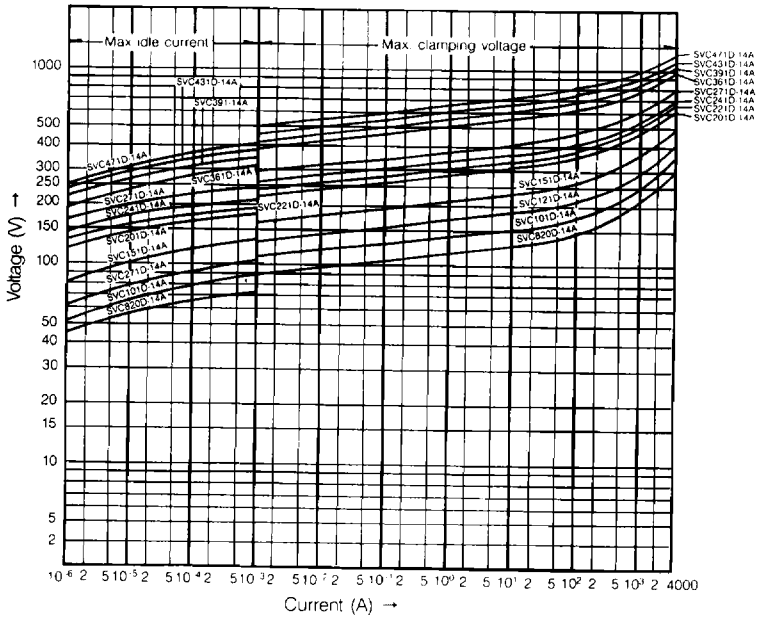
CERAMIC SURGE ABSORBERS (VARISTORS)

SVC

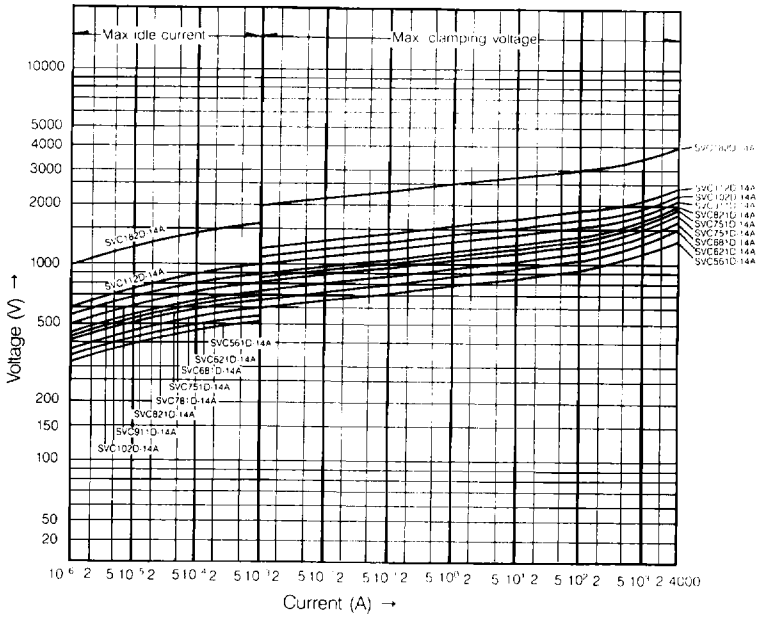
■ TRANSIENT V-I CHARACTERISTIC CURVES

Current waveform Under 10^{-3}A: DC
Over 10^{-1}A: 8/20 μs

•14A (SVC820D-14A to SVC471D-14A)



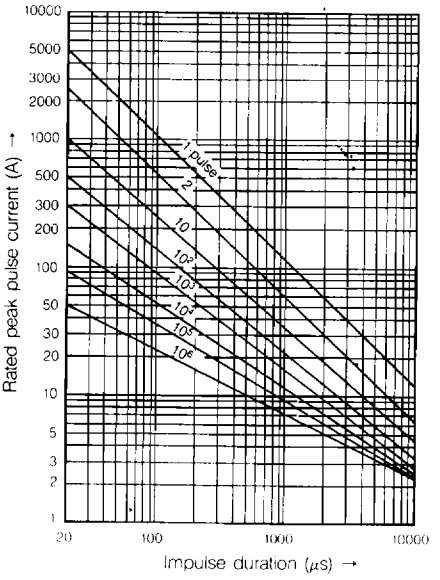
•14A (SVC561D-14A to SVC182D-14A)



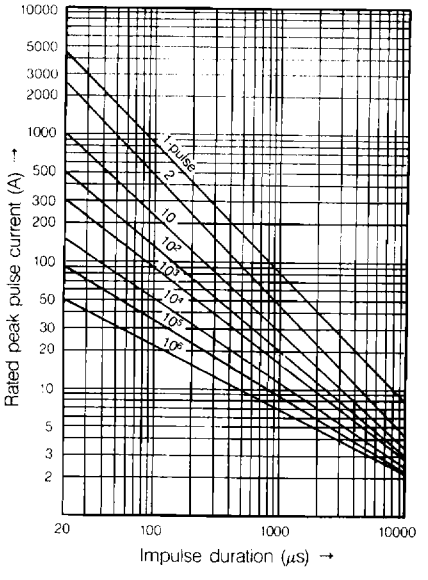
■ PULSE LIFETIME RATINGS

Notes: 2-pulse: 5-minute interval
3 to 10-pulse: 2-minute interval
Up to 10^6-pulse: 10-second interval

•14A (SVC820D-14A to SVC471D-14A)



•14A (SVC561D-14A to SVC182D-14A)



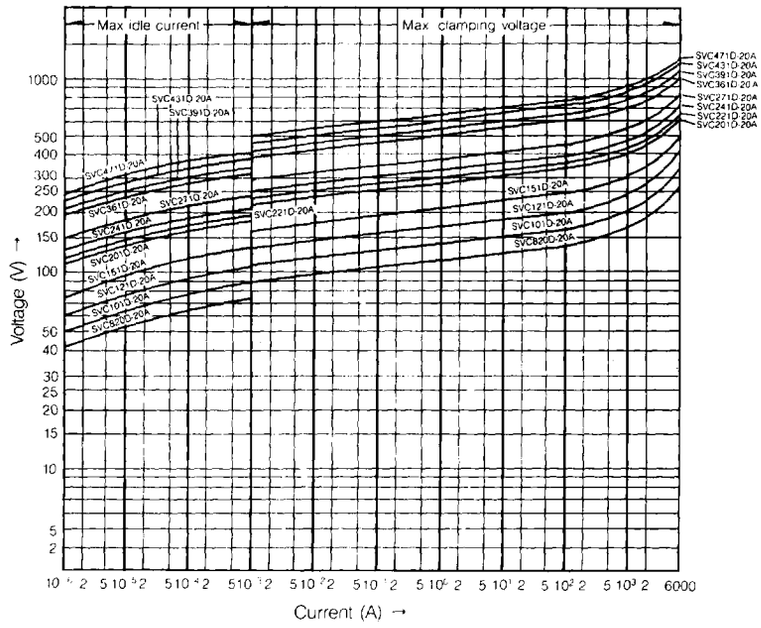
CERAMIC SURGE ABSORBERS (VARISTORS)

SVC

■ TRANSIENT V-I CHARACTERISTIC CURVES

Current waveform Under 10^{-2}A: DC
Over 10^{-1}A: 8/20 μs

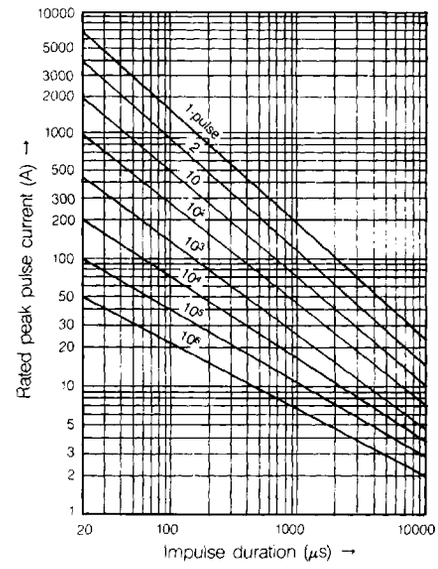
•20A (SVC820D-20A to SVC471D-20A)



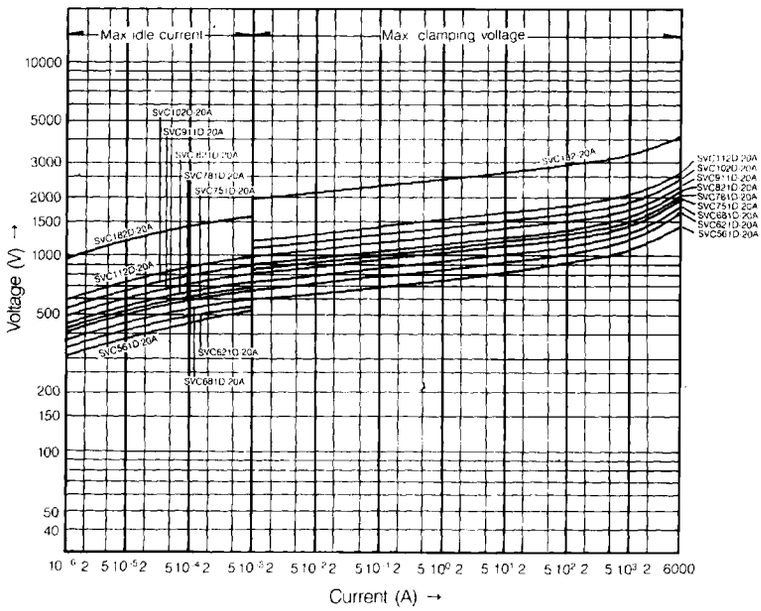
■ PULSE LIFETIME RATINGS

Notes: 2-pulse: 5-minute interval
3 to 10-pulse: 2-minute interval
Up to 10^6-pulse: 10-second interval

•20A (SVC820D-20A to SVC471D-20A)



•20A (SVC561D-20A to SVC182D-20A)



•20A (SVC561D-20A to SVC182D-20A)