

Last order date: 31.10.2012



Disc Size: 5 mm



Disc Size: 10 mm



Disc Size: 20 mm

11 - 95VAC · 250 - 10000A · 5 - 20mm

**Description**

- Radial Leaded Varistor
- Short reaction time
- Low leakage current

**Standards**

UL 1449 - Transient Voltage Surge Suppressors

**Approvals**

- UL File Number: E340137 (UL 1449)

**Applications**

- Surge protection
- Secondary Protection DC and AC
- Automotive applications

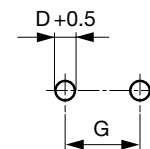
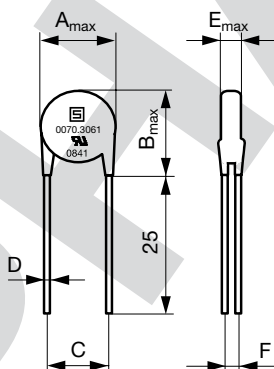
**References**[Packaging Details](#)**Weblinks**

[pdf](#), [html](#), [General Product Information](#), [Approvals](#), [RoHS](#), [CHINA-RoHS](#), [e-Shop](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#)

**Technical Data**

Rated Voltage	11 - 95VAC, 14 - 127VDC
Disc Size	5 - 20mm
Peak Current 8/20 $\mu$ s, 1 Pulse	250 - 10000 A
Max. Energy Absorption 10/1000 $\mu$ s	0.6 - 106J
Current/Energy Derating above 85 °C	- 2.5% / °C
Voltage/Temperature Coeffi- cient	- 0.05% / °C
Mounting	PCB, THT
Admissible Ambient Air Temp.	- 40 °C to 125 °C
Material: Terminals	Tin-Plated Copper Alloy
Material: Tube	Zinc Oxide
Storage Conditions	0 °C to 60 °C max. 70% r.h.
Product Marking	Order Number, Approvals, Data Code

Soldering Methods	Wave
Solderability	235 °C / 2 sec acc. to IEC 60068-2-20, Test Ta, method 1
Resistance to Soldering Heat	260 °C / 5 sec acc. to IEC 60068-2-20, Test Tb, method 1A
Insulation Resistance	>10'000 M $\Omega$
HiPot Encapsulation	2500 VDC
Impulse Response Time	< 50 ns
DC Leakage Current	< 200 $\mu$ A
Flammability	UL 94V-0

**Dimensions**

Drilling diagram

## Dimensions

Rated Voltage	Disc size	A max	B max	C	D	E	F	G	Order Number
[VAC]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	
11	5	7	8.5	5	0.6	3.3	1.2	5.1	0070.1111.xx
11	7	9	11	5	0.6	3.4	1.2	5.1	0070.1121.xx
11	10	12	14.5	7.5	0.8	4	1.4	7.6	0070.1141.xx
11	14	15.5	18.5	7.5	0.8	4	1.4	7.6	0070.1161.xx
11	20	21.5	25.5	10	1	4.5	1.5	10.1	0070.1181.xx
14	5	7	8.5	5	0.6	3.4	1.3	5.2	0070.1411.xx
14	7	9	11	5	0.6	3.5	1.3	5.2	0070.1421.xx
14	10	12	14.5	7.5	0.8	4.2	1.5	7.6	0070.1441.xx
14	14	15.5	18.5	7.5	0.8	4.2	1.5	7.6	0070.1461.xx
14	20	21.5	25.5	10	1	4.6	1.6	10.1	0070.1481.xx
17	5	7	8.5	5	0.6	3.5	1.4	5.2	0070.1711.xx
17	7	9	11	5	0.6	3.6	1.4	5.2	0070.1721.xx
17	10	12	14.5	7.5	0.8	4.4	1.6	7.7	0070.1741.xx
17	14	15.5	18.5	7.5	0.8	4.4	1.7	7.7	0070.1761.xx
17	20	21.5	25.5	10	1	4.8	1.8	10.2	0070.1781.xx
20	5	7	8.5	5	0.6	3.5	1.2	5.1	0070.2011.xx
20	7	9	11	5	0.6	3.6	1.2	5.1	0070.2021.xx
20	10	12	14.5	7.5	0.8	4.5	1.8	7.7	0070.2041.xx
20	14	15.5	18.5	7.5	0.8	4.6	1.9	7.7	0070.2061.xx
20	20	21.5	25.5	10	1	5.1	2.1	10.2	0070.2081.xx
25	5	7	8.5	5	0.6	3.6	1.3	5.2	0070.2511.xx
25	7	9	11	5	0.6	3.7	1.3	5.2	0070.2521.xx
25	10	12	14.5	7.5	0.8	4.2	1.6	7.7	0070.2541.xx
25	14	15.5	18.5	7.5	0.8	4.2	1.7	7.7	0070.2561.xx
25	20	21.5	25.5	10	1	4.7	1.8	10.2	0070.2581.xx
30	5	7	8.5	5	0.6	3.6	1.5	5.2	0070.3011.xx
30	7	9	11	5	0.6	3.7	1.5	5.2	0070.3021.xx
30	10	12	14.5	7.5	0.8	4.4	1.7	7.7	0070.3041.xx
30	14	15.5	18.5	7.5	0.8	4.4	1.8	7.7	0070.3061.xx
30	20	21.5	25.5	10	1	4.9	2	10.2	0070.3081.xx
35	5	7	8.5	5	0.6	3.7	1.6	5.2	0070.3511.xx
35	7	9	11	5	0.6	3.9	1.6	5.2	0070.3521.xx
35	10	12	14.5	7.5	0.8	4.4	1.8	7.7	0070.3541.xx
35	14	15.5	18.5	7.5	0.8	4.5	2	7.8	0070.3561.xx
35	20	21.5	25.5	10	1	5.1	2.2	10.2	0070.3581.xx
40	5	7	8.5	5	0.6	3.9	1.8	5.3	0070.4011.xx
40	7	9	11	5	0.6	4.1	1.8	5.3	0070.4021.xx
40	10	12	14.5	7.5	0.8	4.8	2.1	7.8	0070.4041.xx
40	14	15.5	18.5	7.5	0.8	4.9	2.2	7.8	0070.4061.xx
40	20	21.5	25.5	10	1	5.4	2.4	10.3	0070.4081.xx
50	5	7	8.5	5	0.6	3.3	1.2	5.1	0070.5011.xx
50	7	9	11	5	0.6	3.3	1.2	5.1	0070.5021.xx
50	10	12	14.5	7.5	0.8	3.9	1.4	7.6	0070.5041.xx
50	14	15.5	18.5	7.5	0.8	3.9	1.4	7.6	0070.5061.xx
50	20	21.5	25.5	10	1	4.3	1.5	10.1	0070.5081.xx
60	5	7	8.5	5	0.6	3.3	1.2	5.1	0070.6011.xx
60	7	9	11	5	0.6	3.3	1.2	5.1	0070.6021.xx
60	10	12	14.5	7.5	0.8	4	1.4	7.6	0070.6041.xx
60	14	15.5	18.5	7.5	0.8	4	1.5	7.6	0070.6061.xx
60	20	21.5	25.5	10	1	4.4	1.6	10.1	0070.6081.xx
75	5	7	8.5	5	0.6	3.4	1.3	5.2	0070.7511.xx
75	7	9	11	5	0.6	3.6	1.3	5.2	0070.7521.xx
75	10	12	14.5	7.5	0.8	4.2	1.5	7.6	0070.7541.xx
75	14	15.5	18.5	7.5	0.8	4.2	1.5	7.6	0070.7561.xx

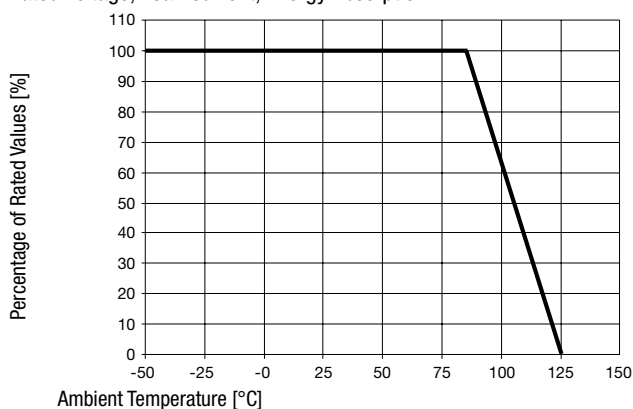


Rated Voltage	Disc size	A max	B max	C	D	E	F	G	Order Number
[VAC]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	
75	20	21.5	25.5	10	1	4.6	1.6	10.1	0070.7581.xx
95	5	7	8.5	5	0.6	3.4	1.3	5.2	0070.9511.xx
95	7	9	11	5	0.6	3.4	1.3	5.2	0070.9521.xx
95	10	12	14.5	7.5	0.8	4	1.5	7.6	0070.9541.xx
95	14	15.5	18.5	7.5	0.8	4	1.5	7.6	0070.9561.xx
95	20	21.5	25.5	10	1	4.5	1.6	10.1	0070.9581.xx

Electrical parameters can be found in the table of variants below.

### Temperature Derating Curves

Rated Voltage, Peak Current, Energy Absorption



### Variants

Rated Voltage	Rated Voltage	Disc size	Peak Current, 8/20 μs, 1 Pulse	Peak Current, 8/20 μs, 2 Pulses	Energy, 10/1000 μs	Min. Voltage @ 1 mA DC	Max. Voltage @ 1 mA DC	Max. Clamping Voltage	Peak Current, 8/20 μs, Clamping	Typ. Capacity @ 1 kHz	Order Number
[VAC]	[VDC]	[mm]	[A]	[A]	[J]	[V]	[V]	[V]	[A]	[pF]	
11	14	5	250	125	0.6	16	20	40	1	2200	0070.1111.xx
11	14	7	500	250	1.1	16	20	36	2.5	3500	0070.1121.xx
11	14	10	1000	500	2.6	16	20	36	5	7500	0070.1141.xx
11	14	14	2000	1000	5.2	16	20	36	10	18000	0070.1161.xx
11	14	20	3000	2000	13	16	20	36	20	37000	0070.1181.xx
14	18	5	250	125	0.7	20	24	48	1	2000	0070.1411.xx
14	18	7	500	250	1.3	20	24	43	2.5	2800	0070.1421.xx
14	18	10	1000	500	3.2	20	24	43	5	6000	0070.1441.xx
14	18	14	2000	1000	6.3	20	24	43	10	15000	0070.1461.xx
14	18	20	3000	2000	16	20	24	43	20	30000	0070.1481.xx
17	22	5	250	125	0.9	24	30	60	1	1600	0070.1711.xx
17	22	7	500	250	1.6	24	30	53	2.5	2000	0070.1721.xx
17	22	10	1000	500	3.9	24	30	53	5	4000	0070.1741.xx
17	22	14	2000	1000	7.8	24	30	53	10	10000	0070.1761.xx
17	22	20	3000	2000	19	24	30	53	20	22000	0070.1781.xx
20	26	5	250	125	1.1	30	36	73	1	1675	0070.2011.xx
20	26	7	500	250	2	30	36	65	2.5	3614	0070.2021.xx
20	26	10	1000	500	4.8	30	36	65	5	6655	0070.2041.xx
20	26	14	2000	1000	9.5	30	36	65	10	14447	0070.2061.xx
20	26	20	3000	2000	24	30	36	65	20	33064	0070.2081.xx
25	31	5	250	125	1.2	35	43	86	1	1417	0070.2511.xx
25	31	7	500	250	2.4	35	43	77	2.5	3058	0070.2521.xx
25	31	10	1000	500	5.6	35	43	77	5	5632	0070.2541.xx
25	31	14	2000	1000	11	35	43	77	10	12225	0070.2561.xx
25	31	20	3000	2000	28	35	43	77	20	27977	0070.2581.xx
30	38	5	250	125	1.5	42	52	99	1	1176	0070.3011.xx

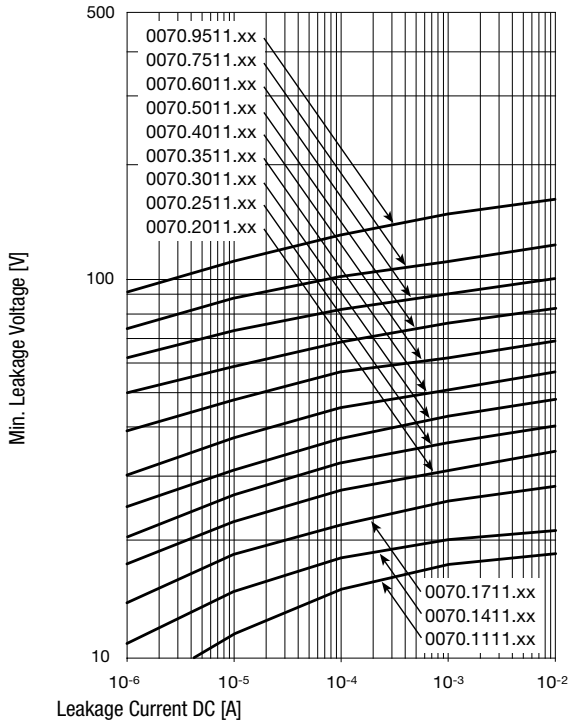
Rated Voltage	Rated Voltage	Disc size	Peak Current, 8/20 $\mu$ s, 1 Pulse	Peak Current, 8/20 $\mu$ s, 2 Pulses	Energy, 10/1000 $\mu$ s	Min. Voltage @ 1 mA DC	Max. Voltage @ 1 mA DC	Max. Clamping Voltage	Peak Current, 8/20 $\mu$ s, Clamping	Typ. Capacity @ 1 kHz	Order Number
[VAC]	[VDC]	[mm]	[A]	[A]	[J]	[V]	[V]	[V]	[A]	[pF]	
30	38	7	500	250	2.5	42	52	93	2.5	2537	0070.3021.xx
30	38	10	1000	500	6.8	42	52	93	5	4673	0070.3041.xx
30	38	14	2000	1000	14	42	52	93	10	10144	0070.3061.xx
30	38	20	3000	2000	34	42	52	93	20	23215	0070.3081.xx
35	45	5	250	125	1.8	50	62	117	1	987	0070.3511.xx
35	45	7	500	250	3.4	50	62	110	2.5	2130	0070.3521.xx
35	45	10	1000	500	8.1	50	62	110	5	3922	0070.3541.xx
35	45	14	2000	1000	16	50	62	110	10	8514	0070.3561.xx
35	45	20	3000	2000	41	50	62	110	20	19484	0070.3581.xx
40	56	5	250	125	2.2	61	75	138	1	438	0070.4011.xx
40	56	7	500	250	5.2	61	75	135	2.5	945	0070.4021.xx
40	56	10	1000	500	13	61	75	135	5	1627	0070.4041.xx
40	56	14	2000	1000	20	61	75	135	10	3285	0070.4061.xx
40	56	20	3000	2000	49	61	75	135	20	7517	0070.4081.xx
50	66	5	800	600	3.5	74	90	163	5	364	0070.5011.xx
50	66	7	1750	1250	7	74	90	157	10	767	0070.5021.xx
50	66	10	3500	2500	14	74	90	147	25	1375	0070.5041.xx
50	66	14	6000	5000	28	74	90	147	50	2829	0070.5061.xx
50	66	20	10000	7000	56	74	90	147	100	5041	0070.5081.xx
60	81	5	800	600	4.5	90	110	190	5	299	0070.6011.xx
60	81	7	1750	1250	9	90	110	180	10	629	0070.6021.xx
60	81	10	3500	2500	18	90	110	175	25	1128	0070.6041.xx
60	81	14	6000	5000	36	90	110	175	50	2319	0070.6061.xx
60	81	20	10000	7000	72	90	110	175	100	5264	0070.6081.xx
75	102	5	800	600	5.5	108	132	220	5	249	0070.7511.xx
75	102	7	1750	1250	11	108	132	220	10	524	0070.7521.xx
75	102	10	3500	2500	22	108	132	210	25	940	0070.7541.xx
75	102	14	6000	5000	44	108	132	210	50	1933	0070.7561.xx
75	102	20	10000	7000	88	108	132	210	100	4387	0070.7581.xx
95	127	5	800	600	6.6	135	165	240	5	118	0070.9511.xx
95	127	7	1750	1250	13	135	165	255	10	255	0070.9521.xx
95	127	10	3500	2500	25	135	165	255	25	469	0070.9541.xx
95	127	14	6000	5000	53	135	165	255	50	1019	0070.9561.xx
95	127	20	10000	7000	106	135	165	255	100	2331	0070.9581.xx

### Packaging Unit

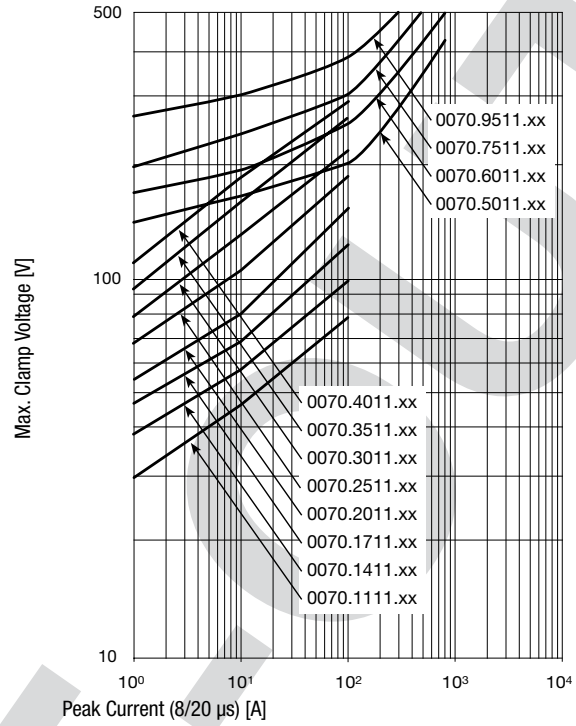
- .xx = .B1 Plastic Bag (100 pcs.)
- .xx = .T2 Taped&Reel:
  - 11 - 95 VAC: 5 + 7 mm Disc Size 1500 pieces
  - 11 - 95 VAC: 10 mm Disc Size 1000 pieces
  - 11 - 95 VAC: 14 mm Disc Size 1000 pieces
  - 11 - 95 VAC: 20 mm Disc Size 500 pieces
- .xx = .A2 Ammo Pack
  - 11 - 95 VAC: 5 + 7 mm Disc Size 1500 pieces
  - 11 - 95 VAC: 10 mm Disc Size 1000 pieces
  - 11 - 95 VAC: 14 mm Disc Size 1000 pieces
  - 11 - 95 VAC: 20 mm Disc Size 500 pieces

Voltage-Current Curves

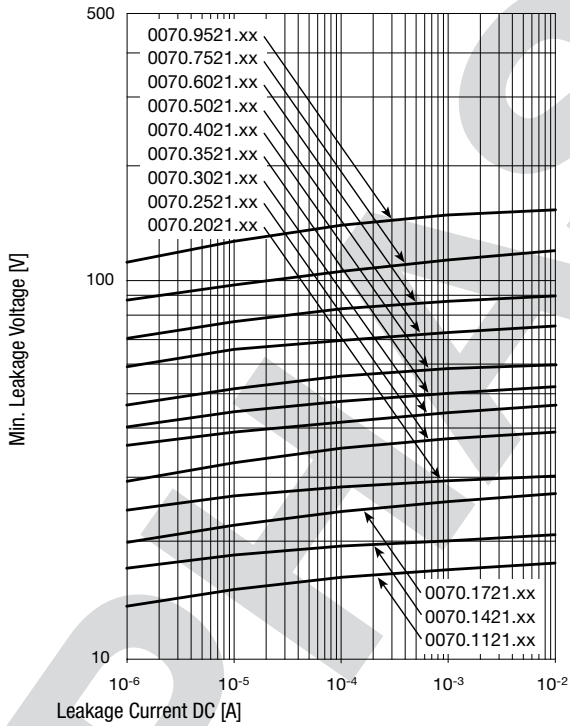
Disc Size: 5 mm Varistor



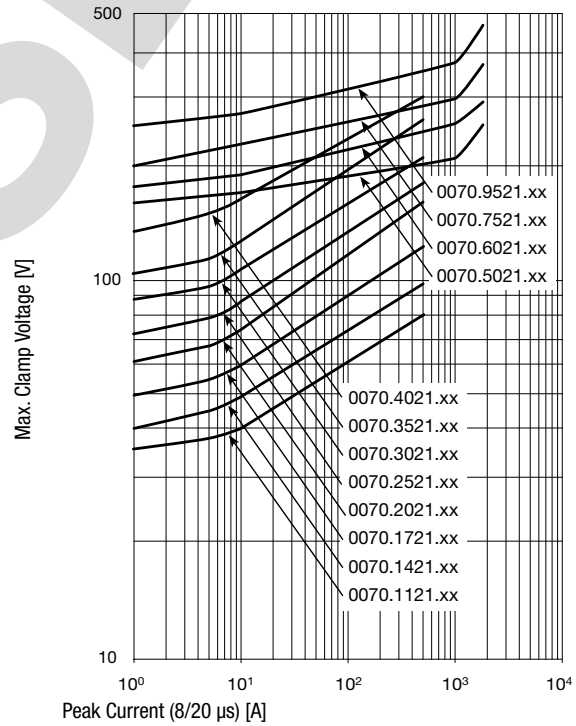
Disc Size: 5 mm Varistor



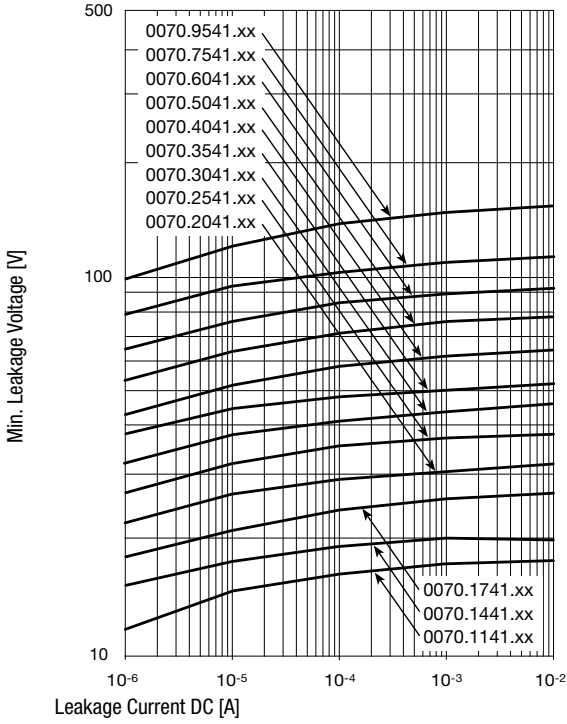
Disc Size: 7 mm



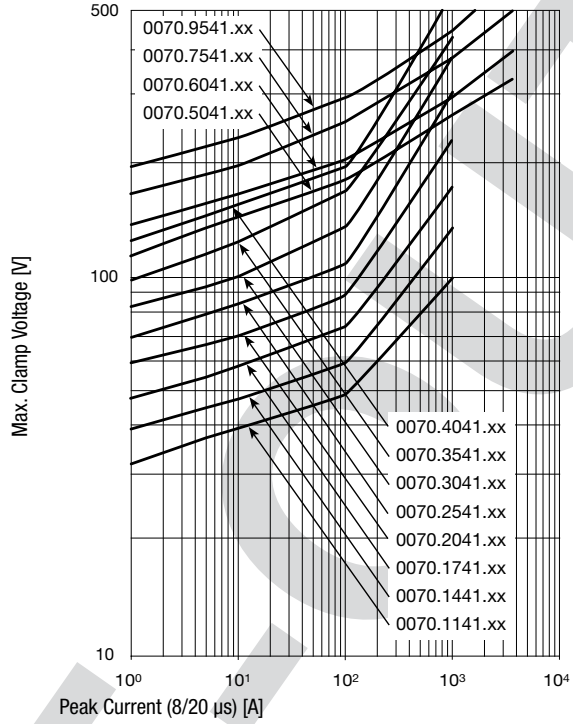
Disc Size: 7 mm



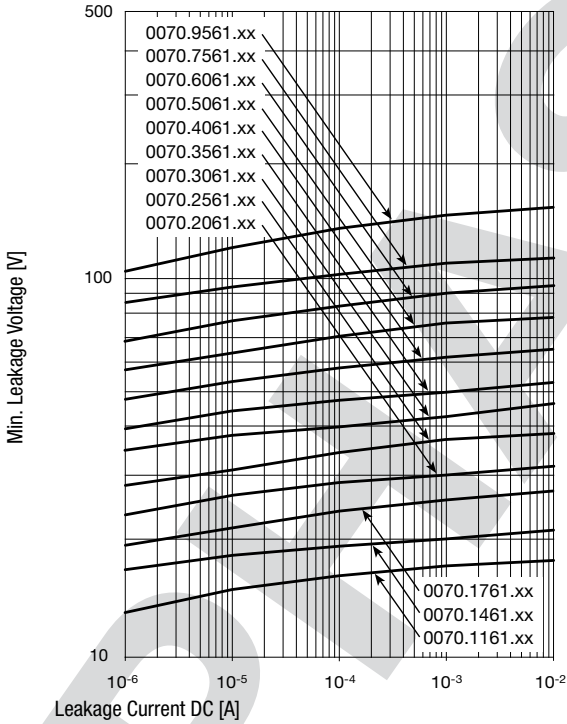
Disc Size: 10 mm



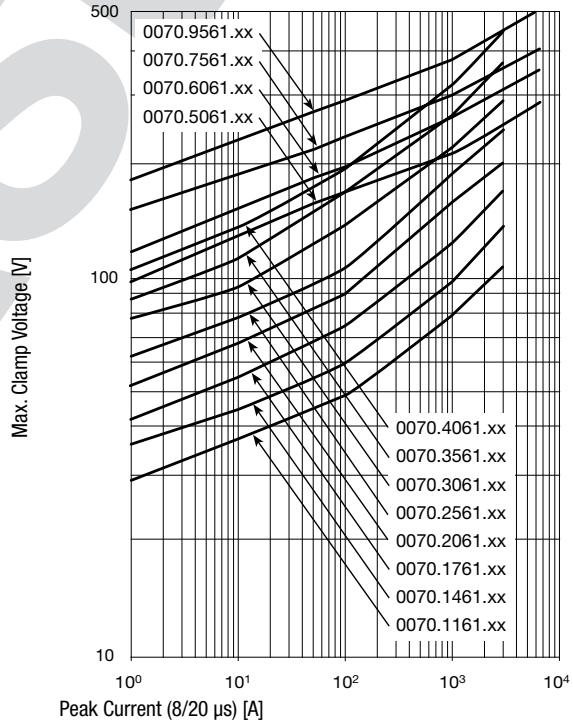
Disc Size: 10 mm



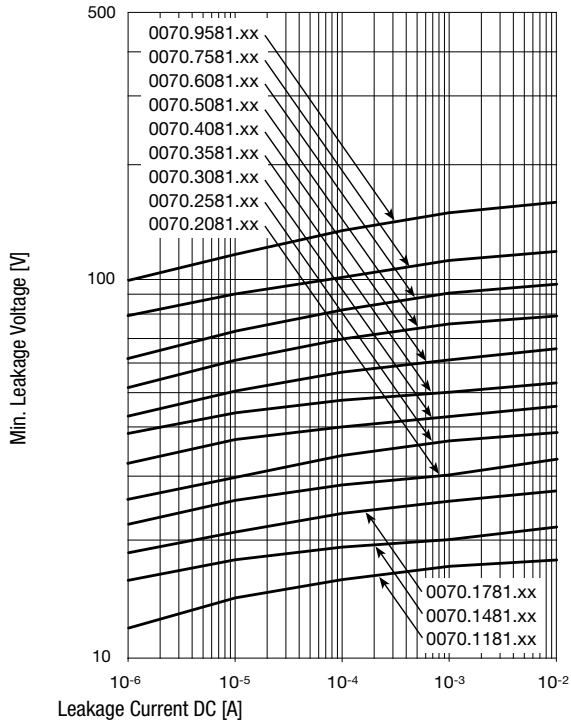
Disc Size: 14 mm



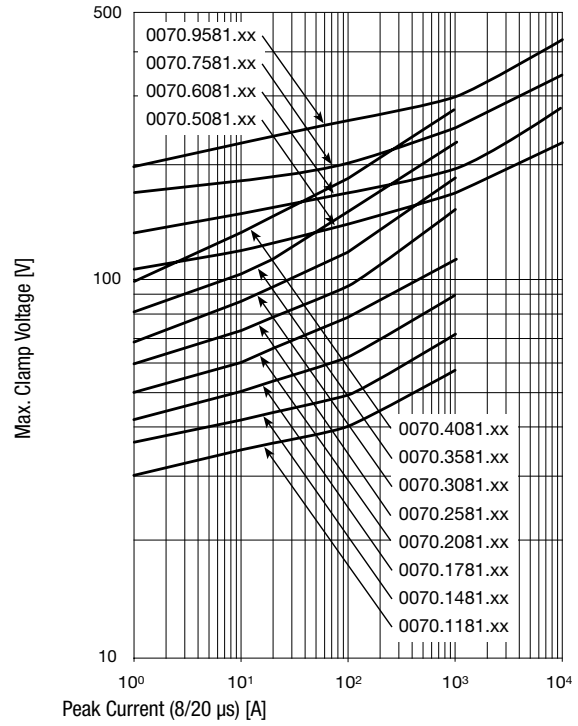
Disc Size: 14 mm



Disc Size: 20 mm



Disc Size: 20 mm Varistor



**Pulse Derating Curves**

Derating at Quantity of Pulses and Pulse Duration  
 1, 10, ... = Quantity of Pulses

