Micro Commercial Components
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182KD20NX* thru 180LD20NX*

11 to 1000 Volts Varistor 7.0 to 695.0 Joule

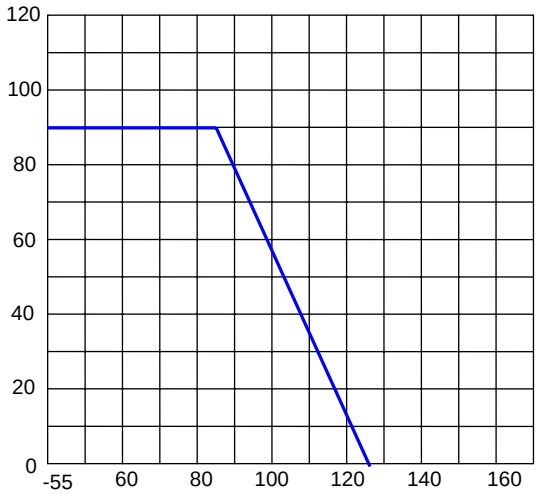
Features

- Radial-Lead Varistor
- Designed to be Operated Continuously Across AC Power Lines
- No Derating Up to 85℃ Ambient
- Available in Tape and Reel or Bulk Pack
- UL Recognized File # E306895(UL1449) and E306942(UL1414)

Maximum Ratings

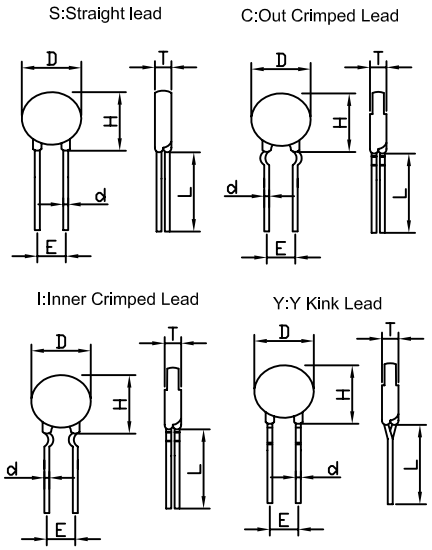
- Operating Ambient Temperature Range: -55℃ to +85℃
- Storage Temperature Range: -55℃ to +125℃
- Temperature Coefficient (αV) of Clamping Voltage (V_c) at Specified Test Current:<0.05%/℃
- Varistor voltage temperature coefficient:

$$\frac{Vb \text{ at } 25℃ - Vb \text{ at } 85℃}{Vb \text{ at } 25℃} \times \frac{1}{60} \times (100/℃)$$



CURRENT, ENERGY AND POWER DERATING CURVE

Note :* 'X' can be S, C, I or Y .
'S' denotes straight lead
'C' denotes out crimped lead
'I' denotes inner crimped lead
'Y' denotes kink lead



L: 20mm Min.

DIMENSIONS				Unit: mm	
Size	D max	H max		D± 0.05	E± 1.0
Lead	All	S	C/I/Y	All	All
05D	7.5	11	13	0.6	5
07D	9	13	15	0.6	5
10D	12.5	18	19.5	0.6	5
				0.8	7.5
14D	16.5	22	23	0.8	7.5
				1	10
20D	23	28	30	0.8	7.5
				1	10

Electrical Characteristics @ 25°C Unless Otherwise Noted

Part Number	Maximum Allowable Voltage		Maximum Energy	Withstanding Surge Current		Rated Wattage	Varistor Voltage	Maximum Clamping Voltage
	ACrms	DC	10/1000us	1 time	2 times	(W)	V1mA	V100A
	(V)	(V)	(J)	(A)			(V)	(V)
182KD20N X	1000	1465	695	6500	4000	1	1800(1620-1980)	2970
112KD20N X	680	895	496				1100(990-1210)	1815
102KD20N X	625	825	448				1000(900-1100)	1650
911KD20N X	550	745	408				910(819-1001)	1500
821KD20N X	510	670	376				820(738-902)	1355
781KD20N X	485	640	368				780(702-858)	1290
751KD20N X	460	615	360				750(675-825)	1240
681KD20N X	420	560	344				680(612-748)	1120
621KD20N X	385	505	328				620(558-682)	1025
561KD20N X	350	460	312				560(504-616)	920
511KD20N X	320	418	296				510(459-561)	842
471KD20N X	300	385	280				470(423-517)	775
431KD20N X	275	350	264				430(387-473)	710
391KD20N X	250	320	240				390(351-429)	650
361KD20N X	230	300	208				360(324-396)	595
331KD20N X	210	275	184				330(297-363)	550
301KD20N X	195	250	168				300(270-330)	505
271KD20N X	175	225	158				270(243-297)	455
241KD20N X	150	200	134				240(216-264)	395
221KD20N X	140	180	124				220(198-242)	360
201KD20N X	130	170	114				200(185-225)	330
181KD20N X	115	150	104				180(162-198)	300
151KD20N X	95	125	88				150(135-165)	250
121KD20N X	75	100	64				120(108-132)	200
101KD20N X	60	85	56				100(90-110)	165
820KD20N X	50	65	44				82(74-90)	135
680KD20N X	40	56	24	2000	1000	0.2	68(61-75)	*135
560KD20N X	35	45	20				56(50-62)	*110
470KD20N X	30	38	17				47(42-52)	*93
390KD20N X	25	31	14				39(35-43)	*77
330KD20N X	20	26	12				33(30-36)	*65
270KD20N X	17	22	10				27(24-30)	*53
220KD20N X	14	18	8				22(20-24)	*43
180LD20N X	10	14	7				18(15-21)	*36

*680K-180L Max. Clamping Voltage testing current 20A

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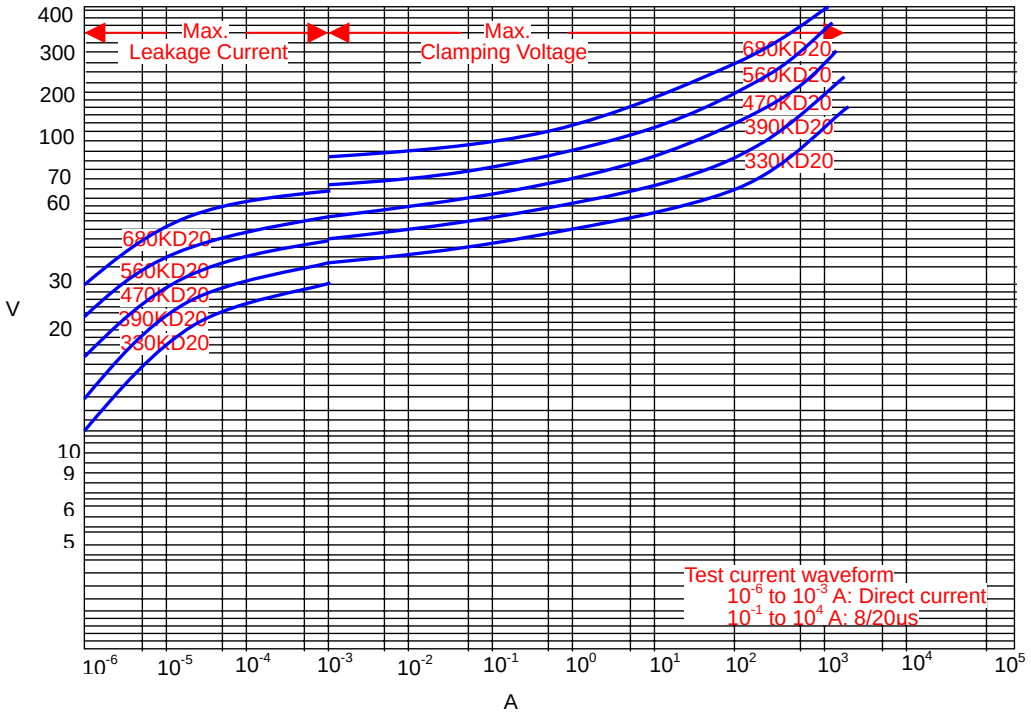
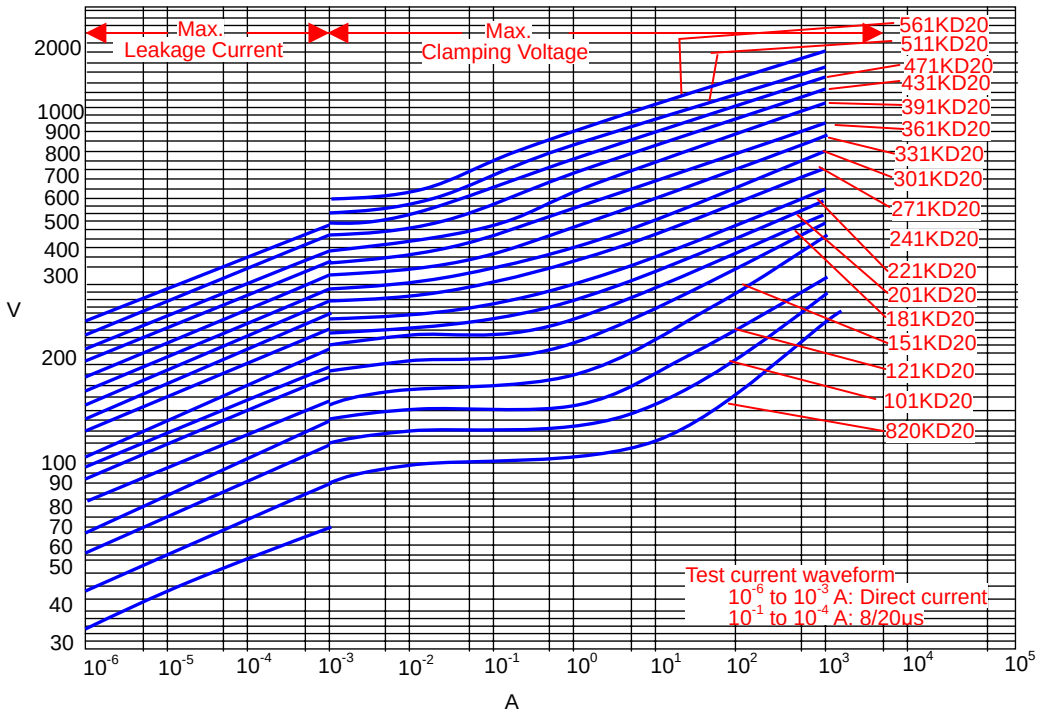
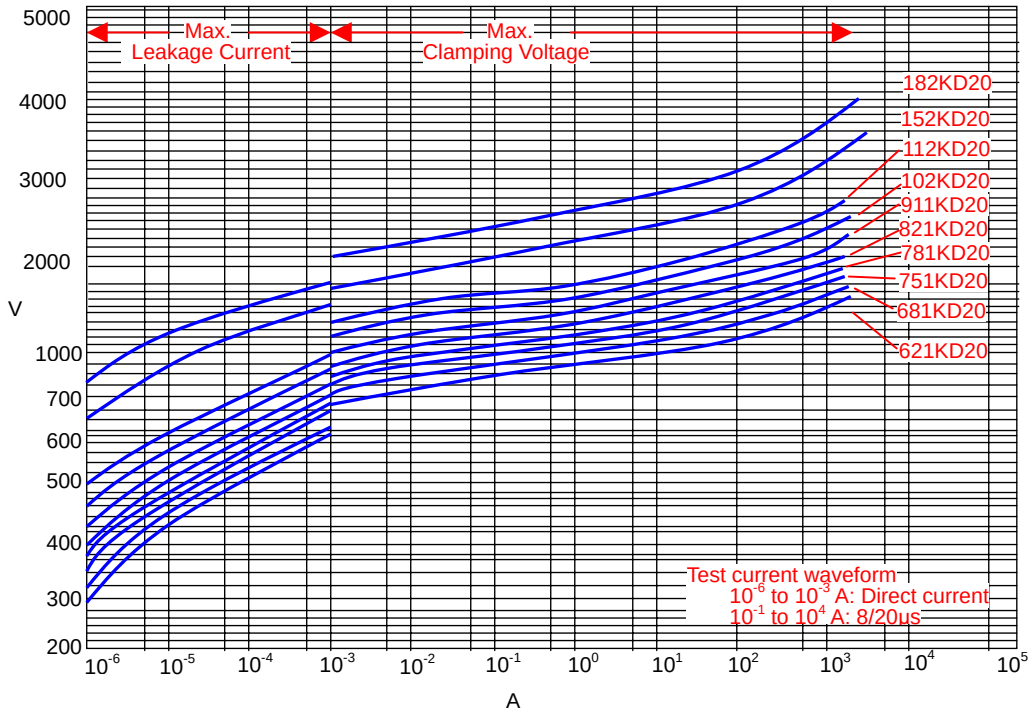
V-I Curve (330K to 680K)



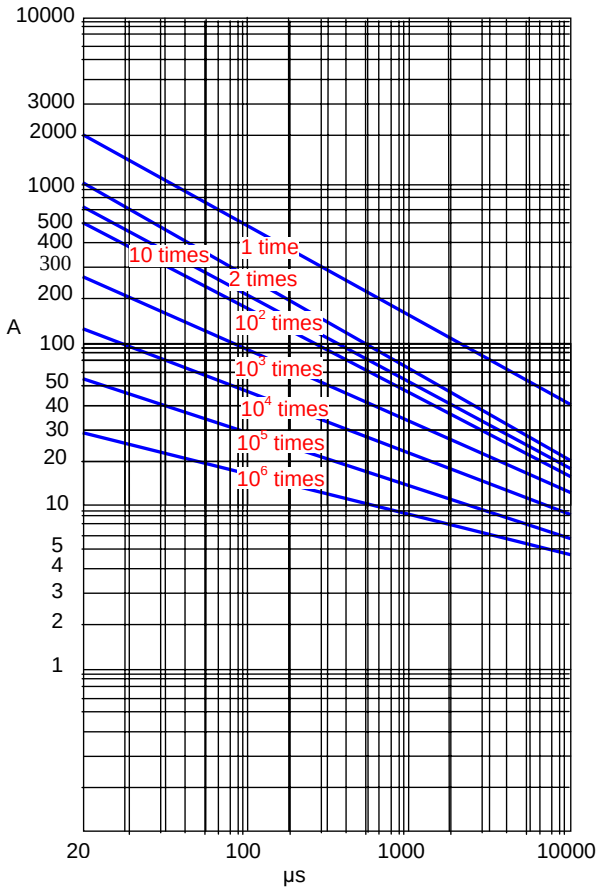
V-I Curve (820K to 561K)



V-I Curve (621K to 182K)

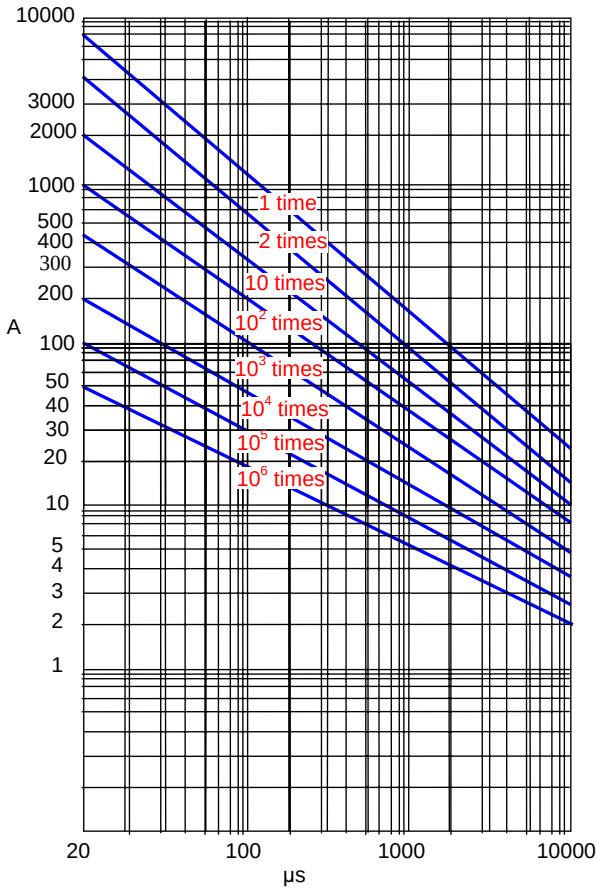


V-I Surge Life Time Ratings
(330K to 680K)



Impulse Current – Amperes
Impulse Width – Micro seconds

V-I Surge Life Time Ratings
(820K to 182K)



Impulse Current – Amperes
Impulse Width – Micro seconds

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Note 2.

T Thickness (max.)

Unit:mm

Part Code	D05	D07	D10	D14	D20
182K			12.6	12.8	13.5
112K			10.5	10.7	11.2
102K			9.9	10.1	10.7
911K			9.4	9.6	10.1
821K		8.3	8.8	9.0	9.5
781K		8.1	8.6	8.8	9.3
751K	7.9	7.9	8.4	8.6	9.1
681K	7.5	7.5	8.0	8.2	8.7
621K	7.2	7.2	7.6	7.8	8.3
561K	6.9	6.9	7.3	7.5	8.0
511K	6.6	6.6	7.0	7.2	7.7
471K	6.4	6.4	6.8	7.0	7.5
431K	6.1	6.1	6.5	6.7	7.2
391K	5.3	5.3	5.7	5.9	6.4
361K	5.1	5.1	5.5	5.7	6.2
331K	4.9	4.9	5.3	5.5	6.0
301K	4.8	4.8	5.2	5.4	5.9
271K	4.6	4.6	5.0	5.2	5.7
241K	4.4	4.4	4.8	5.0	5.5
221K	4.3	4.3	4.7	4.9	5.4
201K	4.2	4.2	4.6	4.8	5.3
181K	4.1	4.1	4.5	4.7	5.2
151K	4.5	4.5	4.9	5.1	5.6
121K	4.1	4.1	4.5	4.6	5.3
101K	3.9	3.9	4.4	4.5	5.1
820K	3.8	3.8	4.3	4.4	4.9
680K	5.5	5.5	6.0	6.1	6.1
560K	5.0	5.0	5.5	5.6	5.6
470K	5.0	5.0	5.5	5.6	5.6
390K	4.7	4.7	5.1	5.2	5.4
330K	4.7	4.7	5.1	5.2	5.4
270K	4.7	4.7	5.1	5.2	5.4
220K	4.5	4.5	4.9	5.0	5.3
180L	4.5	4.5	4.9	5.0	5.2

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