



Micro Commercial Components

Micro Commercial Components
20736 Marilla Street Chatsworth
CA 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

182KD20NX* thru 180LD20NX*

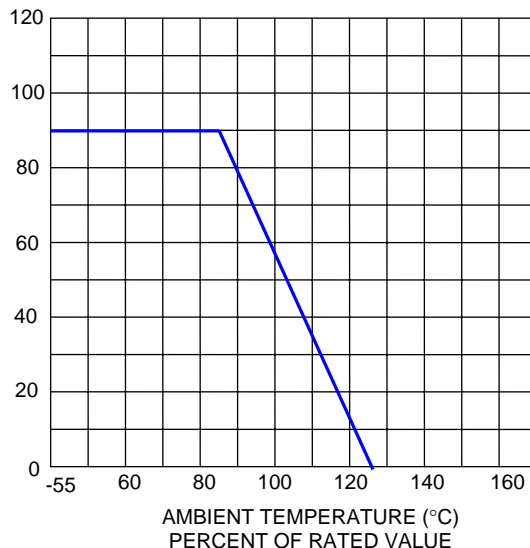
Features

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

Maximum Ratings

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

$$\frac{V_b \text{ at } 25^\circ\text{C} - V_b \text{ at } 85^\circ\text{C}}{V_b \text{ at } 25^\circ\text{C}} \times \frac{1}{60} \times (100/^\circ\text{C})$$



CURRENT, ENERGY AND POWER DERATING
CURVE

Note : * 'X' can be S, C, I or Y .

'S' denotes straight lead

'C' denotes out crimped lead

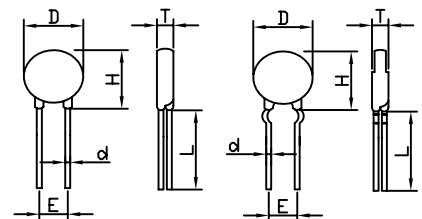
'I' denotes inner crimped lead

'Y' denotes kink lead

**11 to 1000 Volts
Varistor
7.0 to 695.0 Joule**

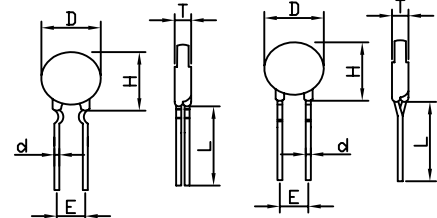
S: Straight lead

C: Out Crimped Lead



I: Inner Crimped Lead

Y: Y Kink Lead



L: 20mm Min.

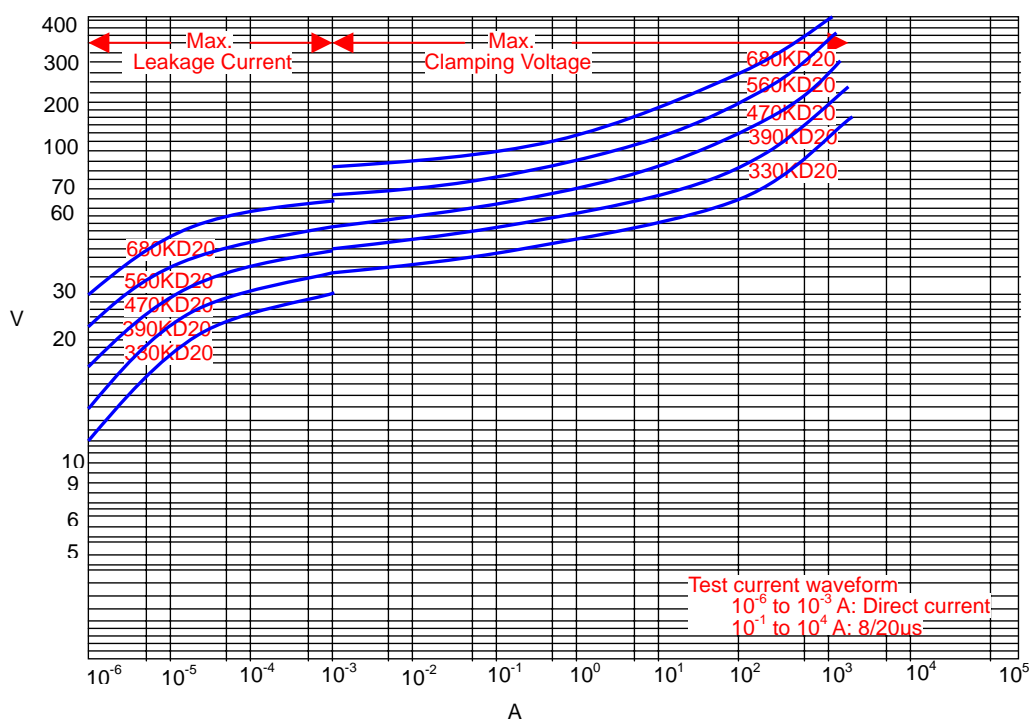
DIMENSIONS				Unit: mm	
Size	D max	H max		D± 0.05	E± 1.0
Lead	All	S	C/I/Y	All	All
05D	7.5	11	13	0.6	5
07D	9	13	15	0.6	5
10D	12.5	18	19.5	0.6	5
				0.8	7.5
14D	16.5	22	23	0.8	7.5
				1	10
20D	23	28	30	0.8	7.5
				1	10

Electrical Characteristics @ 25°C Unless Otherwise Noted

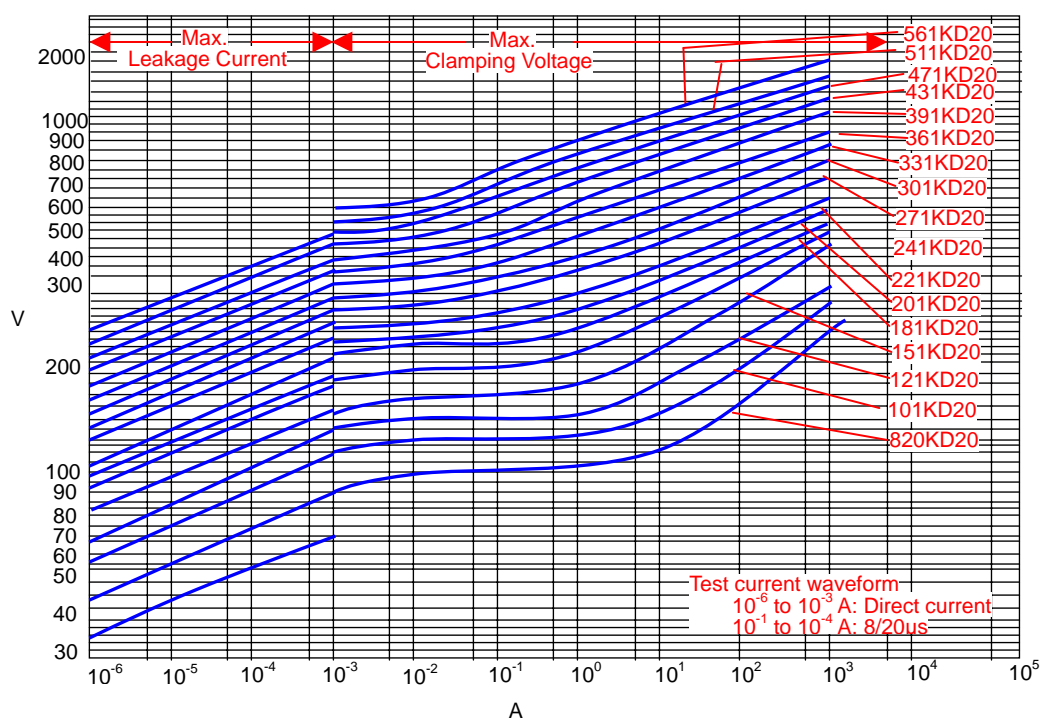
Part Number	Maximum Allowable Voltage		Maximum Energy	Withstanding Surge Current		Rated Wattage	Varistor Voltage	Maximum Clamping Voltage	
	ACrms	DC	10/1000us	1 time	2 times	(W)	V1mA	V100A	
	(V)	(V)	(J)	(A)			(V)	(V)	
182KD20N X	1000	1465	695	6500	4000	1	1800(1620-1980)	2970	
112KD20N X	680	895	496				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

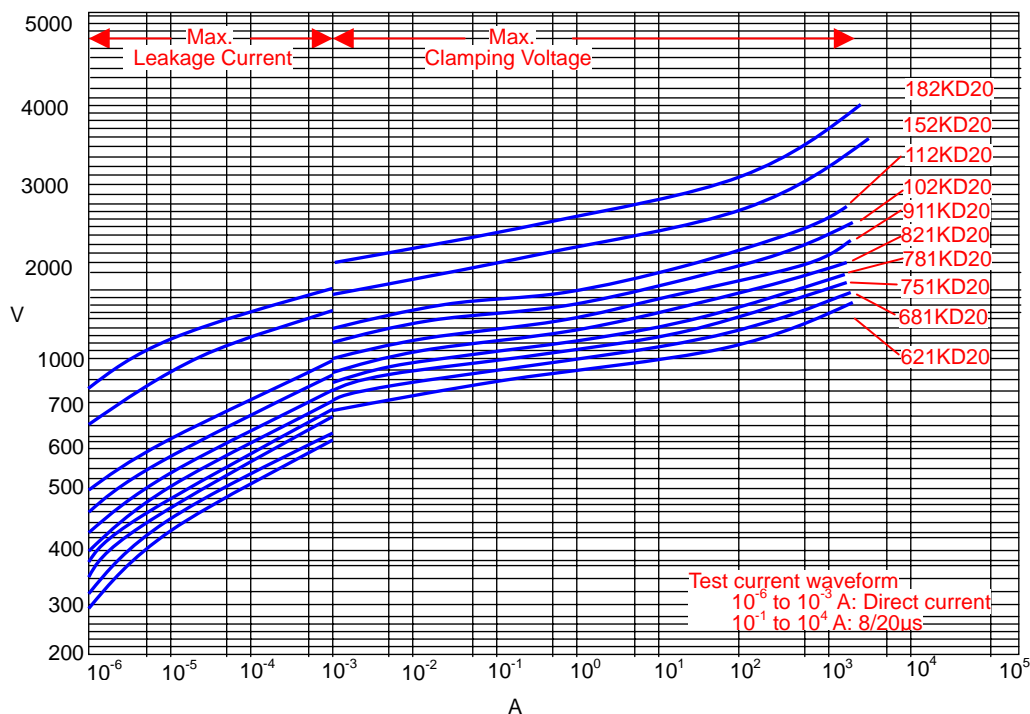
V-I Curve (330K to 680K)



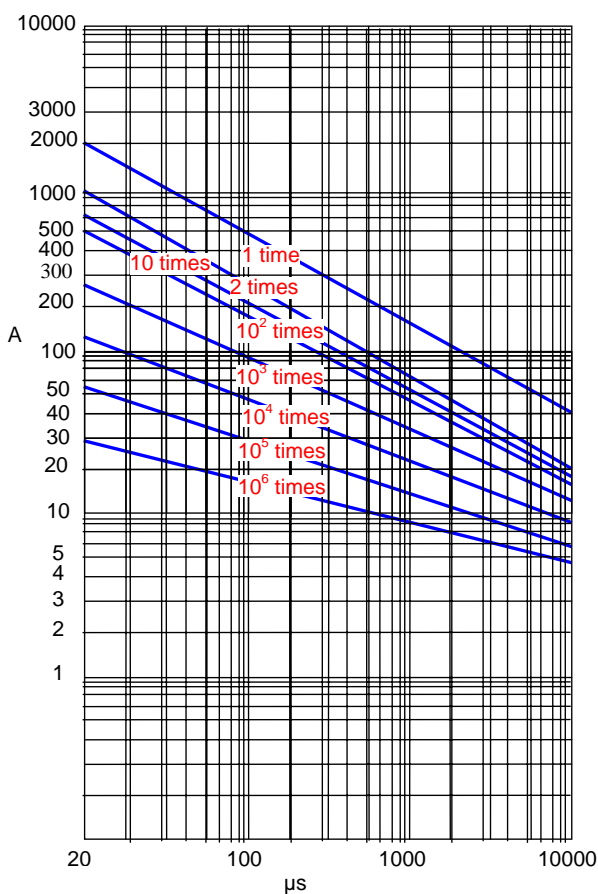
V-I Curve (820K to 561K)



V-I Curve (621K to 182K)

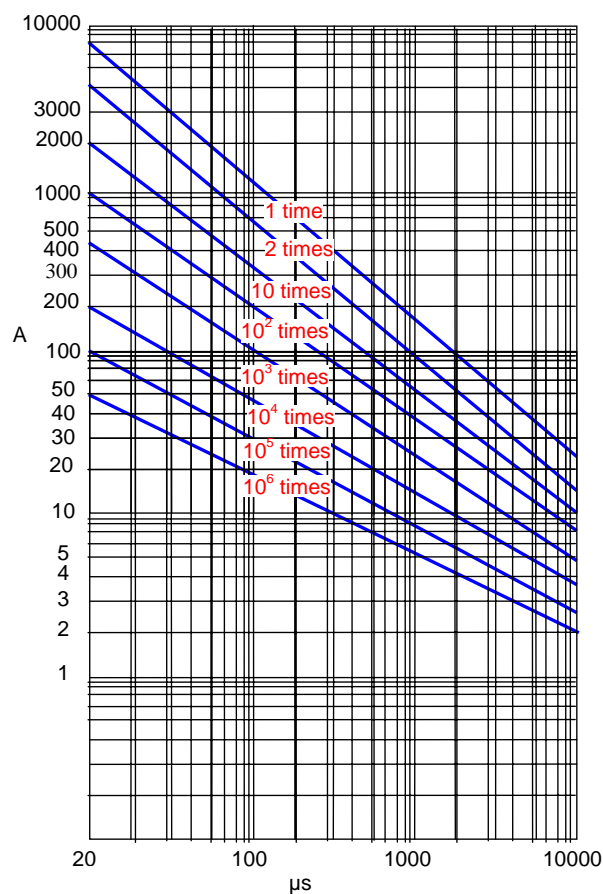


V-I Surge Life Time Ratings
(330K to 680K)



Impulse Current – Amperes
Impulse Width – Micro seconds

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



Impulse Current – Amperes
Impulse Width – Micro seconds

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

IMPORTANT NOTICE

Micro Commercial Components Corp. reserves the right to make changes without further notice to any product herein to make corrections, modifications , enhancements , improvements , or other changes .
Micro Commercial Components Corp. does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights ,nor the rights of others . The user of products in such applications shall assume all risks of such use and will agree to hold *Micro Commercial Components Corp.* and all the companies whose products are represented on our website, harmless against all damages.

APPLICATIONS DISCLAIMER

Products offer by *Micro Commercial Components Corp.* are not intended for use in Medical, Aerospace or Military Applications.