



Micro Commercial Components

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**182KD20JX\***  
 thru  
**180LD20JX\***

## Features

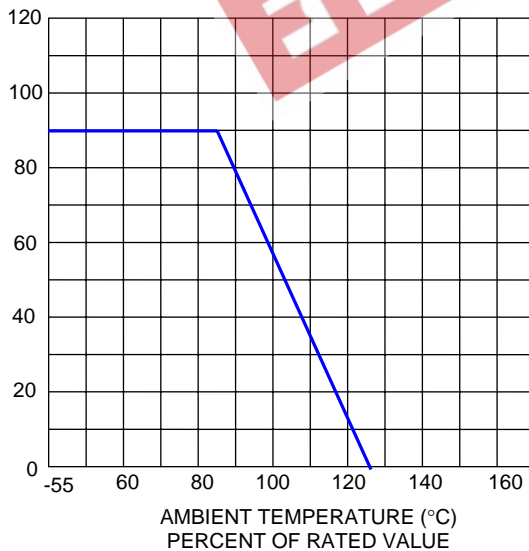
- High Surge, High Energy
- Designed to be Operated Continuously Across AC Power Lines
- No Derating Up to 85°C Ambient
- Available in Tape and Reel or Bulk Pack
- UL Recognized File # E306895(UL1449) and E306942(UL1414)

**11 to 1000 Volts  
 Varistor  
 13 to 1020 Joule**

## Maximum Ratings

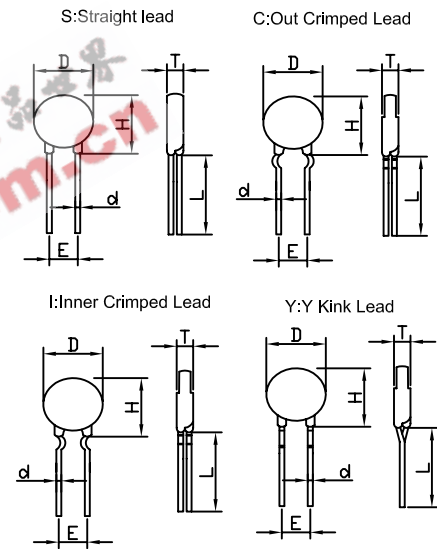
- Operating Ambient Temperature Range: -55°C to +85°C
- Storage Temperature Range: -55°C to +125°C
- Temperature Coefficient ( $\alpha V$ ) of Clamping Voltage ( $V_C$ ) at Specified Test Current: <0.05%/°C
- Varistor voltage temperature coefficient:

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



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



L: 20mm Min.

DIMENSIONS				Unit: mm	
Size	D max	H max		D± 0.05	E± 1.0
Lead	All	S	C//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

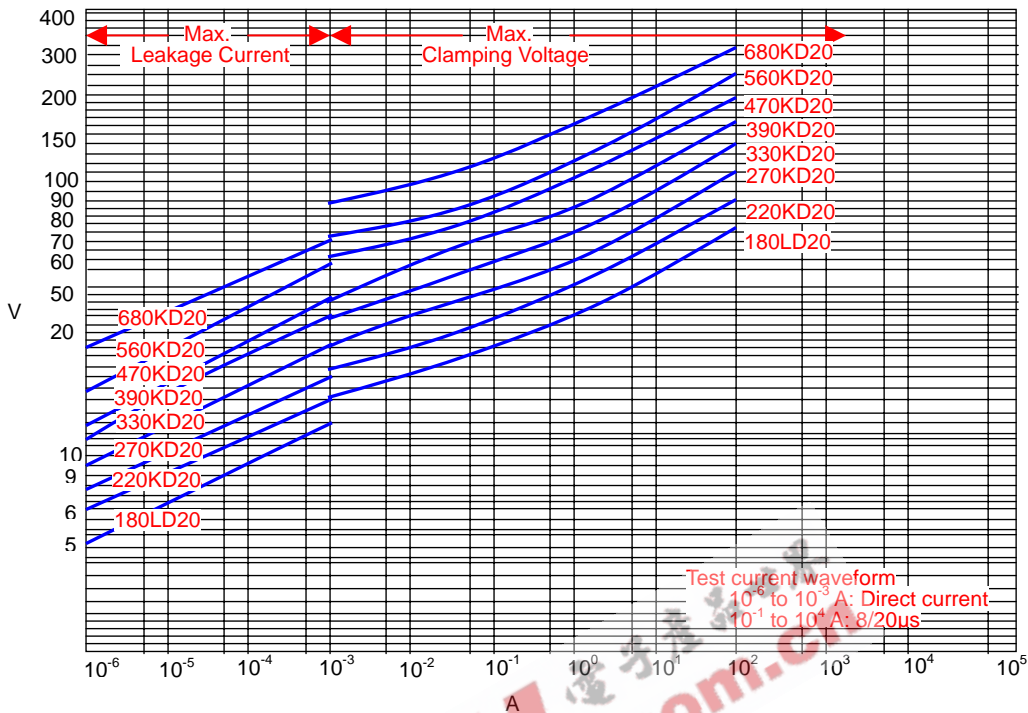
**Electrical Characteristics @ 25°C Unless Otherwise Noted**

Part Number	Maximum Allowable Voltage		Maximum Energy	Withstanding Surge Current 8/20us		Rated Wattage (W)	Varistor Voltage	Maximum Clamping Voltage
	ACrms	DC	10/1000us	1 time	2 times		V1mA	V100A
	(V)	(V)	(J)	(A)		(V)	(V)	
182KD20JX	1000	1465	1020	10000	6500	1	1800(1620-1980)	2970
112KD20JX	680	895	620				1100(990-1210)	1815
102KD20JX	625	825	560				1000(900-1100)	1650
911KD20JX	550	745	510				910(819-1001)	1500
821KD20JX	510	670	460				820(738-902)	1355
781KD20JX	485	640	450				780(702-858)	1290
751KD20JX	460	615	440				750(675-825)	1240
681KD20JX	420	560	430				680(612-748)	1120
621KD20JX	385	505	420				620(558-682)	1025
561KD20JX	350	460	410				560(504-616)	920
511KD20JX	320	418	382				510(459-561)	842
471KD20JX	300	385	350				470(423-517)	775
431KD20JX	275	350	303				430(387-473)	710
391KD20JX	250	320	275				390(351-429)	650
361KD20JX	230	300	255				360(324-396)	595
331KD20JX	210	275	228				330(297-363)	550
301KD20JX	195	250	210				300(270-330)	505
271KD20JX	175	225	190				270(243-297)	455
241KD20JX	150	200	168				240(216-264)	395
221KD20JX	140	180	155				220(198-242)	360
201KD20JX	130	170	140				200(180-220)	330
181KD20JX	115	150	130				180(162-198)	300
151KD20JX	95	125	106				150(135-165)	250
121KD20JX	75	100	88				120(108-132)	200
101KD20JX	60	85	72				100(90-110)	165
820KD20JX	50	65	56				82(74-90)	135
680KD20JX	40	56	49	68(61-75)	*135			
560KD20JX	35	45	41	56(50-62)	*110			
470KD20JX	30	38	34	47(42-52)	*93			
390KD20JX	25	31	28	39(35-43)	*77			
330KD20JX	20	26	24	33(30-36)	*65			
270KD20JX	17	22	19	27(24-30)	*53			
220KD20JX	14	18	16	22(20-24)	*43			
180LD20J X	11	14	13	18(15-21)	*36			

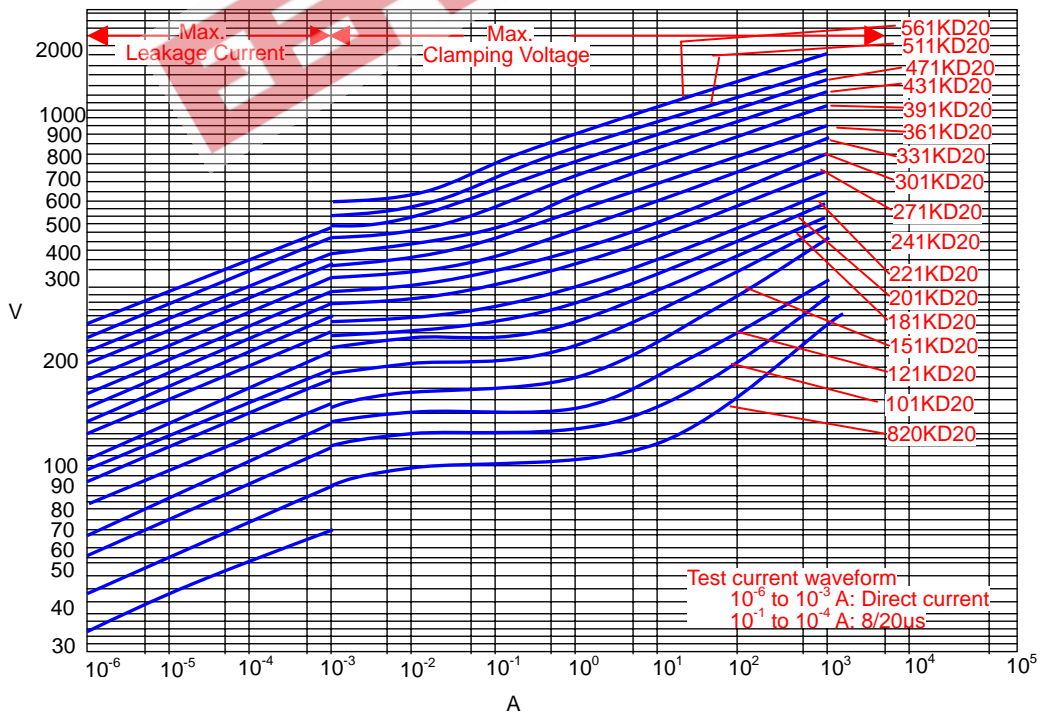
\*680K-180L Max. Clamping Voltage testing current 20A.

182KD20JX thru 180LD20JX

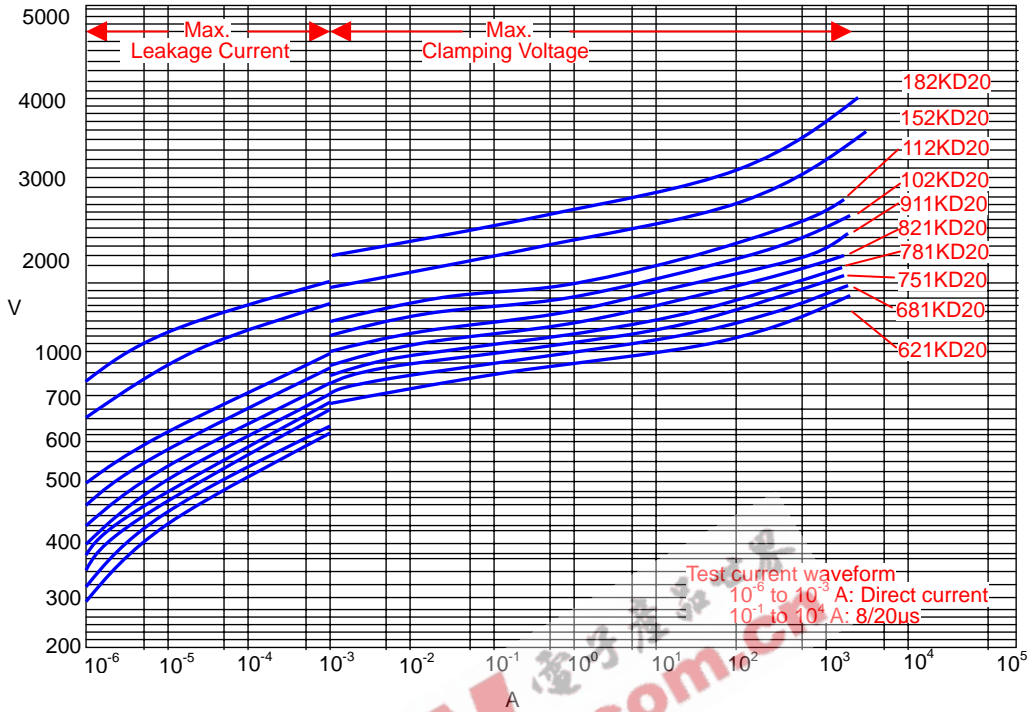
V-I Curve (180L to 680K)



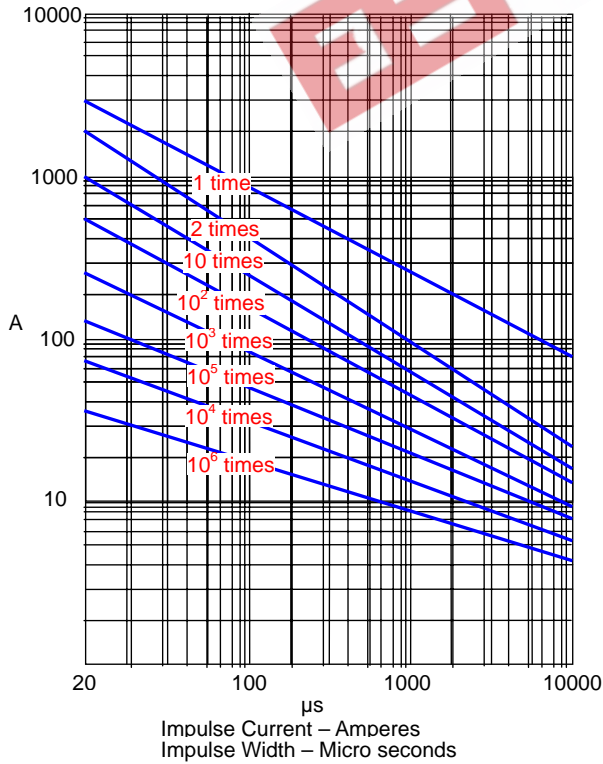
V-I Curve (820K to 561K)



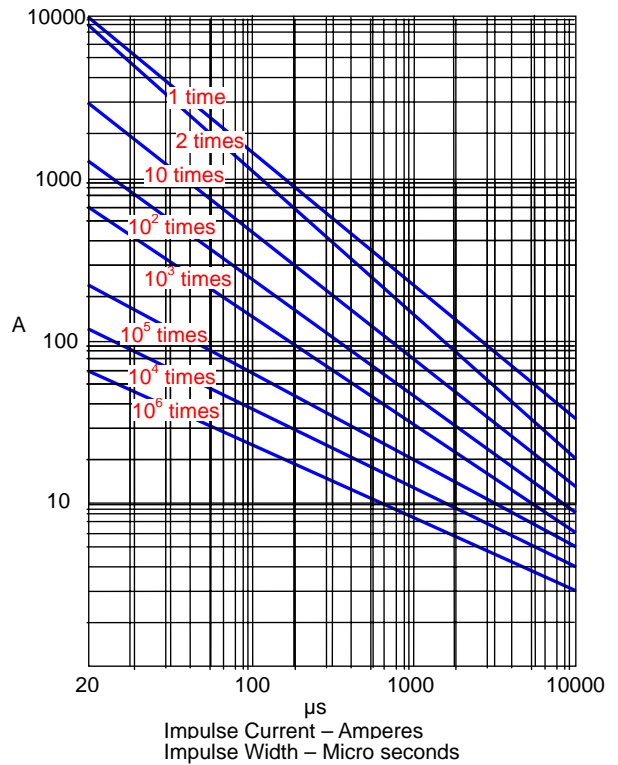
V-I Curve (621K to 182K)



V-I Surge Life Time Ratings (180L to 680K)



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



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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