



Micro Commercial Components

Micro Commercial Components  
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**182KD10JX\*  
thru  
180LD10JX\***

**Features**

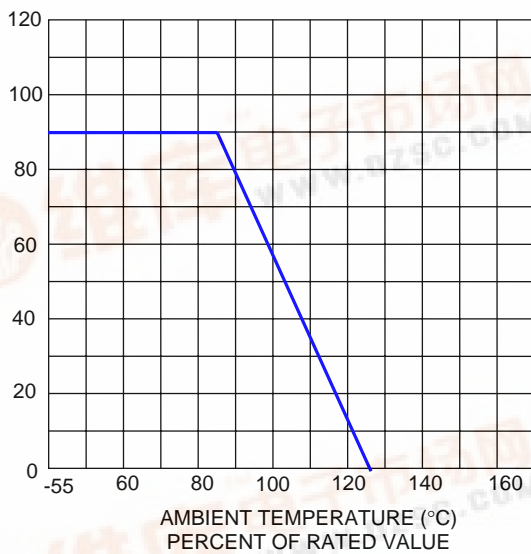
- High Surge, High Energy
- Designed to be Operated Continuously Across AC Power Lines
- No Derating Up to 85°C Ambient
- Available in Tape and Reel or Bulk Pack
- UL Recognized File # E306895(UL1449) and E306942(UL1414)

**11 to 1000 Volts  
Varistor  
2.6 to 247Joule**

**Maximum Ratings**

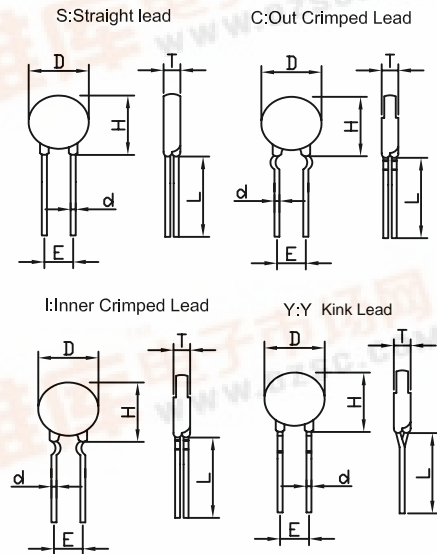
- Operating Ambient Temperature Range: -55°C to +85°C
- Storage Temperature Range: -55°C to +125°C
- Temperature Coefficient ( $\alpha V$ ) of Clamping Voltage ( $V_C$ ) at Specified Test Current: <math>0.05\%/^{\circ}\text{C}</math>
- Varistor voltage temperature coefficient:

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



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/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



182KD10JX thru 180LD10JX

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

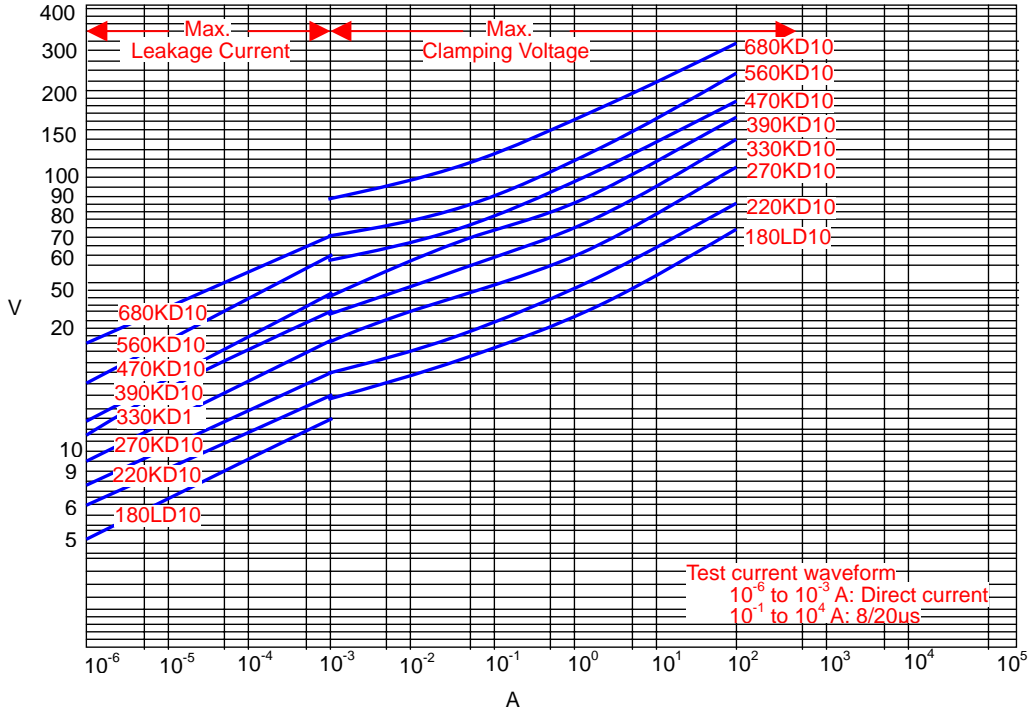
Part Number	Maximum Allowable Voltage		Maximum Energy	Withstanding Surge Current 8/20us		Rated Wattage (W)	Varistor Voltage	Maximum Clamping Voltage
	ACrms	DC	10/1000us	1 time	2 times		V1mA	V25A
	(V)	(V)	(J)	(A)		(V)	(V)	
182KD10JX	1000	1465	247.0	3500	2500	0.4	1800(1620-1980)	2970
112KD10JX	680	895	155.0				1100(990-1210)	1815
102KD10JX	625	825	140.0				1000(900-1100)	1650
911KD10JX	550	745	127.0				910(819-1001)	1500
821KD10JX	510	670	118.0				820(738-902)	1355
781KD10JX	485	640	116.0				780(702-858)	1290
751KD10JX	460	615	115.0				750(675-825)	1240
681KD10JX	420	560	112.0				680(612-748)	1120
621KD10JX	385	505	107.0				620(558-682)	1025
561KD10JX	350	460	102.0				560(504-616)	920
511KD10JX	320	418	92.0				510(459-561)	845
471KD10JX	300	385	85.0				470(423-517)	775
431KD10JX	275	350	80.0				430(387-473)	710
391KD10JX	250	320	70.0				390(351-429)	650
361KD10JX	230	300	65.0				360(324-396)	595
331KD10JX	210	275	58.0				330(297-363)	550
301KD10JX	195	250	52.0				300(270-330)	505
271KD10JX	175	225	49.0				270(243-297)	455
241KD10JX	150	200	42.0				240(216-264)	395
221KD10JX	140	180	39.0				220(198-242)	360
201KD10JX	130	170	35.0				200(180-220)	330
181KD10JX	115	150	32.0				180(162-198)	300
151KD10JX	95	125	25.0				150(135-165)	250
121KD10JX	75	100	22.0				120(108-132)	200
101KD10JX	60	85	18.0	100(90-110)	165			
820KD10JX	50	65	14.0	82(74-90)	135			
680KD10JX	40	56	9.8	1000	500	0.05	68(61-75)	*135
560KD10JX	35	45	8.1				56(50-62)	*110
470KD10JX	30	38	6.8				47(42-52)	*93
390KD10JX	25	31	5.6				39(35-43)	*77
330KD10JX	20	26	4.8				33(30-36)	*65
270KD10JX	17	22	3.9				27(24-30)	*53
220KD10JX	14	18	3.2				22(20-24)	*43
180LD10J X	11	14	2.6				18(15-21)	*36

\*680K-180L Max. Clamping Voltage testing current 5A.

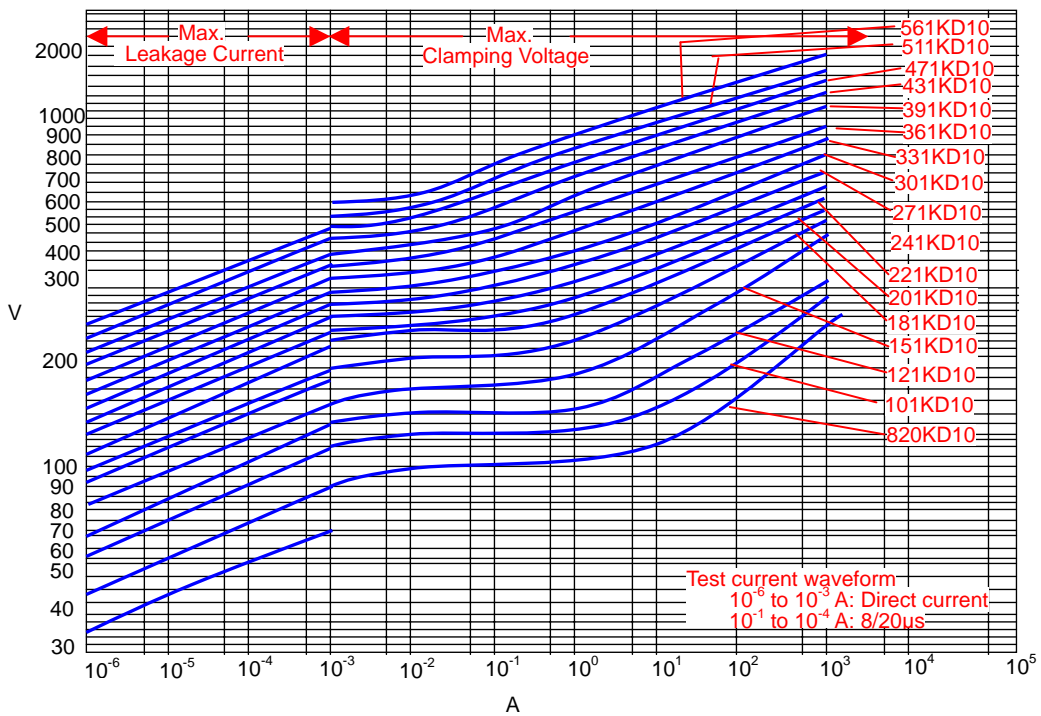
182KD10JX thru 180LD10JX



V-I Curve (180L to 680K)



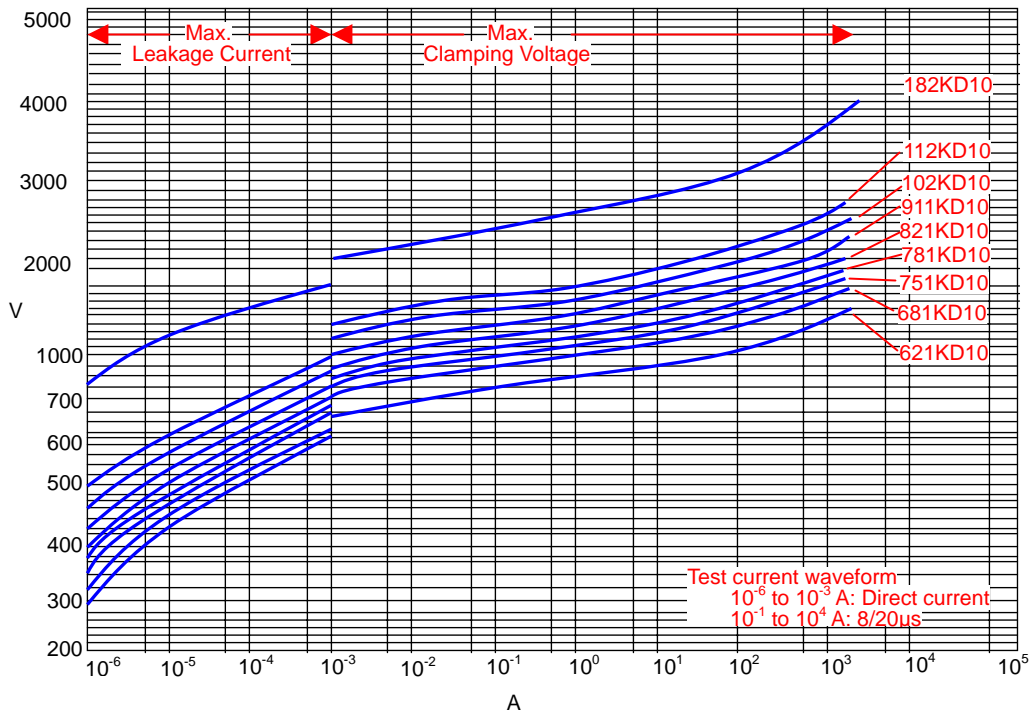
V-I Curve (820K to 561K)



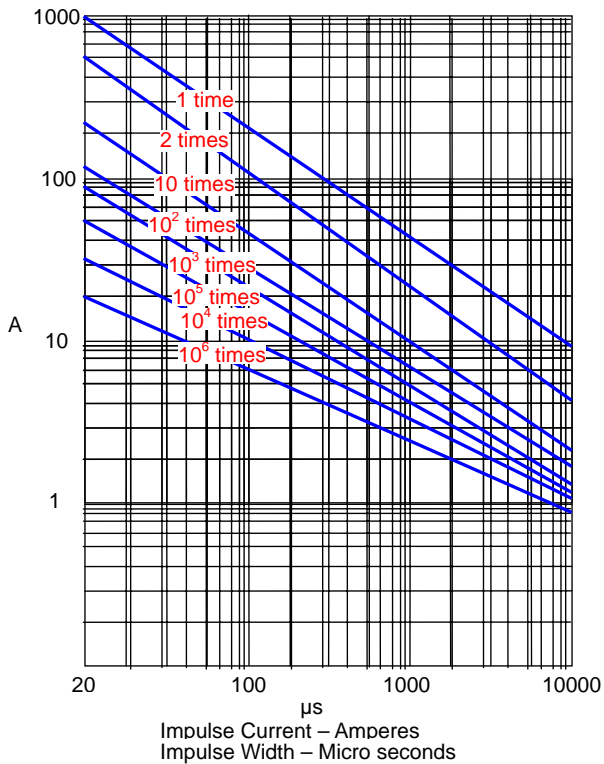
182KD10JX thru 180LD10JX



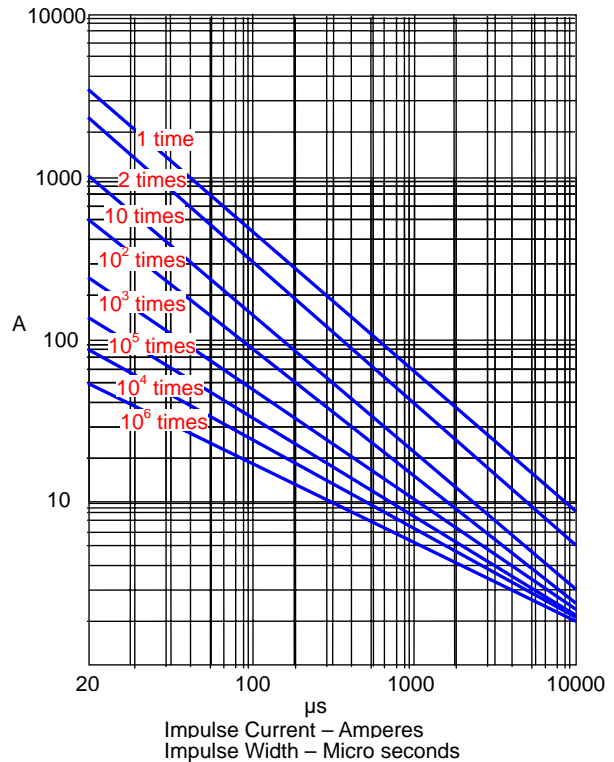
V-I Curve (621K to 182K)



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



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



182KD10JX thru 180LD10JX



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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