



Micro Commercial Components

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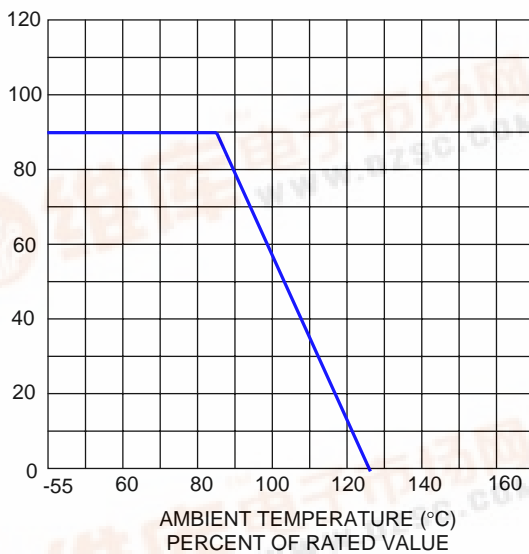
Features

- 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 # E171541

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:

$$\frac{V_b \text{ at } 20^\circ\text{C} - V_b \text{ at } 70^\circ\text{C}}{V_b \text{ at } 20^\circ\text{C}} \times \frac{1}{50} \times 100(\% / ^\circ\text{C})$$



CURRENT, ENERGY AND POWER DERATING CURVE

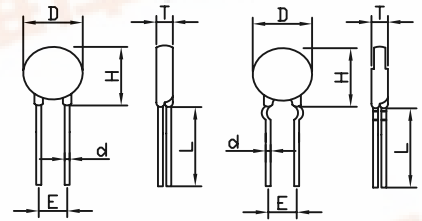
Note : * 'X' can be S, C, I or Y .

- 'S' denotes straight lead
- 'C' denotes out crimped lead
- 'I' denotes inner crimped lead
- 'Y' denotes kink lead

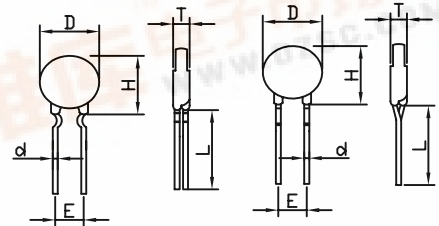
182KD14NX*
thru
120MD14NX*

7 to 1000 Volts
Varistor
4.2 to 336.0 Joule

S: Straight lead C: Out Crimped Lead



I: Inner Crimped Lead Y: Y Kink Lead



L: 20mm min

DIMENSIONS					
Unit:mm					
SIZE	Dmax	Hmax		D +/- 0.05	E +/- 0.8
Lead	ALL	S	C/I/Y	ALL	ALL
05D	7	10	13	0.6	5
07D	9	12	15	0.6	5
10D	13	16	19.5	0.8	7.5
14D	17	20	23	0.8	7.5
20D	23	27	30	0.8	7.5
				1.0	10
25D	28	31	35	1.0	12.5



182KD14NX thru 120MD14NX



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Electrical Characteristics @ 25°C Unless Otherwise Noted

Part Number	Maximum Allowable Voltage		Maximum Energy	Withstanding Surge Current		Rated Wattage (W)	Varistor Voltage	Maximum Clamping Voltage			
	Acrms (V)	DC (V)	10/1000us (J)	1 time	2 times		V1mA (V)	V50A (V)			
				(A)							
182KD14NX	1000	1465	336.0	4500	2500	0.6	1800(1620-1980)	2970			
152KD14NX	750	1300	266.0				1500(1350-1650)	2475			
112KD14NX	680	895	217.0				1100(990-1210)	1815			
102KD14NX	625	825	217.0				1000(900-1100)	1650			
911KD14NX	550	745	217.0				910(819-1001)	1500			
821KD14NX	510	670	203.0				820(738-902)	1355			
781KD14NX	485	640	203.0				780(702-858)	1290			
751KD14NX	460	615	203.0				750(675-825)	1240			
681KD14NX	420	560	168.0				680(612-748)	1120			
621KD14NX	385	505	168.0				620(558-682)	1025			
561KD14NX	350	460	149.8				560(504-616)	920			
511KD14NX	320	415	149.8				510(459-561)	845			
471KD14NX	300	385	149.8				470(423-517)	775			
431KD14NX	275	350	145.6				430(387-473)	710			
391KD14NX	250	320	134.4				390(351-429)	650			
361KD14NX	230	300	123.2				360(324-396)	595			
331KD14NX	210	275	112.0				330(297-363)	550			
301KD14NX	190	250	103.2				300(270-330)	505			
271KD14NX	175	225	93.8				270(243-297)	455			
241KD14NX	150	200	82.6				240(216-264)	395			
221KD14NX	140	180	79.8				220(198-242)	360			
201KD14NX	130	170	79.8				200(185-225)	330			
181KD14NX	115	150	58.8				180(162-198)	300			
151KD14NX	95	125	51.8				150(135-165)	250			
121KD14NX	75	100	40.6				120(108-132)	200			
101KD14NX	60	85	33.6				100(90-110)	165			
820KD14NX	50	65	29.4				82(74-90)	135			
680KD14NX	40	56	23.8				1000	500	0.1	68(61-75)	*135
560KD14NX	35	45	19.6							56(50-62)	*110
470KD14NX	30	38	16.8							47(42-52)	*93
390KD14NX	25	31	13.2	39(35-43)	*77						
330KD14NX	20	26	12.3	33(30-36)	*65						
270KD14NX	17	22	9.7	27(24-30)	*53						
220KD14NX	14	48	7.6	22(20-24)	*43						
180LD14NX	10	14	6.6	18(15-21)	*38						
120MD14NX	7	9	4.2	12(9.6-14.4)	*25						

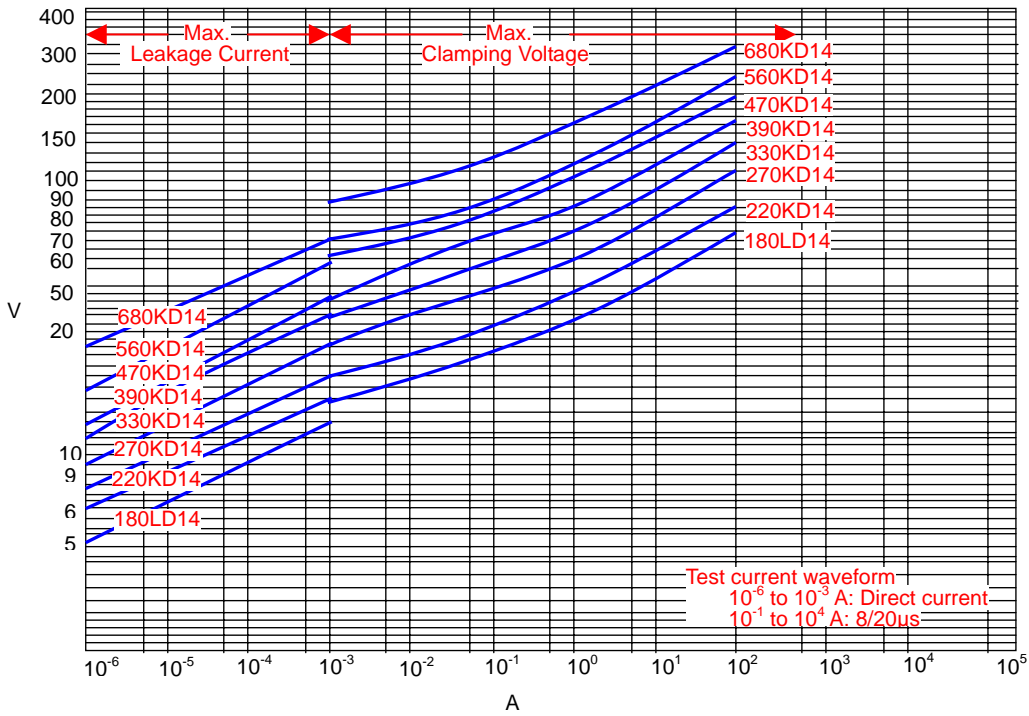
*680K-180L Max. Clamping Voltage testing current 10A

182KD14NX thru 120MD14NX

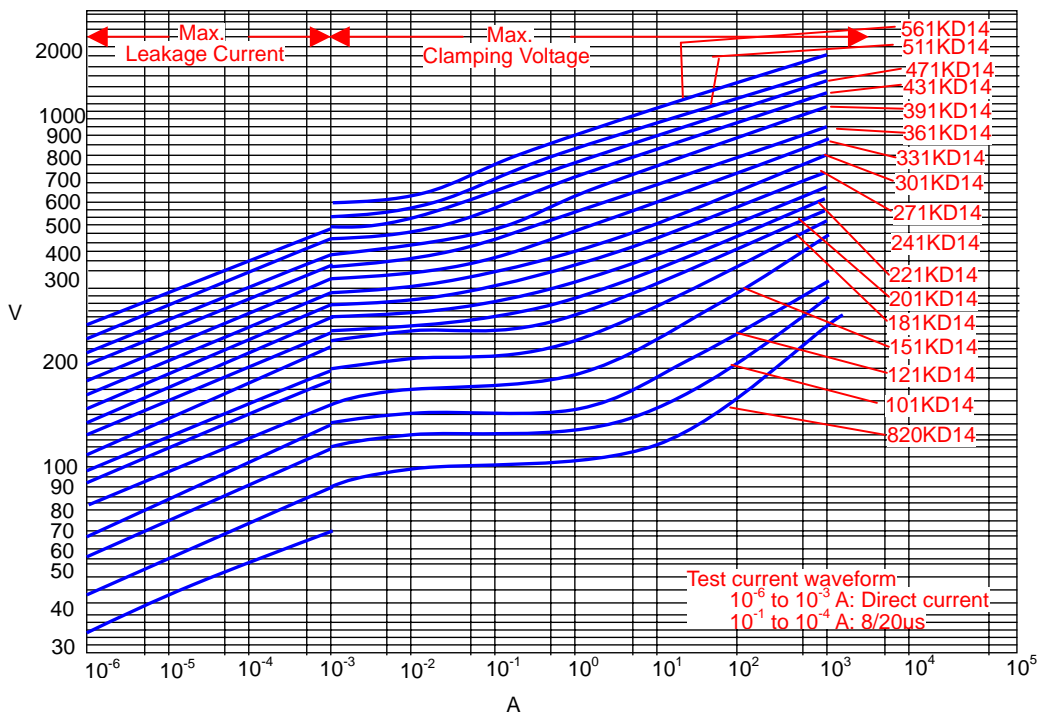


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V-I Curve (180L to 680K)



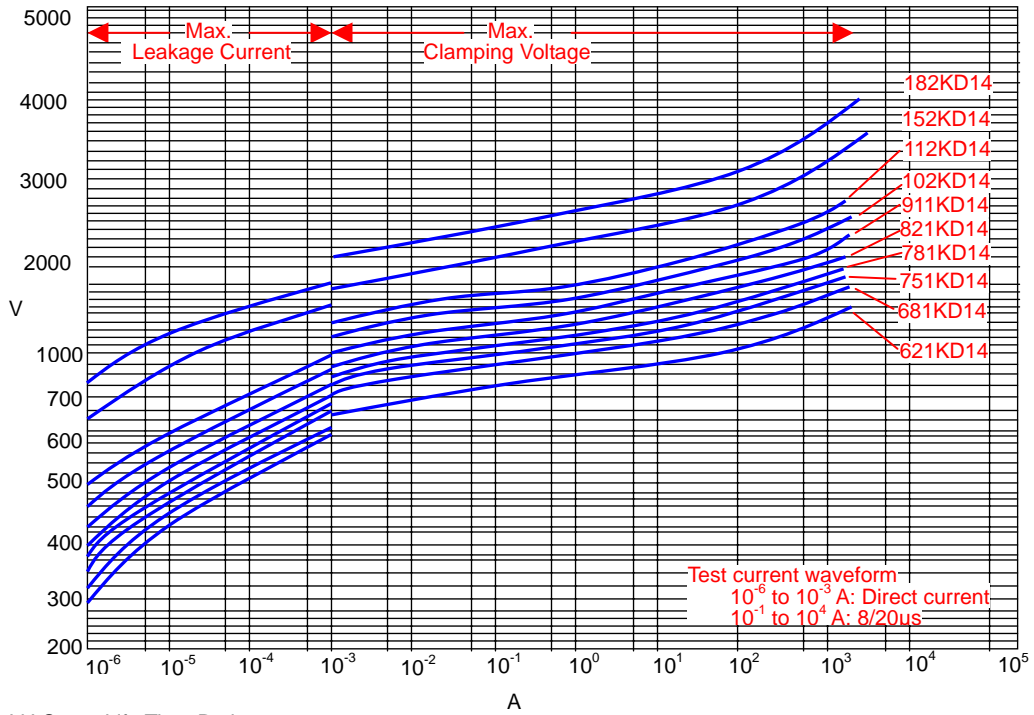
V-I Curve (820K to 561K)



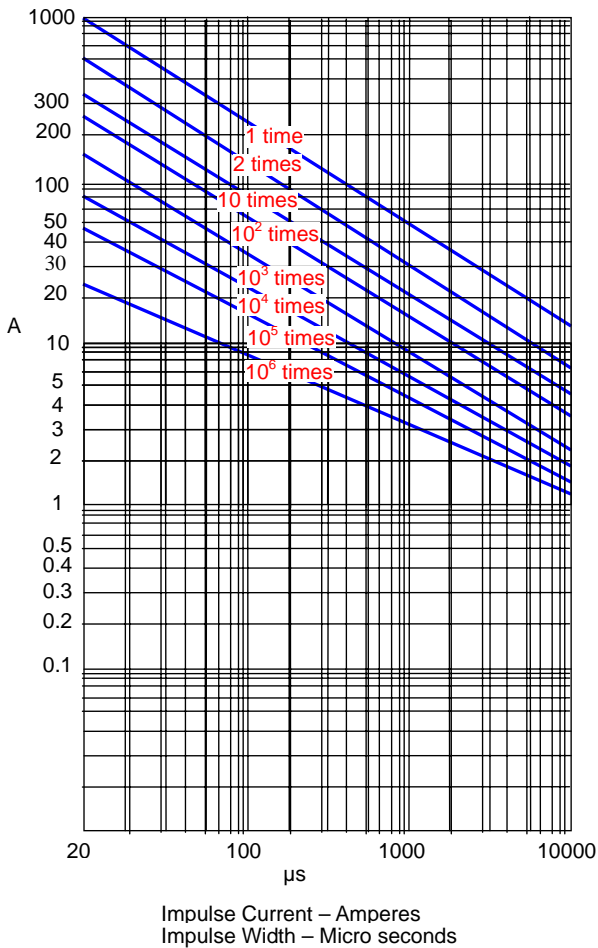
182KD14NX thru 120MD14NX



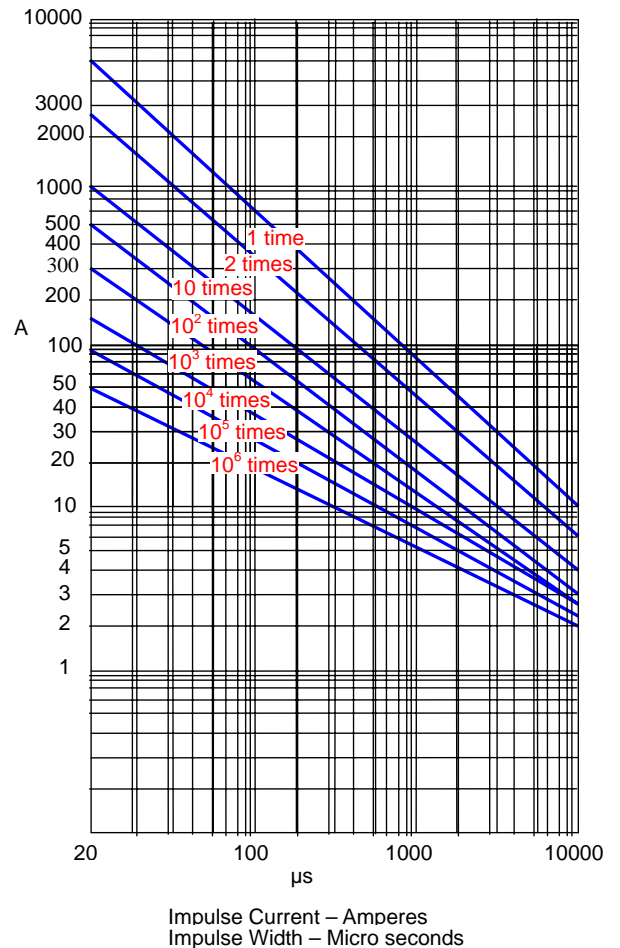
V-I Curve (621K to 182K)



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	D09	D10	D14	D18	D20
182K				12.5	12.5	12.5	15.6
152K				11	11	11	13.2
112K			7.5	8.5	8.5	8.5	10.1
102K			7.3	8.3	8.3	8.3	9.5
911K			7.1	8.1	8.1	8.1	9.0
821K		6.9	6.9	7.9	7.9	7.9	8.5
781K		6.7	6.7	7.7	7.7	7.7	8.4
751K	6.5	6.5	6.5	7.5	7.5	7.5	8.2
681K	6.4	6.4	6.4	7.1	7.1	7.1	7.8
621K	6.4	6.4	6.4	7.1	7.1	7.1	7.5
561K	6.2	6.2	6.2	6.7	6.7	6.7	7.0
511K	5.8	5.8	5.8	6.4	6.4	6.4	6.8
471K	5.6	5.6	5.6	6.1	6.1	6.1	6.6
431K	5.3	5.3	5.3	5.9	5.9	5.9	6.4
391K	5.1	5.1	5.1	5.7	5.7	5.7	6.2
361K	5.0	5.0	5.0	5.5	5.5	5.5	6.2
331K	4.8	4.8	4.8	5.3	5.3	5.3	5.9
301K	4.7	4.7	4.7	5.1	5.1	5.1	5.7
271K	4.5	4.5	4.5	5.0	5.0	5.0	5.6
241K	4.3	4.3	4.3	4.8	4.8	4.8	5.4
221K	4.2	4.2	4.2	4.7	4.7	4.7	5.3
201K	4.1	4.1	4.1	4.5	4.5	4.5	5.0
181K	4.1	4.1	4.1	4.5	4.5		5.0
151K	4.8	4.8	4.4	5.2	5.2		5.6
121K	4.5	4.5	4.1	4.9	4.9		5.3
101K	4.3	4.3	3.9	4.7	4.7		5.1
820K	4.1	4.1	3.8	4.5	4.5		4.9
680K	4.5	5.2	4.5	5.3	5.3		5.8
560K	4.5	5.0	4.4	5.1	5.1		5.7
470K	4.5	4.9	4.2	5.0	5.0		5.6
390K	4.5	4.8	4.0	4.9	4.9		5.5
330K	4.5	4.9	4.5	5.0	5.0		
270K	4.5	4.7	4.2	4.8	4.8		
220K	4.5	4.6	4.0	4.7	4.7		
180L	4.5	4.5	3.8	4.6	4.6		