



Micro Commercial Components

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**182KD14NX\*  
 thru  
 120MD14NX\***

**Features**

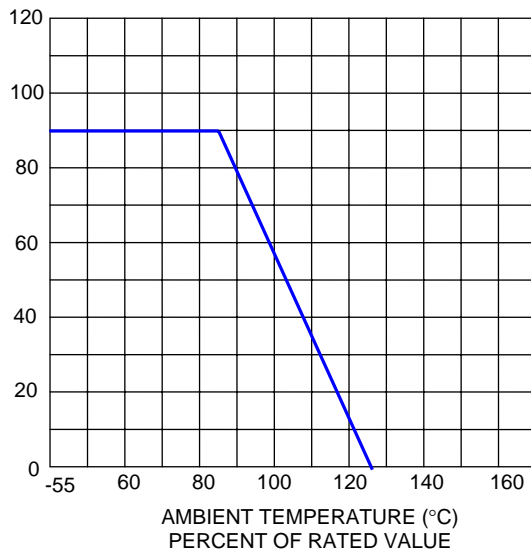
- Radial-Lead Varistor
- Designed to be Operated Continuously Across AC Power Lines
- No Derating Up to 85°C Ambient
- Available in Tape and Reel or Bulk Pack
- UL Recognized File # E171541

**7 to 1000 Volts  
 Varistor  
 4.2 to 336.0 Joule**

**Maximum Ratings**

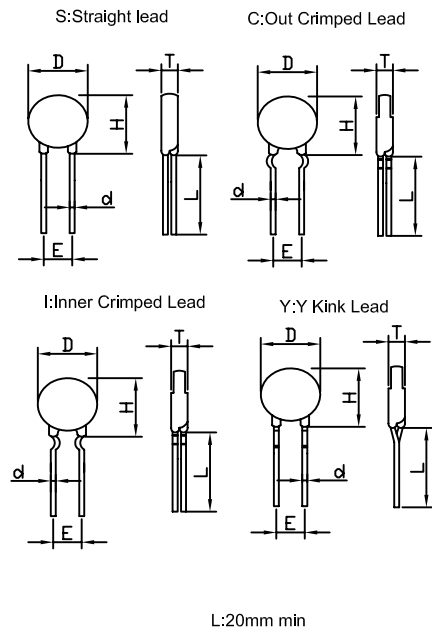
- Operating Ambient Temperature Range: -55°C to +85°C
- Storage Temperature Range: -55°C to +125°C
- Temperature Coefficient ( $\alpha V$ ) of Clamping Voltage ( $V_C$ ) at Specified Test Current: <0.05%/°C
- Varistor voltage temperature coefficient:

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



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



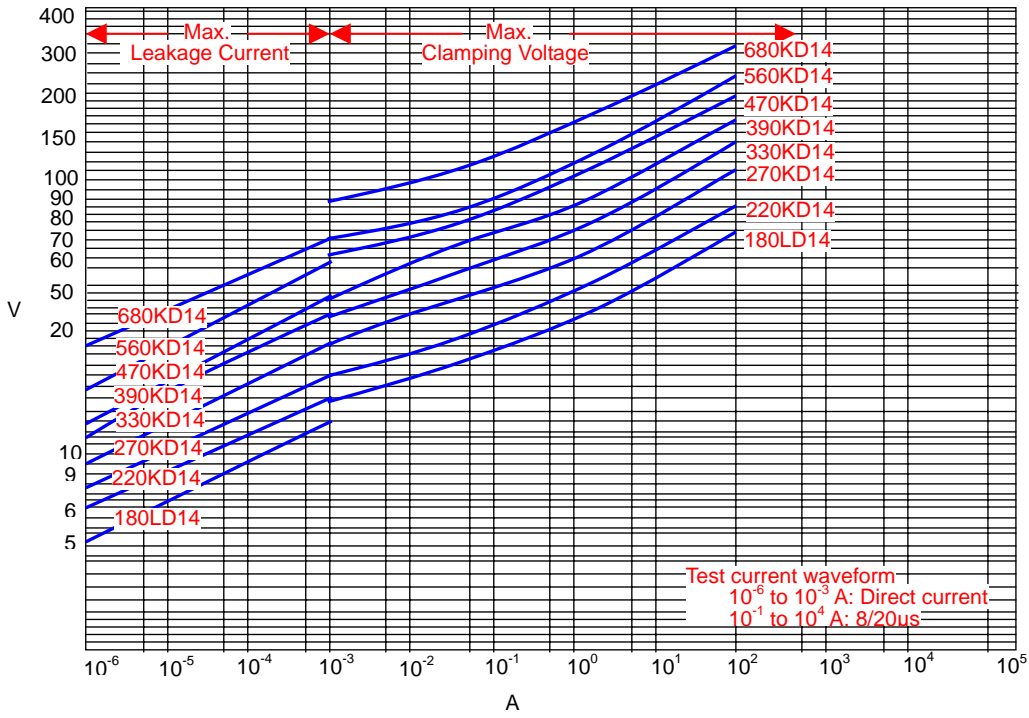
SIZE	DIMENSIONS				Unit:mm	
	Dmax	Hmax		D +/- 0.05	E +/- 0.8	
Lead	ALL	S	C/I/Y	ALL	ALL	
05D	7	10	13	0.6	5	
07D	9	12	15	0.6	5	
10D	13	16	19.5	0.8	7.5	
14D	17	20	23	0.8	7.5	
20D	23	27	30	0.8	7.5	
				1.0	10	
25D	28	31	35	1.0	12.5	

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

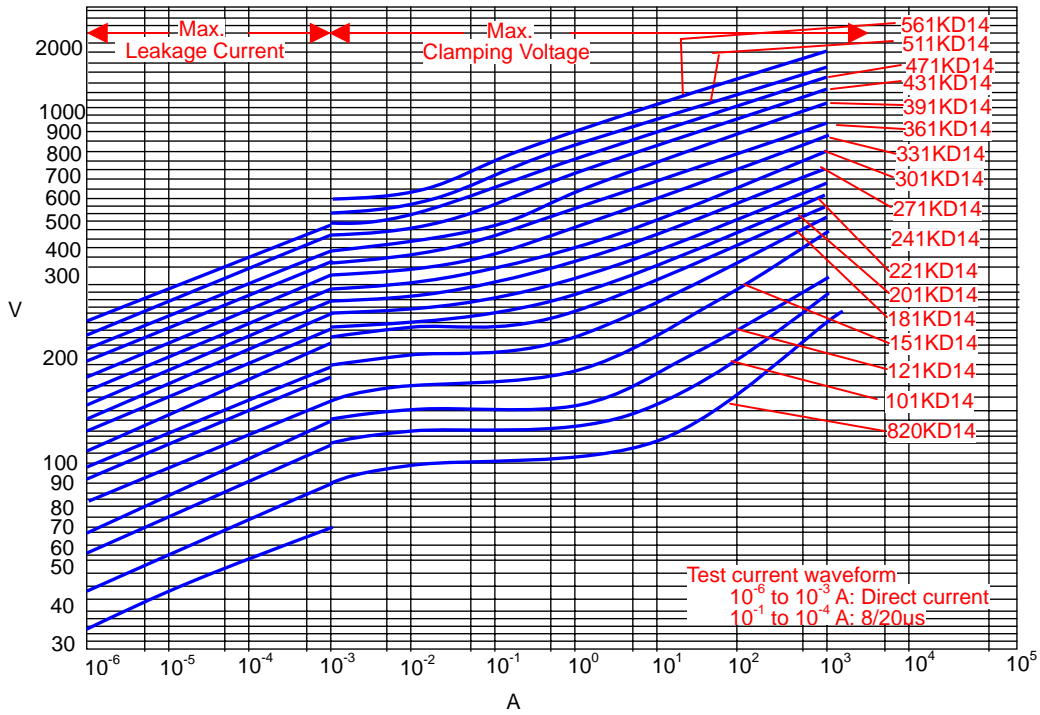
Part Number	Maximum Allowable Voltage		Maximum Energy	Withstanding Surge Current		Rated Wattage (W)	Varistor Voltage	Maximum Clamping Voltage
	Acrms (V)	DC (V)	10/1000us (J)	1 time	2 times		V1mA (V)	V50A (V)
				(A)				
182KD14NX	1000	1465	336.0	4500	2500	0.6	1800(1620-1980)	2970
152KD14NX	750	1300	266.0				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				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

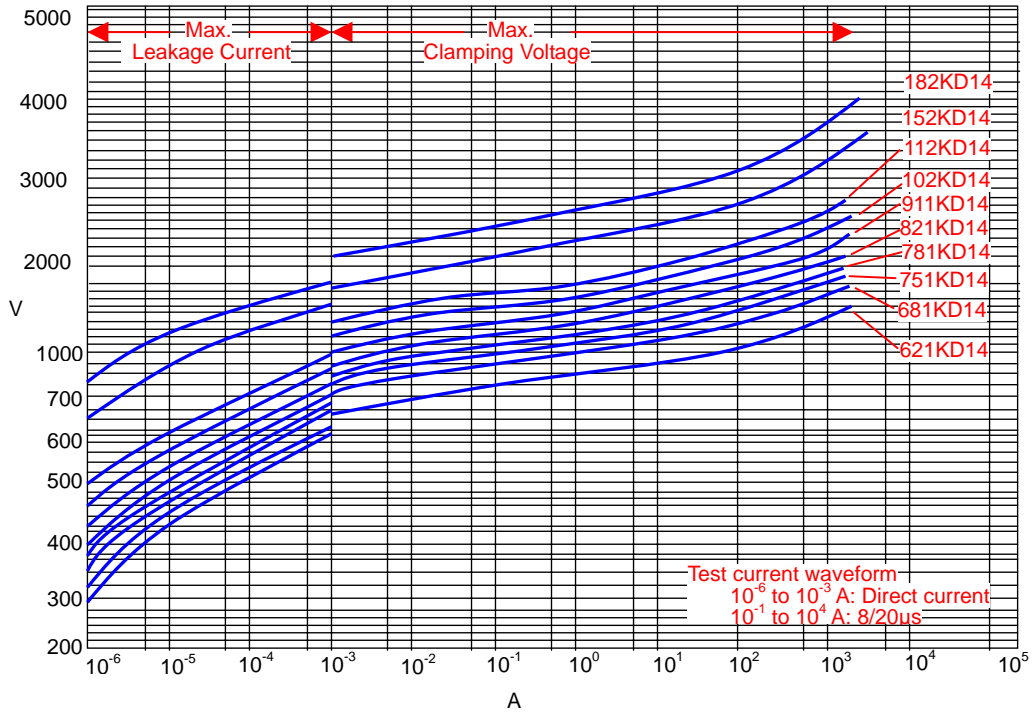
V-I Curve (180L to 680K)



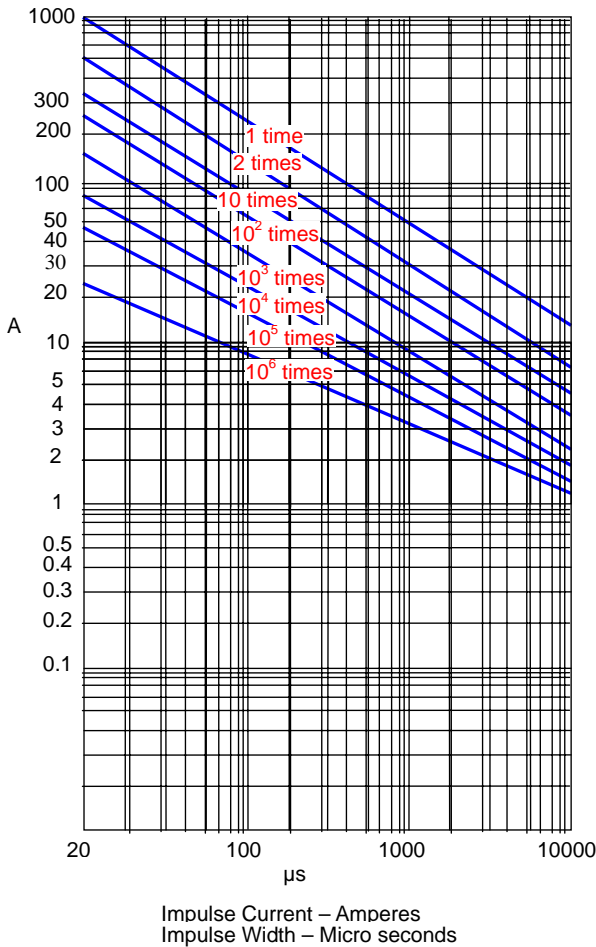
V-I Curve (820K to 561K)



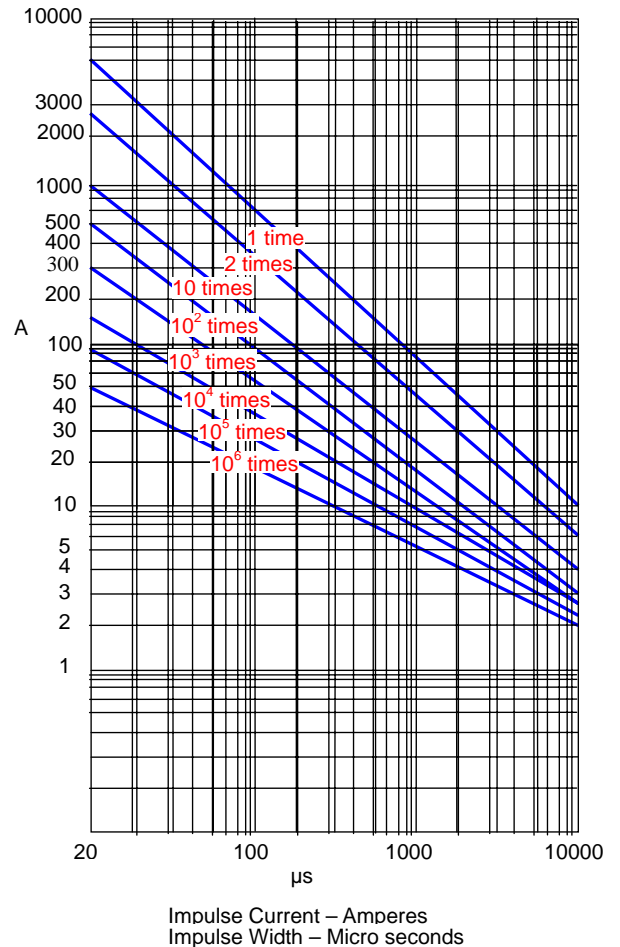
V-I Curve (621K to 182K)



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	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		