



Micro Commercial Components

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751KD05NX* thru 8R0MD05NX*

Features

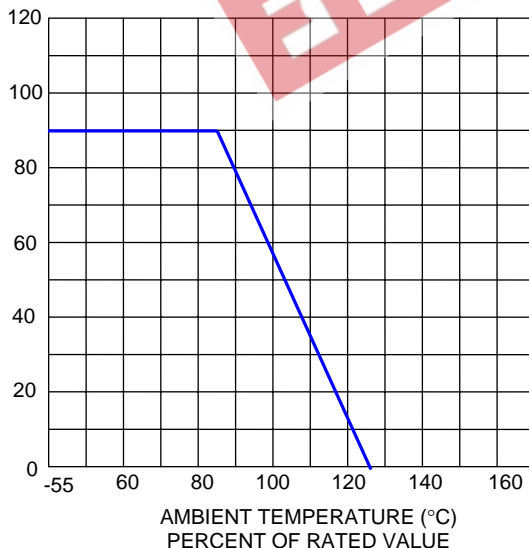
- Radial-Lead Varistor
- Designed to be Operated Continuously Across AC Power Lines
- No Derating Up to 85°C Ambient
- Available in Tape and Reel or Bulk Pack
- UL Recognized File # E306895(UL1449) and E306942(UL1414)

**4 to 460 Volts
 Varistor
 0.20 to 22.5 Joule**

Maximum Ratings

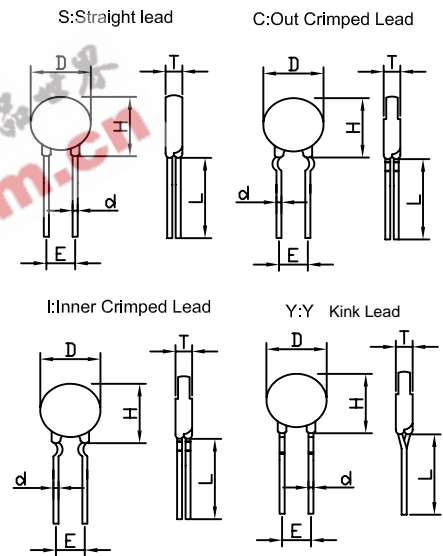
- Operating Ambient Temperature Range: -55°C to +85°C
- Storage Temperature Range: -55°C to +125°C
- Temperature Coefficient (αV) of Clamping Voltage (V_C) at Specified Test Current: <0.05%/°C
- Varistor voltage temperature coefficient:

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



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



L: 20mm Min.

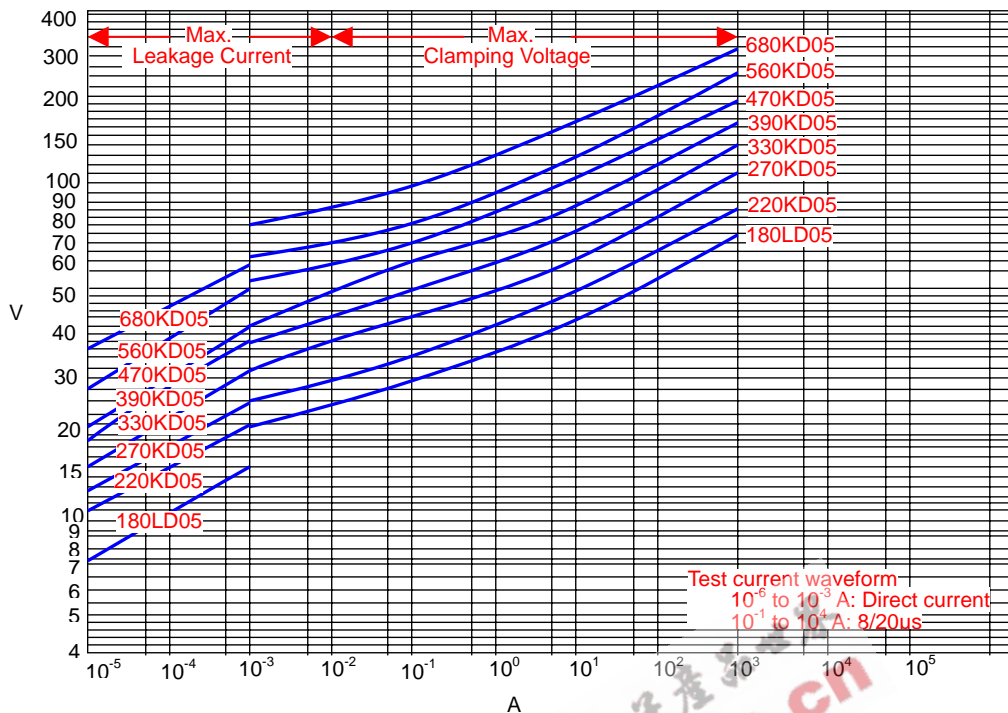
DIMENSIONS				Unit: mm	
Size	D max	H max		D± 0.05	E± 1.0
Lead	All	S	C/I/Y	All	All
05D	7.5	11	13	0.6	5
07D	9	13	15	0.6	5
10D	12.5	18	19.5	0.6	5
				0.8	7.5
14D	16.5	22	23	0.8	7.5
				1	10
20D	23	28	30	0.8	7.5
				1	10

Electrical Characteristics @ 25°C Unless Otherwise Noted

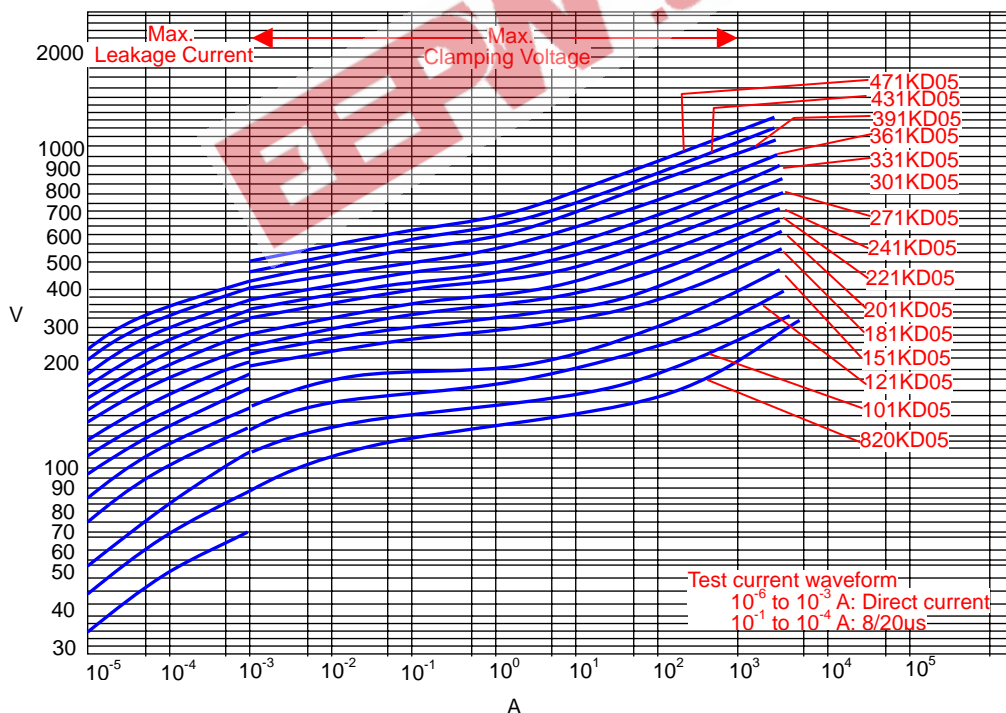
Part Number	Maximum Allowable Voltage		Maximum Energy 10/1000us	Withstanding Surge Current		Rated Wattage (W)	Varistor Voltage V1mA (V)	Maximum Clamping Voltage V5A (V)
	ACrms	DC		1 time	2 times			
	(V)	(V)	(J)	(A)				
751KD05NX	460	615	22.5	400	200	0.1	750(675-825)	1290
681KD05NX	420	560	21.5				680(612-748)	1150
621KD05NX	385	505	20.5				620(558-682)	1050
561KD05NX	350	460	19.5				560(504-616)	940
511KD05NX	320	418	18.5				510(459-561)	880
471KD05NX	300	385	17.5				470(423-517)	810
431KD05NX	275	350	16.5				430(387-473)	745
391KD05NX	250	320	15.0				390(351-429)	675
361KD05NX	230	300	13.0				360(324-396)	620
331KD05NX	210	275	11.5				330(297-363)	575
301KD05NX	195	250	10.5				300(270-330)	525
271KD05NX	175	225	9.9				270(243-297)	475
241KD05NX	150	200	8.4				240(216-264)	415
221KD05NX	140	180	7.8				220(198-242)	380
201KD05NX	130	170	7.1				200(185-225)	355
181KD05NX	115	150	6.5				180(162-198)	320
151KD05NX	95	125	5.5				150(135-165)	260
121KD05NX	75	100	4.0				120(108-132)	210
101KD05NX	60	85	3.5				100(90-110)	175
820KD05NX	50	65	2.8				82(74-90)	145
680KD05NX	40	56	2.1	100	50	0.01	68(61-75)	*150
560KD05NX	35	45	1.8				56(50-62)	*123
470KD05NX	30	38	1.5				47(42-52)	*104
390KD05NX	25	31	1.2				39(35-43)	*86
330KD05NX	20	26	1.1				33(30-36)	*73
270KD05NX	17	22	0.9				27(24-30)	*60
220KD05NX	14	18	0.7				22(20-24)	*48
180LD05NX	11	14	0.6				18(15-21)	*40
120MD05NX	6	8	0.3	50	25	0.01	12(9.6-14.4)	*33
8R0MD05NX	4	5.5	0.2				8(6.4-9.6)	*24

*680K-8R0M Max. Clamping Voltage testing current 1A

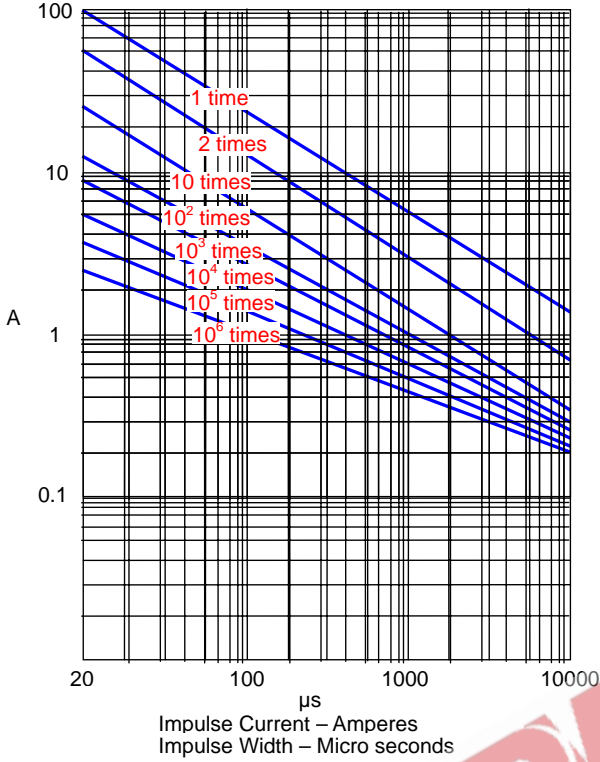
V-I Curve (180L to 680K)



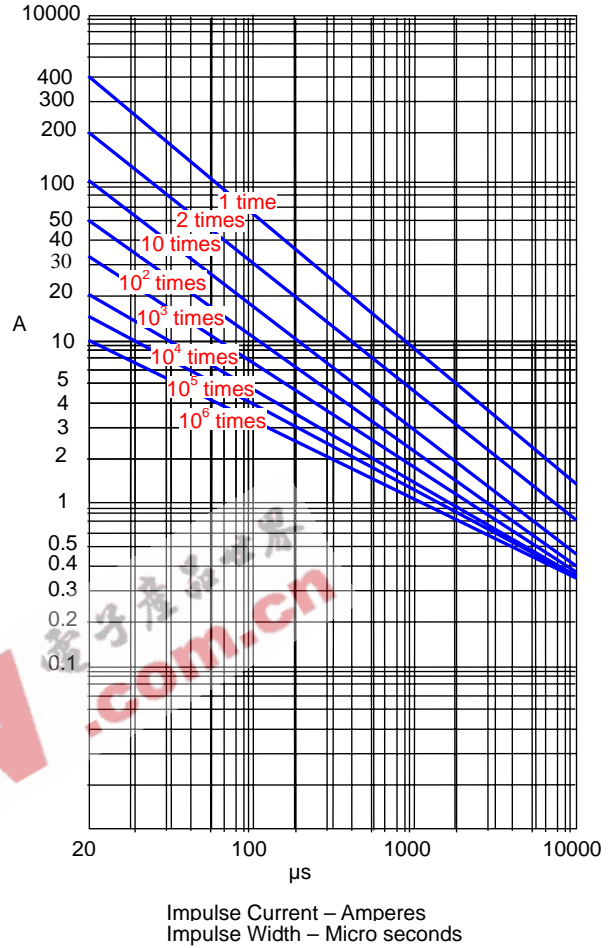
V-I Curve (820K to 471K)



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



V-I Surge Life Time Ratings
(820K to 751K)



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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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