



Micro Commercial Components
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**821KD07
thru
8R0MD07**

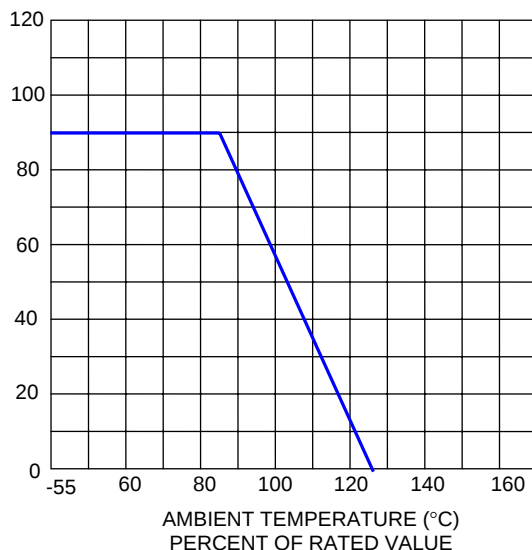
Features

- 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

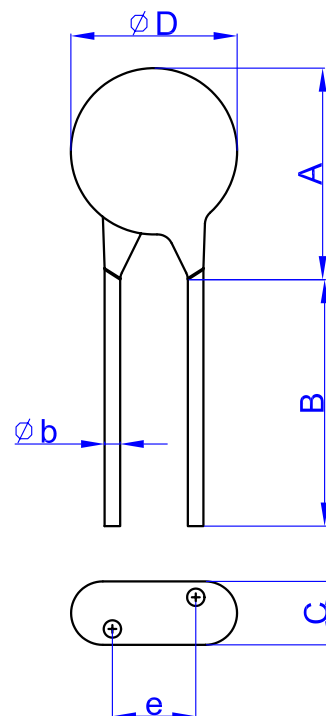
- Operating Ambient Temperature Range: -55°C to +85°C
- Storage Temperature Range: -55°C to +125°C
- Temperature Coefficient (αV) of Clamping Voltage (V_C) at Specified Test Current: <0.05%/°C
- Varistor voltage temperature coefficient:

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



CURRENT, ENERGY AND POWER DERATING
CURVE

**5 to 510 Volts
Varistor
0.8 to 67.2 Joule**



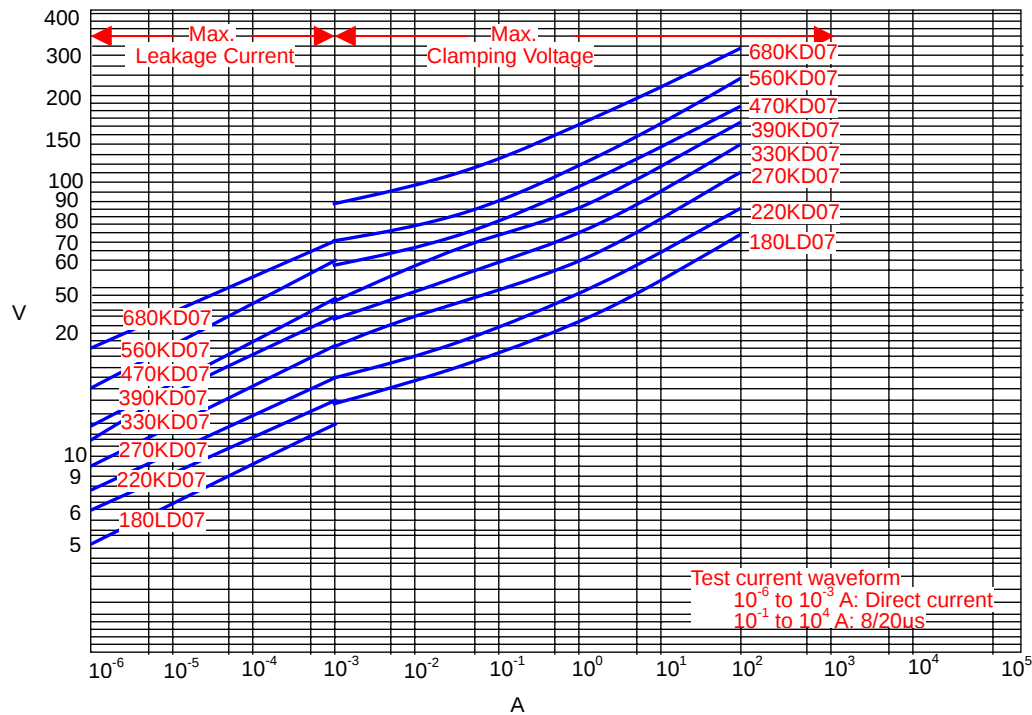
DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
D	---	.354	---	9.00	
A	---	.472	---	12.00	
d	.021	.026	0.55	0.65	
e	.165	.228	4.20	5.80	
B	.787	---	20.00	---	
C	See note 2				

Electrical Characteristics @ 25°C Unless Otherwise Noted

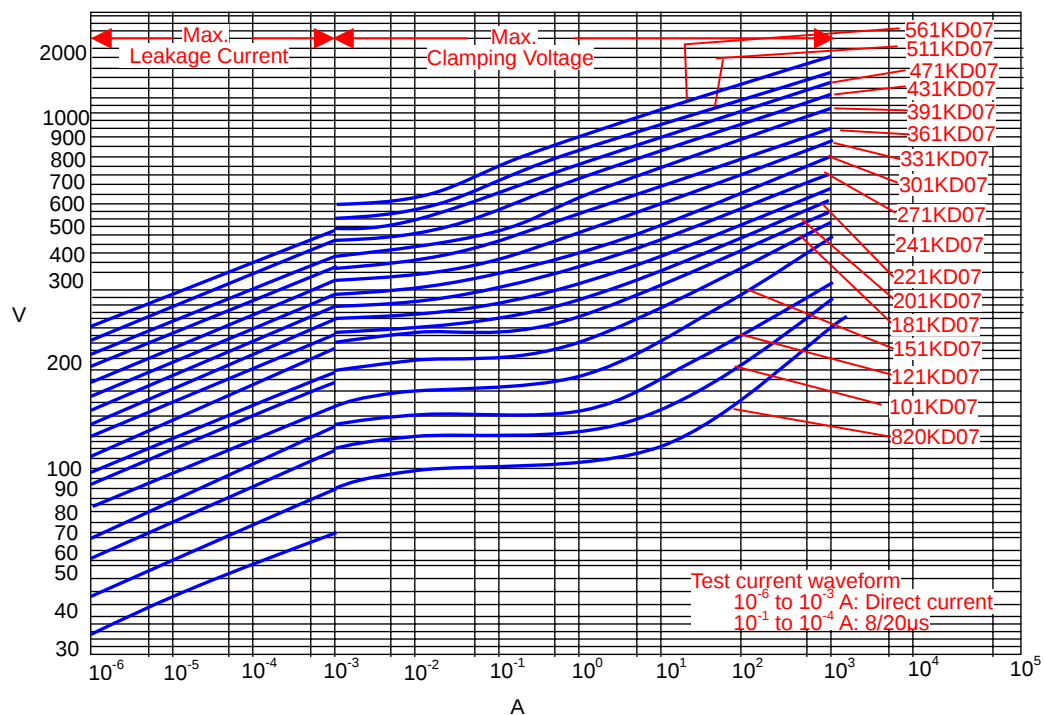
Part Number	Maximum Allowable Voltage		Maximum Energy	Withstanding Surge Current		Rated Wattage	Varistor Voltage	Maximum Clamping Voltage
	Acrcms (V)	DC (V)	10/1000us (J)	1 time	2 times	(W)	V1mA (V)	V10A (V)
				(A)				
821KD07	510	670	67.2	1200	600	0.25	820(738-902)	1355
781KD07	485	640	67.2				780(702-858)	1290
751KD07	460	615	67.2				750(675-825)	1240
681KD07	420	560	61.6				680(612-748)	1120
621KD07	385	505	61.6				620(558-682)	1025
561KD07	350	460	56.0				560(504-616)	920
511KD07	320	415	56.0				510(459-561)	845
471KD07	300	385	56.0				470(423-517)	775
431KD07	275	350	50.4				430(387-473)	710
391KD07	250	320	46.2				390(351-429)	650
361KD07	230	300	42.0				360(324-396)	595
331KD07	210	275	37.8				330(297-363)	550
301KD07	190	250	35.0				300(270-330)	505
271KD07	175	225	32.2				270(243-297)	455
241KD07	150	200	28.0				240(216-264)	395
221KD07	140	180	28.0				220(198-242)	360
201KD07	130	170	25.2				200(185-225)	330
181KD07	115	150	18.2				180(162-198)	300
151KD07	95	125	16.8				150(135-165)	250
121KD07	75	100	14.0				120(108-132)	200
101KD07	60	85	11.6				100(90-110)	165
820KD07	50	65	9.8				82(74-90)	135
680KD07	40	56	7.3	250	125	0.02	68(61-75)	*135
560KD07	35	45	6.2				56(50-62)	*110
470KD07	30	38	5.0				47(42-52)	*93
390KD07	25	31	4.2				39(35-43)	*77
330KD07	20	26	3.5				33(30-36)	*65
270KD07	17	22	2.8				27(24-30)	*53
220KD07	14	48	2.4				22(20-24)	*43
180LD07	10	14	2.1				18(15-21)	*38
120MD07	7	9	1.2				12(9.6-14.4)	*25
8R0MD07	5	6	0.8				8(6.4-9.6)	*17

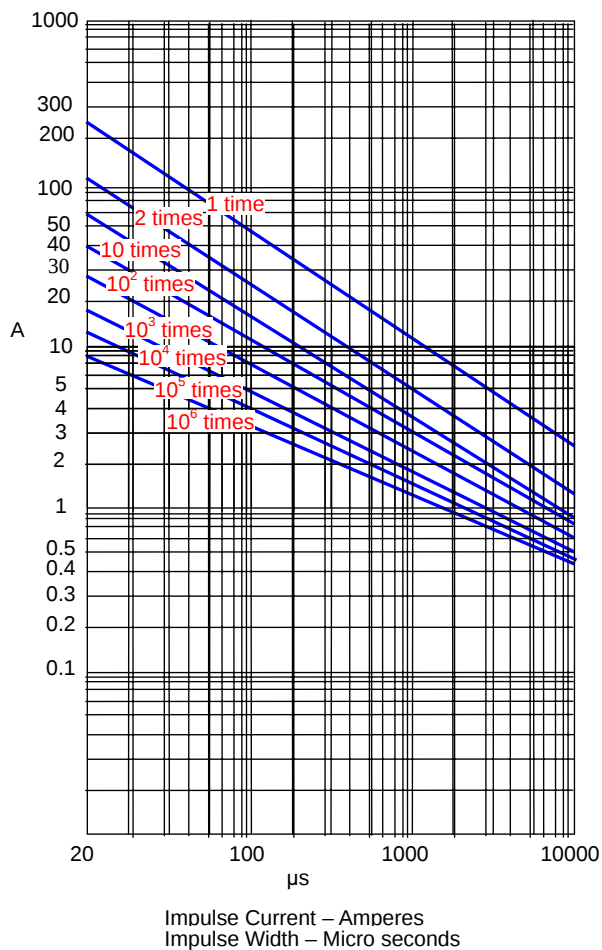
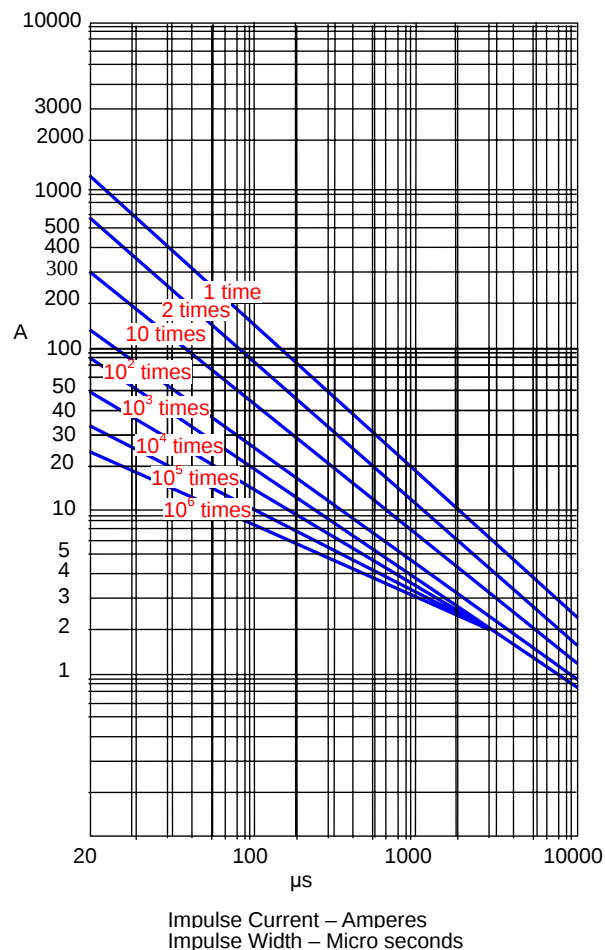
*680K-180L Max. Clamping Voltage testing current 2.5A

V-I Curve (180L to 680K)



V-I Curve (820K to 561K)



V-I Surge Life Time Ratings
(180L to 680K)V-I Surge Life Time Ratings
(820K to 821K)

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		