



Micro Commercial Components  
 20736 Marilla Street Chatsworth  
 CA 91311  
 Phone: (818) 701-4933  
 Fax: (818) 701-4939

# 182KD18 thru 820MD18

## Features

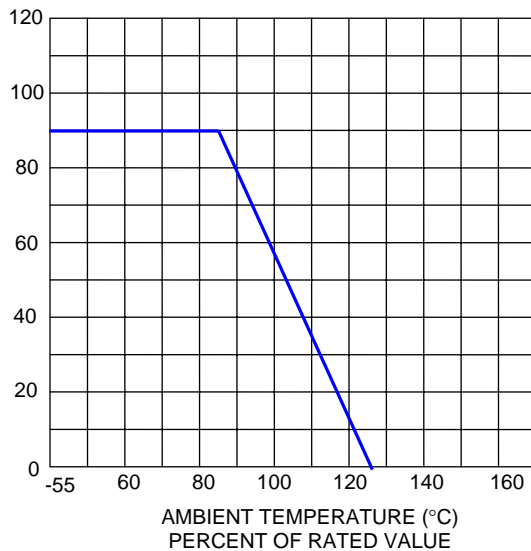
- Radial-Lead Varistor
- Designed to be Operated Continuously Across AC Power Lines
- No Derating Up to 85°C Ambient
- Available in Tape and Reel or Bulk Pack
- UL Recognized File # E171541

**50 to 1000 Volts  
 Varistor  
 35.2 to 392.0 Joule**

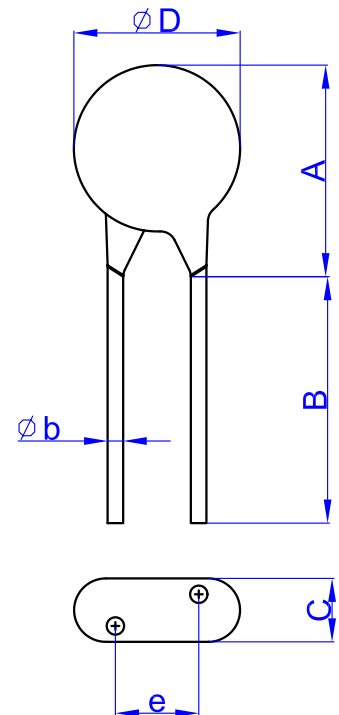
## Maximum Ratings

- 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

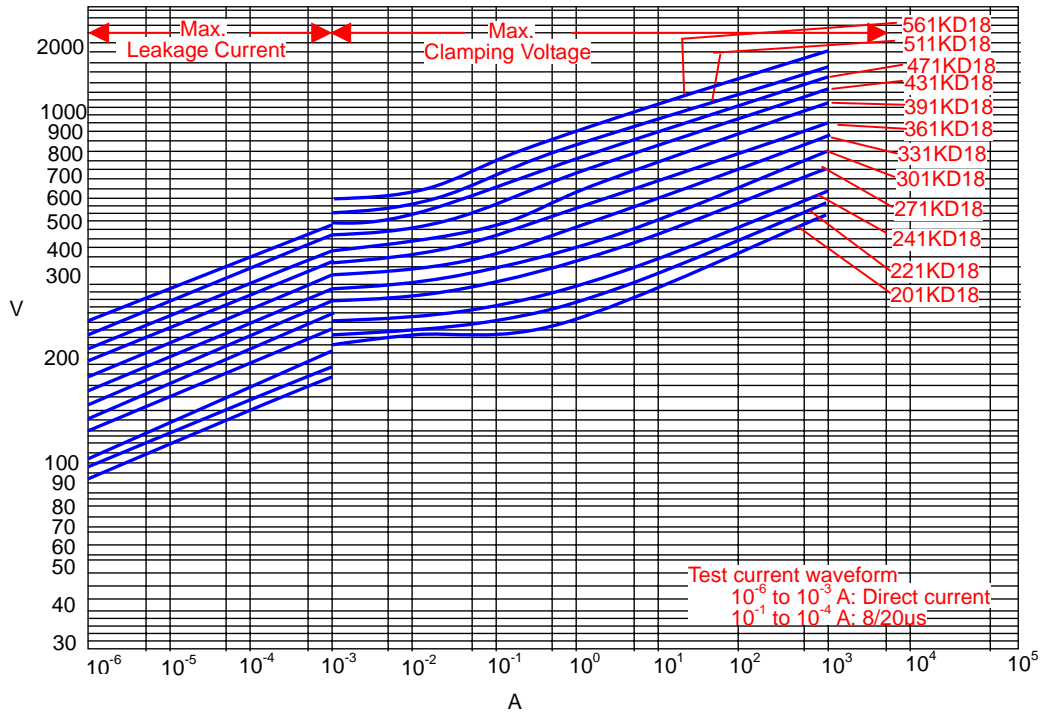


DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
D	---	.866	---	22.00	
A	---	.984	---	25.00	
d	.030	.034	0.75	0.85	
e	.264	.327	6.70	8.30	
B	.787	---	20.00	---	
C	See note 2				

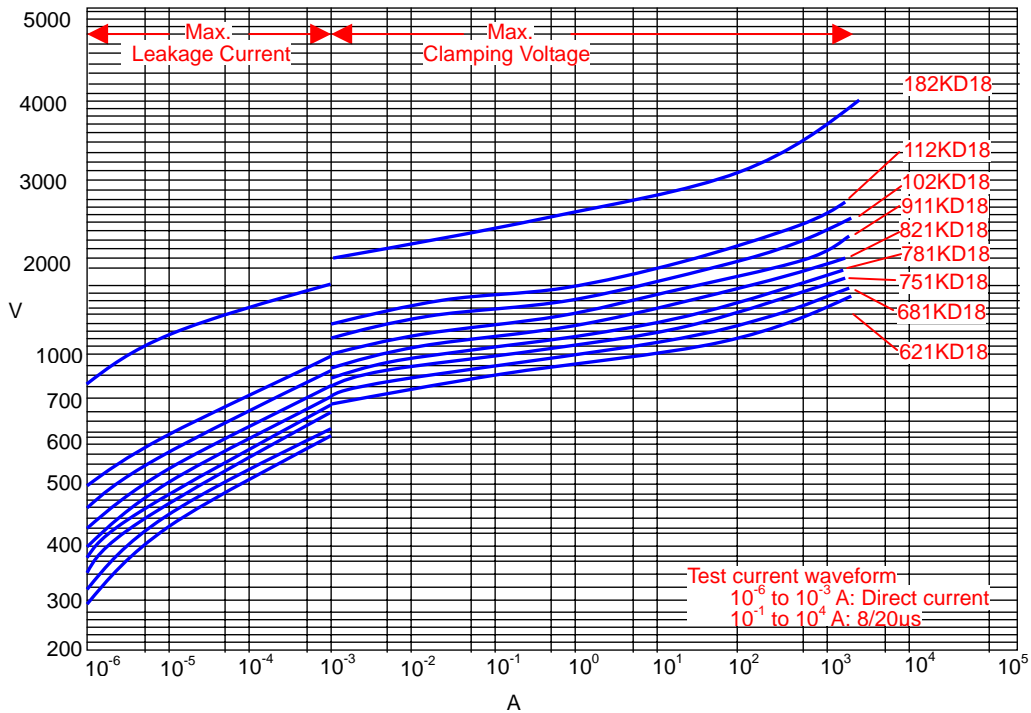
**Electrical Characteristics @ 25°C Unless Otherwise Noted**

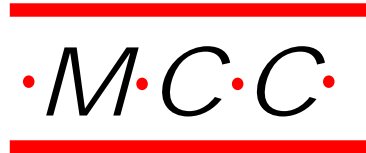
Part Number	Maximum Allowable Voltage		Maximum Energy	Withstanding Surge Current		Rated Wattage (W)	Varistor Voltage	Maximum Clamping Voltage
	Acrcms (V)	DC (V)	10/1000us (J)	1 time	2 times		V1mA (V)	V50A (V)
				(A)				
182KD18	1000	1465	392.0	5500	3000	0.8	1800(1620-1980)	2970
152KD18	750	1300	308.0				1500(1350-1650)	2475
112KD18	680	895	252.0				1100(990-1210)	1815
102KD18	625	825	252.0				1000(900-1100)	1650
911KD18	550	745	252.0				910(819-1001)	1500
821KD18	510	670	238.0				820(738-902)	1355
781KD18	485	640	238.0				780(702-858)	1290
751KD18	460	615	238.0				750(675-825)	1240
681KD18	420	560	203.0				680(612-748)	1120
621KD18	385	505	203.0				620(558-682)	1025
561KD18	350	460	182.0				560(504-616)	920
511KD18	320	415	182.0				510(459-561)	845
471KD18	300	385	182.0				470(423-517)	775
431KD18	275	350	175.0				430(387-473)	710
391KD18	250	320	161.0				390(351-429)	650
361KD18	230	300	151.2				360(324-396)	595
331KD18	210	275	128.8				330(297-363)	550
301KD18	190	250	121.8				300(270-330)	505
271KD18	175	225	113.4				270(243-297)	455
241KD18	150	200	100.8				240(216-264)	395
221KD18	140	180	95.2				220(198-242)	360
201KD18	130	170	91.0				200(185-225)	330
181KD18	115	150	75.6				180(162-198)	300
151KD18	95	125	64.5				150(135-165)	250
121KD18	75	100	51.6				120(108-132)	200
101KD18	60	85	43.0				100(90-110)	165
820KD18	50	65	35.2				82(74-90)	135

V-I Curve (820K to 561K)

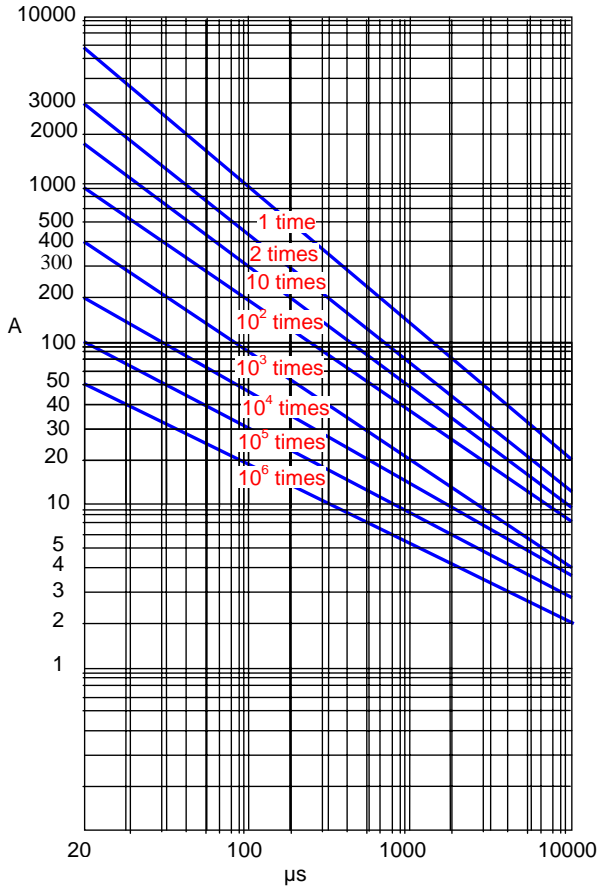


V-I Curve (621K to 182K)



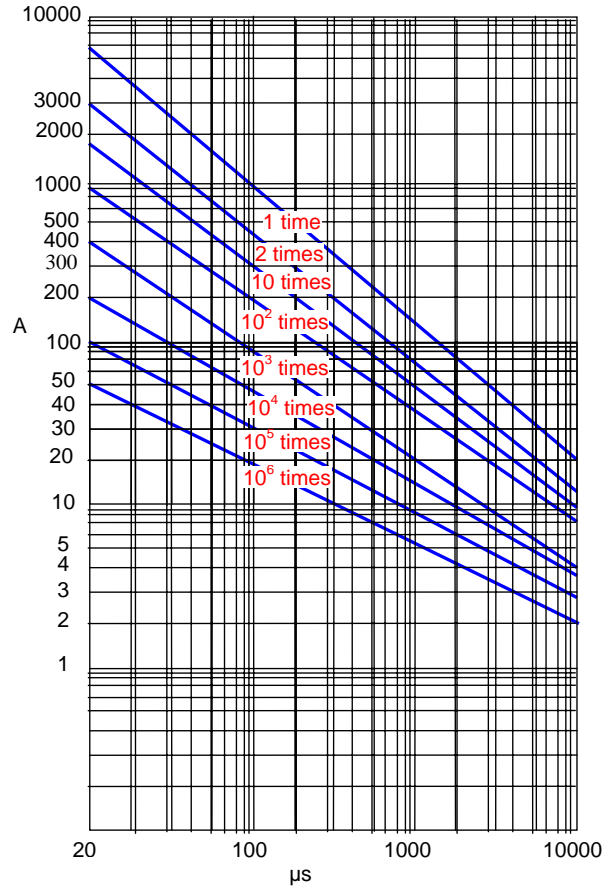


V-I Surge Life Time Ratings  
(820K to 561K)



Impulse Current – Amperes  
Impulse Width – Micro seconds

V-I Surge Life Time Ratings  
(621K to 182K)



Impulse Current – Amperes  
Impulse Width – Micro seconds



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				