Device Ratings and Characteristics

Part No.	Device Marking	Maximum Allowable Voltage		Varistor Voltage (@1mA)			Clamping Voltage @ Test Current (@8/20μs)		Maximum Energy (@10/1000μs)	Maximum Peak Current (@8/20μs)	Rated Power	Typical Capacitance (@1KHz)	UL 1449 4th ,In @8/20us	Related Standards Symbol
		ACrms(V)	DC(V)	Vn(Vdc)	Min.	Max.	Vc(V)	Ip(A)	(J)	(A)	(W)	(pF)	(KA)	
CNR-10D180K	10D180K	11	14	18	16	20	36	5	2.1	500	0.05	16000	0.5	○
CNR-10D220K	10D220K	14	18	22	20	24	43	5	2.5	500	0.05	11000		○
CNR-10D270K	10D270K	17	22	27	24	30	53	5	3.0	500	0.05	8000		○
CNR-10D330K	10D330K	20	26	33	30	36	65	5	4.0	500	0.05	6300		○
CNR-10D390K	10D390K	25	31	39	35	43	77	5	4.6	500	0.05	5200		○
CNR-10D470K	10D470K	30	38	47	42	52	93	5	5.5	500	0.05	4600		○
CNR-10D560K	10D560K	35	45	56	50	62	110	5	7.0	500	0.05	3750		○
CNR-10D680K	10D680K	40	56	68	61	75	135	5	8.2	500	0.05	2800		○
CNR-10D820K	10D820K	50	65	82	74	90	135	25	12	2500	0.4	1920	1	□
CNR-10D101K	10D101K	60	85	100	90	110	165	25	15	2500	0.4	1800		□
CNR-10D121K	10D121K	75	100	120	108	132	200	25	18	2500	0.4	1500		□
CNR-10D151K	10D151K	95	125	150	135	165	250	25	22	2500	0.4	1200		□
CNR-10D181K	10D181K	115	150	180	162	198	300	25	27	2500	0.4	620		□
CNR-10D201K	10D201K	130	170	200	180	220	340	25	30	2500	0.4	570		◇
CNR-10D221K	10D221K	140	180	220	198	242	360	25	32	2500	0.4	560		◇
CNR-10D241K	10D241K	150	200	240	216	264	395	25	35	2500	0.4	550		◇
CNR-10D271K	10D271K	175	225	270	243	297	455	25	40	2500	0.4	530		◇
CNR-10D301K	10D301K	195	250	300	270	330	500	25	42	2500	0.4	500		◇
CNR-10D331K	10D331K	215	275	330	297	363	550	25	47	2500	0.4	450		◇
CNR-10D361K	10D361K	230	300	360	324	396	595	25	47	2500	0.4	450		◇
CNR-10D391K	10D391K	250	320	390	351	429	650	25	60	2500	0.4	430		◇
CNR-10D431K	10D431K	275	350	430	387	473	710	25	65	2500	0.4	400		◇
CNR-10D471K	10D471K	300	385	470	423	517	775	25	70	2500	0.4	300		◇
CNR-10D511K	10D511K	320	410	510	459	561	845	25	70	2500	0.4	260		◇
CNR-10D561K	10D561K	350	460	560	504	616	915	25	70	2500	0.4	200		◇
CNR-10D621K	10D621K	395	510	620	558	682	1020	25	70	2500	0.4	170		◇
CNR-10D681K	10D681K	420	560	680	612	748	1120	25	70	2500	0.4	160		◇
CNR-10D751K	10D751K	465	615	750	675	825	1235	25	75	2500	0.4	150		◇
CNR-10D781K	10D781K	485	640	780	702	858	1290	25	80	2500	0.4	150		◇
CNR-10D821K	10D821K	510	670	820	738	902	1355	25	85	2500	0.4	150		◇
CNR-10D911K	10D911K	550	745	910	819	1001	1500	25	93	2500	0.4	140		◇
CNR-10D102K	10D102K	625	825	1000	900	1100	1650	25	102	2500	0.4	140		◇
CNR-10D112K	10D112K	680	895	1100	990	1210	1815	25	115	2500	0.4	130		◇
CNR-10D182K	10D182K	1000	1465	1800	1620	1980	2950	25	185	2500	0.4	75	1	○

Related Standards

Symbols	○	□			◇			
Approval								

Reliability

Characteristics	Standard	Test Conditions	Specifications
Robustness of terminations	IEC 60068-2-21 Test Ua1	F = 10 N (d ≤ 0.8 mm) ,F = 20 N (d = 1 mm)	△V/V≦±10% No visible damage
Solderability	IEC 60068-2-20 Test Ta (Method 1)	T = 235±5℃, d = 2±0.5s	Approximately≧95%
Resistance to soldering heat	IEC 60068-2-20 Test Tb (Method 1A)	T = 260±5℃, d = 10±1s	△V/V≦±10% No visible damage
Shock	IEC 60068-2-27 Test Ea	Pulse shape: half-sine. a = 490 m/s2 , d = 11ms. N = 6 x 3 shocks	△V/V≦±10% No visible damage
Vibration	IEC 60068-2-6 Test Fc Method B4	Frequency range: 10 Hz to 55 Hz ,a = 0.75 mm or 98 m/s2 (whichever is the less), d = 3x2 h	△V/V≦±10% No visible damage
Needle flame test	IEC 60695-11-5	Severity: Vertical 10 s	Duration of burning: 5 s max.
Voltage under pulse condition	IEC 61051-2	At class current	As specified in specification
Voltage proof	IEC 61051-2	Metal balls method (4.8.1.2) 2500 V, 60 s	As specified in specification
Pulse current - 8/20 μs	IEC 61051-2	8/20 μs, 10 times, I peak=0.25*Imax	△V/V≦±10% No visible damage
Pulse current - 10/1000 μs	IEC 61051-2	10/1000 μs, 10 times, Ipeak = 0.0075* Imax	△V/V≦±10% No visible damage
Combination pulse	IEC 60950-1:2013 Annex Q	Additional test: 10 pulses (combination pulse 6KV/3KA), in one direction, 1 per min	△V/V≦±10% No visible damage U ≤ 1.1 Uinitial Voltage proof:No breakdown or flashover
Rapid change of temperature	IEC 60068-2-14 Test Na	N = 5 cycles, d = 30 min , θA = -40±3°C, θB = 85±2°C	△V/V≦±10% No visible damage
Climatic sequence	IEC 60068-2-2 Test Ba IEC 60068-2-30 Test Db IEC 60068-2-1 Test Aa IEC 60068-2-30 Test Db	Dry heat, Test Ba:16±2h, T = 85±2℃ Damp heat, Test Db first cycle :24h, T = 55±2℃ Cold, Test Aa :2h, T = -40±3℃ Damp heat Test Ba remaining cycles:5 cycle	△V/V≦±10% No visible damage RISO≧100MΩ Voltage proof:No breakdown or flashover
Endurance at upper category temperature	IEC 61051-1 (4.21)	T:max temperature as specified , Duration: 1000 h, Voltage: max. a.c. voltage	△V/V≦±10% No visible damage R≧1000MΩ U ≤ 1,1 Uinitial

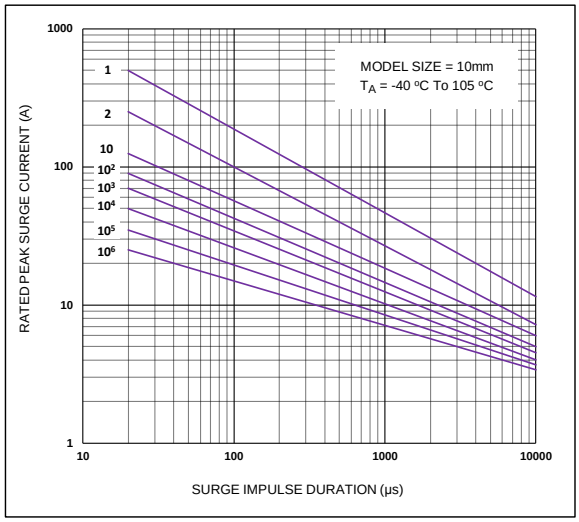
Reliability

Characteristics	Standard	Test Conditions	Specifications
Damp heat (Steady state)	IEC 60068-2-78 Test Ca	T = 40±2℃, RH = 93(+2/-3)%, 56d , 4 specimens:No voltage applied , Other 4 specimens:Applied voltage: 10% of the max. d.c. voltage	△V/V≦±10% RISO≧100MΩ
Maximum Peak Current	Specification Standard	Imax, 8/20 μs, 1 time $\frac{V_{1mA}\text{at }85℃ - V_{1mA}\text{at}25℃}{V_{1mA}\text{at}25℃} \times \frac{1}{60} \times 100(\%/℃)$	-0.05≦TC≦ 0.05(%/℃)
Nominal Discharge Current Test	UL1449 4th	Nominal Discharge Current (In), 8/20 μs, 15 times	△V/V≦±10% No visible damage
Varistor Voltage Temp. Coefficient	Specification Standard	V1mA at -40℃, 85℃, 25℃	△V/V≦±10% No visible damage
High Temperature Storage	IEC60068-2-2	1000h, T = 85±2℃	△V/V≦±10% No visible damage
Max. Energy	Specification Standard	10/1000 μs, 1 tmes, Max. Energy	△V/V≦±10% No visible damage
Operating duty cycle test ＊	UL 1449	6 kV/3 kA combination wave surges, phase angle of 90 (+0, -15) degrees, npositive polarity 8 times, negative polarity 7 times, interval of 60s.	△V/V≦±10% No visible damage
Surge Immunity Test＊	IEC 61000-4-5	4kV/2kA combination wave surges, phase angle of 90 (+0, -15) degrees, npositive polarity 20times, negative polarity 20times, interval of 60s.	△V/V≦±10% No visible damage

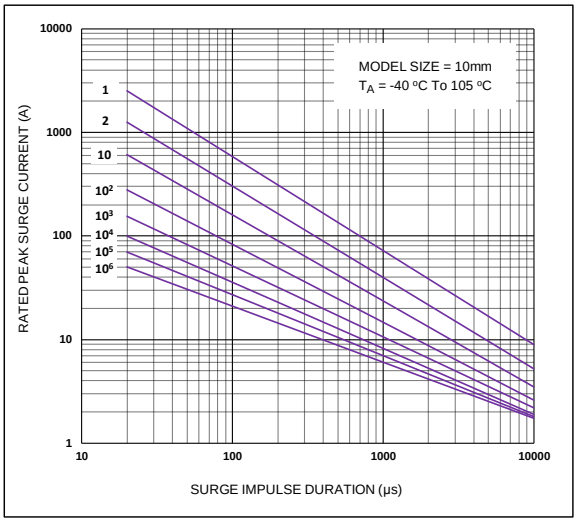
＊(According to customer requirements to meet the test items)

Impulse Life Time Rating Curves

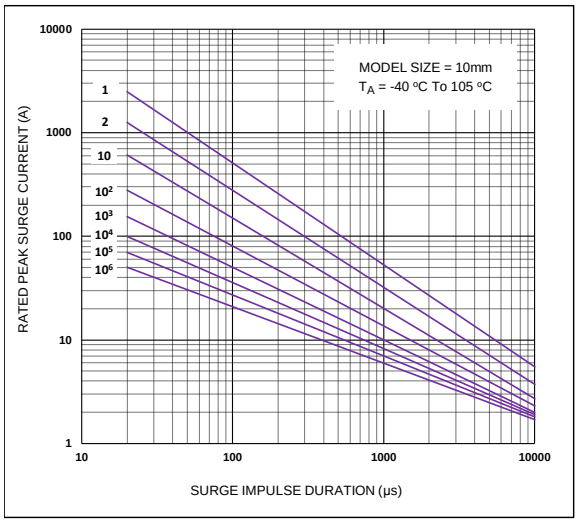
CNR-10D180K to CNR-10D680K



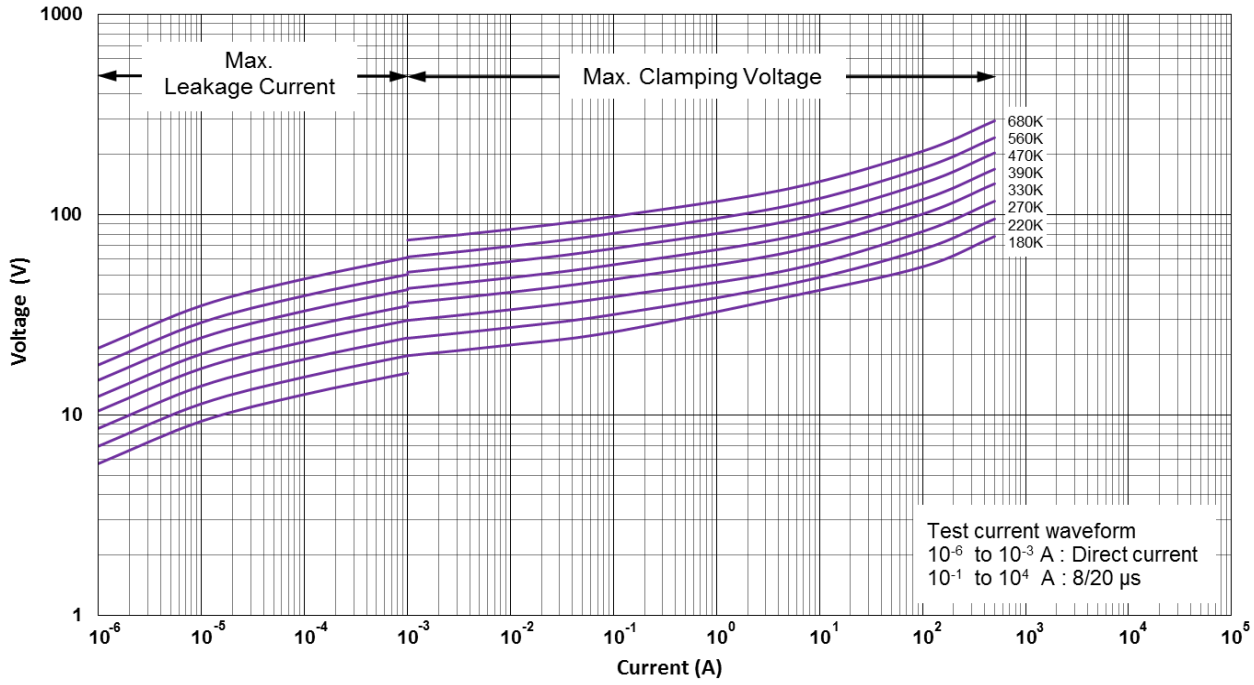
CNR-10D820K to CNR-10D751K



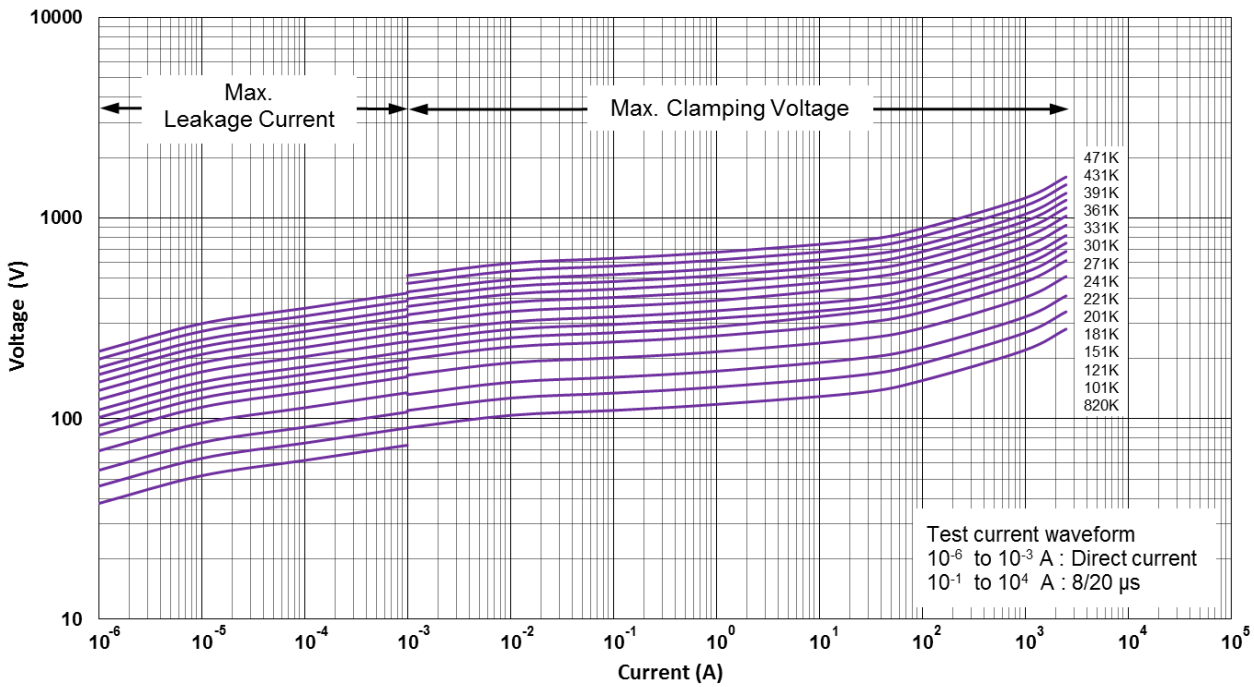
CNR-10D781K to CNR-10D182K



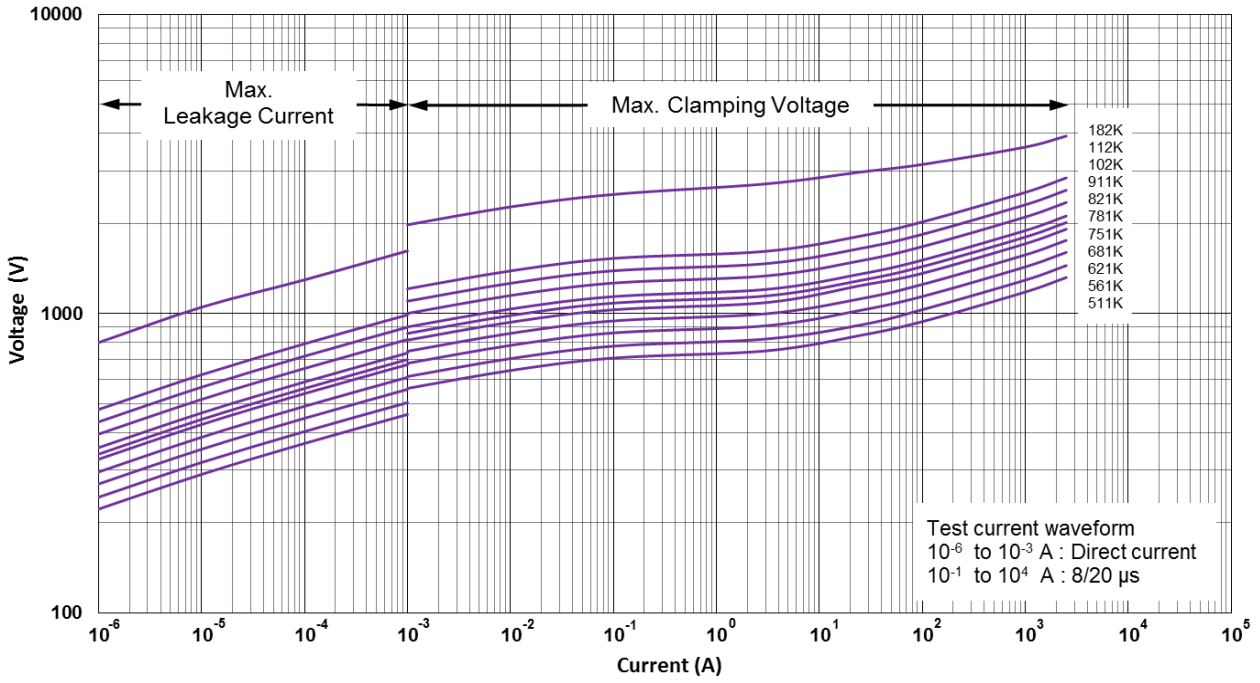
CNR-10D180K to CNR-10D680K V-I Curves



CNR-10D820K to CNR-10D471K V-I Curves

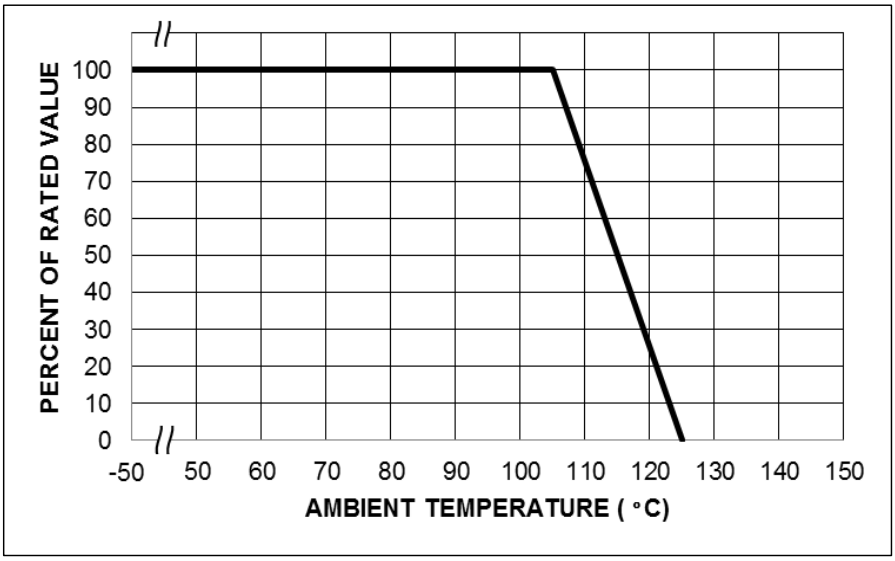


CNR-10D511K to CNR-10D182K V-I Curves

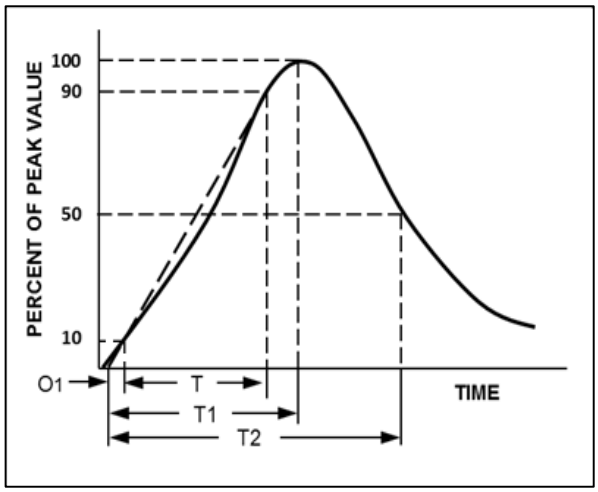


Power Derating Curve

Should transients occur in rapid succession, the average power dissipation is the energy (watt-seconds) per pulse times the number of pulses per second. The power so developed must be with the specifications shown on the Device Ratings and Specifications Table for the specific device.The operating values of a MOV need to be derated at high temperatures as shown above. Because varistors only dissipate a relatively small amount of average power they are not suitable for repetitive applications that involve substantial amounts of average power dissipation.



Surge Current Standard Waveform



O1 = Virtual Origin of Wave
T = Time from 10% to 90% of Peak
T1 = Rise Time = 1.25 x T
T2 = Decay Time
Example - For an 8/20 μs Current Waveform:
8μs = T1 = Rise Time
20μs = T2 = Decay Time

Product Dimensions

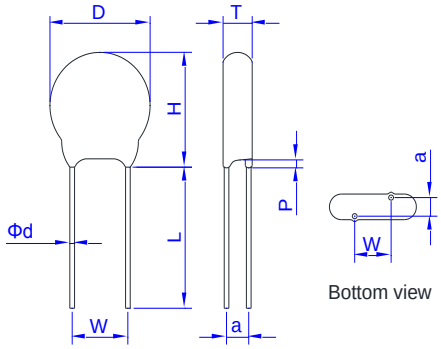


Fig 1. Straight Lead

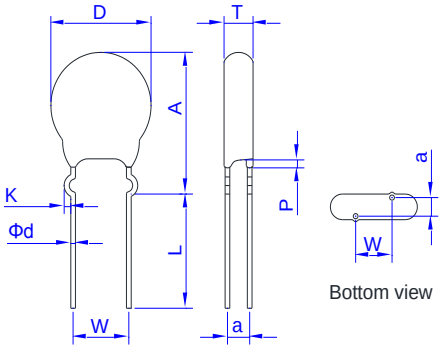


Fig 2. Outside Kink Lead

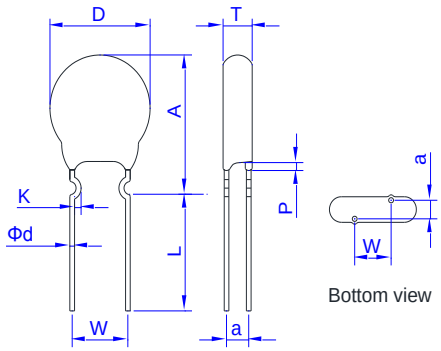


Fig 3. Inside Kink Lead

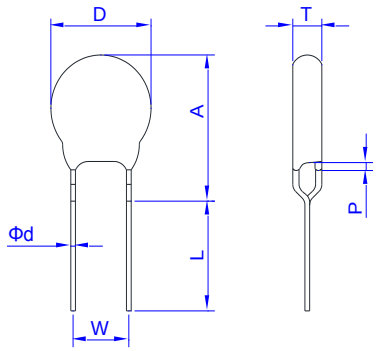


Fig 4. In Line Kink Lead

Dimension Table **Unit:mm**

Symbol \ Model size		05D		07D		10D		14D		18D		20D	
		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
D		5.5	7.5	7.5	9.0	10.5	14.0	13.5	17.5	18.5	23.0	19.5	25.0
H		-	10.0	-	12.0	-	17.0	-	20.5	-	26.0	-	28.0
W		4.0	6.0	4.0	6.0	6.5	8.5	6.5	8.5	6.5	8.5	9.0	11.0
Φd		0.55	0.65	0.55	0.65	0.75	0.85	0.75	0.85	0.75	0.85	0.95	1.05
P(max.)		3.0											
L(min)		25.0											
K(Kink Lead)		0.8	1.6	0.8	1.6	1.0	1.8	1.0	1.8	1.0	1.8	1.0	1.8
A(max.)	180K-271K	-	13.0	-	15.0	-	19.5	-	22.5	-	26.5	-	30.0
	>271K	-	13.0	-	15.0	-	20.5	-	23.5	-	27.0	-	31.0
T		See Tmax table											

＊Short Cut Lead type TTXX the lead length (L) can 3.0~15mm (expect 20D dia <10mm), see Ordering Note.

＊＊a value see T max. table

T max. Table Unit:mm

Model	05D	07D	10D	14D	18D	20D	a(±1.0)
180K	3.3	3.5	3.9	4.0	4.2	4.3	1.5
220K	3.6	3.8	4.2	4.3	4.5	4.6	1.6
270K	3.8	4.0	4.4	4.5	4.7	4.8	1.7
330K	3.3	3.5	3.9	4.0	4.2	4.3	1.6
390K	3.5	3.7	4.1	4.2	4.4	4.5	1.8
470K	3.7	3.9	4.3	4.4	4.6	4.7	1.9
560K	4.0	4.2	4.6	4.7	4.9	5.0	2.0
680K	4.3	4.5	4.9	5.0	5.2	5.3	2.2
820K	3.3	3.5	3.9	4.0	4.2	4.3	1.5
101K	3.6	3.8	4.2	4.3	4.5	4.6	1.5
121K	3.8	4.0	4.4	4.5	4.7	4.8	1.6
151K	4.1	4.3	4.7	4.8	5.0	5.1	1.8
181K	3.2	3.4	3.8	3.9	4.1	4.2	1.5
201K	3.3	3.5	3.9	4.0	4.2	4.3	1.5
221K	3.4	3.6	4.0	4.1	4.3	4.4	1.6
241K	3.5	3.7	4.1	4.2	4.4	4.5	1.7
271K	3.7	3.9	4.2	4.3	4.5	4.6	1.8

Model	05D	07D	10D	14D	18D	20D	a(±1.0)
301K	3.9	4.1	4.3	4.4	4.6	4.7	1.9
331K	4.0	4.2	4.5	4.6	4.8	4.9	2.0
361K	4.1	4.3	4.7	4.8	5.0	5.1	1.7
391K	4.2	4.4	4.8	4.9	5.1	5.2	1.8
431K	4.4	4.6	5.0	5.1	5.3	5.4	1.9
471K	4.6	4.8	5.2	5.3	5.5	5.6	2.0
511K	4.8	5.0	5.3	5.4	5.6	5.7	2.2
561K	5.0	5.2	5.5	5.6	5.8	5.9	2.3
621K	5.3	5.5	5.7	5.8	6.0	6.1	2.5
681K	5.4	5.6	5.8	5.9	6.1	6.2	2.7
751K	5.6	5.8	6.0	6.1	6.3	6.4	2.9
781K	-	6.0	6.3	6.4	6.6	6.7	3.0
821K	-	6.3	6.5	6.6	6.8	6.9	3.1
911K	-	-	6.6	6.7	6.9	7.0	3.5
102K	-	-	7.0	7.1	7.3	7.4	3.8
112K	-	-	7.4	7.5	7.7	7.9	4.1
182K	-	-	11.3	11.5	-	11.9	6.0

Tape and Reel Specificstions

● Radial devices on tape are supplied with straight leads or inline kink leads.

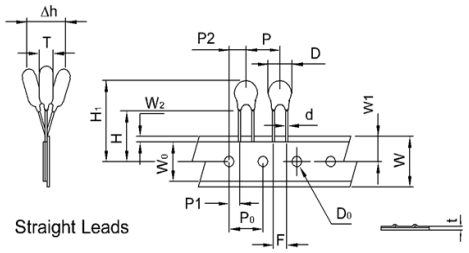


Figure: A

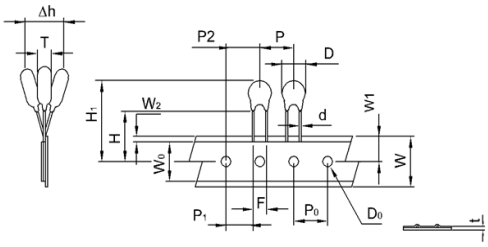


Figure: B

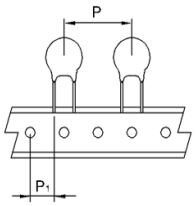


Figure: C

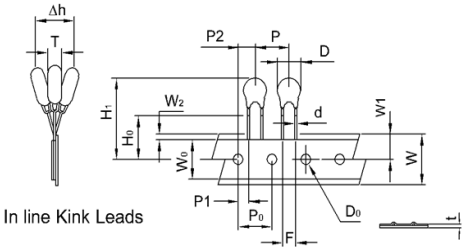


Figure: D

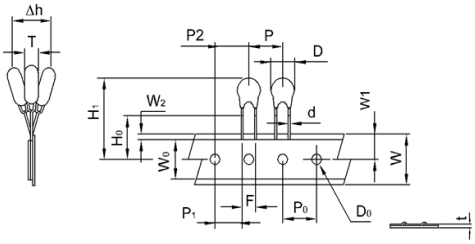


Figure: E

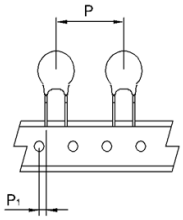


Figure: F

Symbol	Description	Model					
		05D	07D	10D	10D	14D	14D
P	Pitch of Component	12.7±1.0	12.7±1.0	12.7±1.0	15.0±1.0	25.4±1.0	30.0±1.0
P_0	Feed Hole Pitch	12.7±0.2	12.7±0.2	12.7±0.2	15.0±0.2	12.7±0.2	15.0±0.2
P_1	Feed Hole Center to Pitch	3.85±0.7	3.85±0.7	3.85±0.7	3.75±0.7	8.95±0.7	3.75±0.7
P_2	Hole Center to Component Center	6.35±0.7	6.35±0.7	6.35±0.7	7.5±0.7	12.7±0.7	7.5±0.7
F	Lead to Lead Distance	5.0±0.8	5.0±0.8	7.5±0.8	7.5±0.8	7.5±0.8	7.5±0.8
△h	Component Alignment	2.0max	2.0max	2.0max	2.0max	2.0max	2.0max
W	Tape Width	18.0+1.0	18.0+1.0	18.0+1.0	18.0+1.0	18.0+1.0	18.0+1.0
		18.0-0.5	18.0-0.5	18.0-0.5	18.0-0.5	18.0-0.5	18.0-0.5
W_0	Hold Down Tape Width	5.0 Min.	5.0 Min.	5.0 Min.	5.0 Min.	5.0 Min.	5.0 Min.
W_1	Hole Position	9.0+0.75	9.0+0.75	9.0+0.75	9.0+0.75	9.0+0.75	9.0+0.75
		9.0-0.5	9.0-0.5	9.0-0.5	9.0-0.5	9.0-0.5	9.0-0.5
W_2	Hold Down Tape Position	3.0 Max	3.0 Max	3.0 Max	3.0 Max	3.0 Max	3.0 Max
H	Height from Tape Center to Component Base	18.0+2.0	18.0+2.0	18.0+2.0	18.0+2.0	18.0+2.0	18.0+2.0
		18.0-0.0	18.0-0.0	18.0-0.0	18.0-0.0	18.0-0.0	18.0-0.0
H_0	Seating Plane Height	16.0±0.5	16.0±0.5	16.0±0.5	16.0±0.5	16.0±0.5	16.0±0.5
H_1	Component Height	29.0 Max.	32.0 Max.	36.0 Max.	36.0 Max.	40.0 Max.	40.0 Max.
D_0	Feed Hole Diameter	4.0±0.2	4.0±0.2	4.0±0.2	4.0±0.2	4.0±0.2	4.0±0.2
t	Total Tape Thickness	0.7±0.2	0.7±0.2	0.7±0.2	0.7±0.2	0.7±0.2	0.7±0.2
L	Leagth Clipped Lead	11.0 Max	11.0 Max	11.0 Max	11.0 Max	11.0 Max	11.0 Max
Figure		A, D	A, D	B, E	A, D	C	F

Tape and Reel Specificstions

● Radial devices on tape are supplied with inside kink leads or outside kink leads.

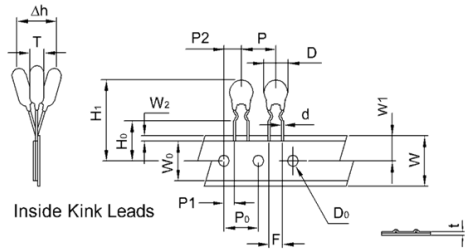


Figure: A

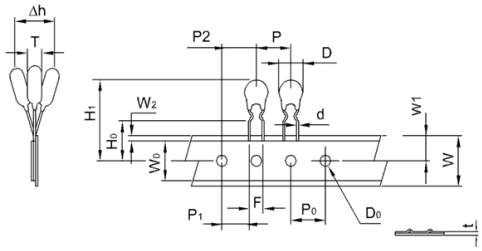


Figure: B

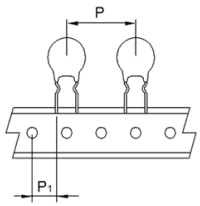


Figure: C

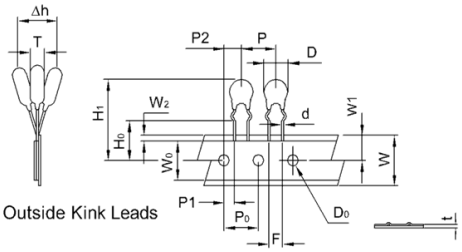


Figure: D

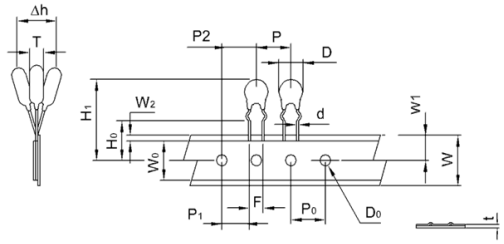


Figure: E

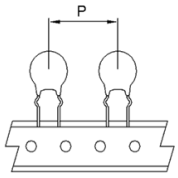


Figure: F

Symbol	Description	Model					
		05D	07D	10D	10D	14D	14D
P	Pitch of Component	12.7±1.0	12.7±1.0	12.7±1.0	15.0±1.0	25.4±1.0	30.0±1.0
P_0	Feed Hole Pitch	12.7±0.2	12.7±0.2	12.7±0.2	15.0±0.2	12.7±0.2	15.0±0.2
P_1	Feed Hole Center to Pitch	3.85±0.7	3.85±0.7	3.85±0.7	3.75±0.7	8.95±0.7	3.75±0.7
P_2	Hole Center to Component Center	6.35±0.7	6.35±0.7	6.35±0.7	7.5±0.7	12.7±0.7	7.5±0.7
F	Lead to Lead Distance	5.0±0.8	5.0±0.8	7.5±0.8	7.5±0.8	7.5±0.8	7.5±0.8
△h	Component Alignment	2.0max	2.0max	2.0max	2.0max	2.0max	2.0max
W	Tape Width	18.0+1.0	18.0+1.0	18.0+1.0	18.0+1.0	18.0+1.0	18.0+1.0
		18.0-0.5	18.0-0.5	18.0-0.5	18.0-0.5	18.0-0.5	18.0-0.5
W_0	Hold Down Tape Width	5.0 Min.	5.0 Min.	5.0 Min.	5.0 Min.	5.0 Min.	5.0 Min.
W_1	Hole Position	9.0+0.75	9.0+0.75	9.0+0.75	9.0+0.75	9.0+0.75	9.0+0.75
		9.0-0.5	9.0-0.5	9.0-0.5	9.0-0.5	9.0-0.5	9.0-0.5
W_2	Hold Down Tape Position	3.0 Max	3.0 Max	3.0 Max	3.0 Max	3.0 Max	3.0 Max
H	Height from Tape Center to Component Base	18.0+2.0	18.0+2.0	18.0+2.0	18.0+2.0	18.0+2.0	18.0+2.0
		18.0-0.0	18.0-0.0	18.0-0.0	18.0-0.0	18.0-0.0	18.0-0.0
H_0	Seating Plane Height	16.0±0.5	16.0±0.5	16.0±0.5	16.0±0.5	16.0±0.5	16.0±0.5
H_1	Component Height	29.0 Max.	32.0 Max.	36.0 Max.	36.0 Max.	40.0 Max.	40.0 Max.
D_0	Feed Hole Diameter	4.0±0.2	4.0±0.2	4.0±0.2	4.0±0.2	4.0±0.2	4.0±0.2
t	Total Tape Thickness	0.7±0.2	0.7±0.2	0.7±0.2	0.7±0.2	0.7±0.2	0.7±0.2
L	Leagth Clipped Lead	11.0 Max	11.0 Max	11.0 Max	11.0 Max	11.0 Max	11.0 Max
Figure		A, D	A, D	B, E	A, D	C	F

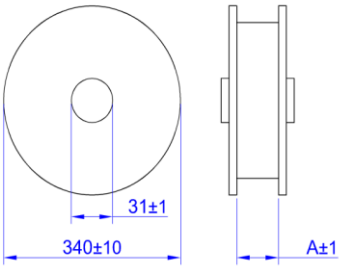
Packing information

Bulk packing

Series	Straight Lead Type Quantity(pcs/bag)	Cut Lead Type Quantity(pcs/bag)	Kink Type Quantity(pcs/bag)
CNR-05D	1000	1000	1000
CNR-07D	1000	1000	1000
CNR-10D	500	500	500
CNR-14D	500	500	500
CNR-18D	500	500	500
CNR-20D	250	250	250

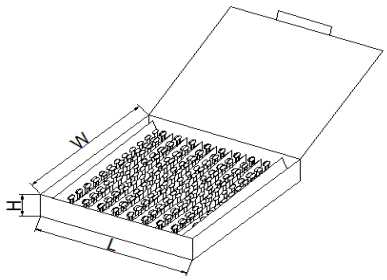
Tape & Reel product packing

Series	A (mm)	Quantity (pcs/reel)
CNR-05D(180K~391K)-TRXX	43	2000
CNR-05D(431K~751K)-TRXX		1500
CNR-07D(180K~391K)-TRXX		2000
CNR-07D(431K~821K)-TRXX		1500
CNR-10D(180K~621K)-TRXX		1000
CNR-10D(681K~112K)-TRXX		800
CNR-14D(180K~391K)-TRXX	56	800
CNR-14(D431K~621K)-TRXX		700
CNR-14D(681K~112K)-TRXX		600



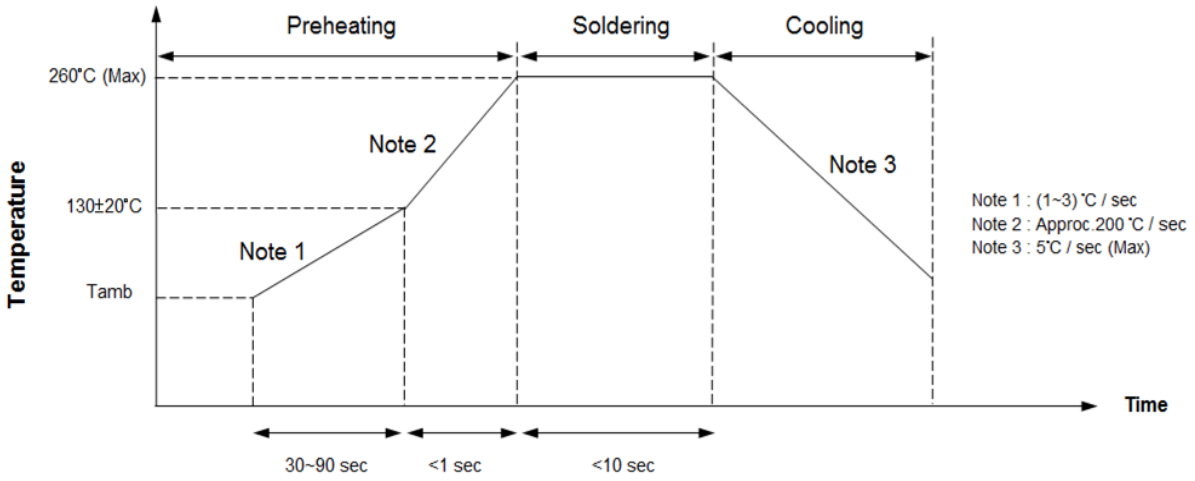
Box product packing

Series	Quantity (pcs/box)
CNR-05D(180K~621K)-BTXX	1000
CNR-05D(681K~751K)-BTXX	800
CNR-07D(180K~621K)-BTXX	1000
CNR-07D(681K~821K)-BTXX	800
CNR-10D(180K~621K)-BTXX	1000
CNR-10D(681K~112K)-BTXX	800
CNR-14D(180K~621K)-BTXX	500
CNR-14D(681K~112K)-BTXX	400



Serise	L±5	W±5	H±5
CNR-05~07D	340	245	45
CNR-10~14D	340	245	50

Solder Recommendation



Recommendation Reworking Conditions with Soldering Iron

Item	Conditions
Temperature of soldering Iron-tip	360℃(Max)
Soldering Time	3 sec(Max)
Distance from Varistor	2mm(Min)

RoHS Compliant Declaration

We hereby declare that the components delivered to your company are compliant with RoHS Directive 2002/95/EC

Storage Conditions of Products

(I) Storage Conditions:

1.Storage Temperature: -10℃~+40℃

2.Relative Humidity:≦75%RH

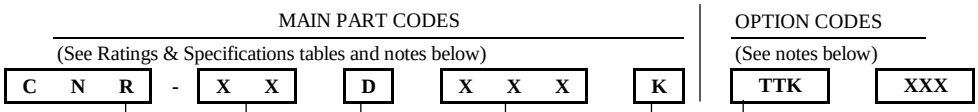
3.Keep away from corrosive atmosphere and sunlight

4.Solvent Resistance: MIL–STD–202, Method 215F

5.Moisture Sensitivity: Level 1, J-STD-020

(II) Period of Storage: 1 year

Explanation of Part Numbers



Device Family Code
CeNtRa
Metal Oxide Varistors

Disc Element Dia.

05 - Ø 5.0mm
07 - Ø 7.0mm
10 - Ø 10mm
14 - Ø 14mm
18 - Ø 18mm
20 - Ø 20mm

Type

D: Standard series
V: Medium surge series
P: High surge series
H: Ultra high energy series
N: High temperature series
C: Automobile series
S: Square Disc type
F: Thermal Cut-off Series
T: Thermal Cut-off Series (with indictor)

Tolerance
K=±10%

Varistor Voltage
180=18X10^0=18V
181=18X10^1=180V
182=18X10^2=1800V

For standard parts, use the MAIN PART designator only. For parts with non-standard options (such as additional form, Packing and lead space options), use MAIN PART + OPTION CODE.
OPTION CODE items are subject to availability and minimum order requirements. Please contact a Centra products representative for additional information or questions.

Ordering Notes:

MAIN PART CODES

Series + /Packaging/ Lead Style / Designators:

Ordering examples:

Straight Lead Bulk Pack (Standard)	Straight Lead (Short Cut) Bulk Pack	Straight Lead Tape & Reel Pack	Straight Lead Flat Box Pack
CNR-10D471K	CNR-10D471K**TTSXXX**	CNR-10D471K**TRSX**	CNR-10D471K**BTSX**

Outside Kink Lead Bulk Pack	Outside Kink Lead (Short Cut) Bulk Pack	Outside Kink Lead Tape & Reel Pack	Outside Kink Lead Flat Box Pack
CNR-10D471**SOK**	CNR-10D471K**TTKXXX**	CNR-10D471K**TRKX**	CNR-10D471K**BTKX**

Inside Kink Lead Bulk Pack	Inside Kink Lead (Short Cut) Bulk Pack	Inside Kink Lead Tape & Reel Pack	Inside Kink Lead Flat Box Pack
CNR-10D471K**SIK**	CNR-10D471K**TTIXXX**	CNR-10D471K**TRIX**	CNR-10D471K**BTIX**

In Line Kink Lead Bulk Pack	In Line Kink Lead (Short Cut) Bulk Pack	In Line Kink Lead Tape& Reel Pack	In Line Kink Lead Flat Box Pack
CNR-10D471K**SHK**	CNR-10D471K**TTHXXX**	CNR-10D471K**TRHX**	CNR-10D471K**BTHX**

Option Code

\+ XXX

Short Cut Lead Length 10mm±1.0mm
CNR-10D471K**TTS10**

Tape & Reel Pack Feed Hole Pitch
CNR-10D471K**TRSA**
CNR-10D471K**TRSB**

A: P_0 → 12.7mm±0.2mm
B: P_0 → 15.0mm±0.2mm