

CNR 14D 突波吸收器

Device Ratings and Characteristics

元件的額定值與特性

Part No. 型號	Maximum Allowable Voltage 最大容許電壓		Varistor Voltage 突波吸收器動作電壓 (@1mA)			Maximum Clamping Voltage 抑制電壓 @ Test Current (8/20μs)		Maximum Energy 最大吸收能量 (J)	Maximum Peak Current 最大電流耐量 (8/20μs)	Rated Power 消耗功率 (W)	Typical Capacitance 參考電容值 (@1KHz)	Standards 安規
	ACrms(V)	DC(V)	Min.	Vb(Vdc)	Max.	Vc (V)	Ip (A)	10/1000μs	(A)		(pF)	
CNR-14D180K	11	14	14.4	18	21.6	39	10	4.0	1000	0.10	25000	☆
CNR-14D220K	14	18	18.7	22	26.0	43	10	5.0	1000	0.10	20000	☆
CNR-14D270K	17	22	23.0	27	31.1	53	10	6.0	1000	0.10	16000	☆
CNR-14D330K	20	26	29.5	33	36.5	65	10	7.5	1000	0.10	12200	☆
CNR-14D390K	25	31	35	39	43	77	10	8.6	1000	0.10	7000	☆
CNR-14D470K	30	38	42	47	52	93	10	10.0	1000	0.10	6750	☆
CNR-14D560K	35	45	50	56	62	110	10	11.0	1000	0.10	6500	☆
CNR-14D680K	40	56	61	68	75	135	10	14.0	1000	0.10	5500	☆ □
CNR-14D820K	50	65	74	82	90	135	50	22.0	4500	0.60	4300	☆ ◎ □
CNR-14D101K	60	85	90	100	110	165	50	28.0	4500	0.60	3500	☆ ◎ □
CNR-14D121K	75	100	108	120	132	200	50	32.0	4500	0.60	2500	☆ ◎ □
CNR-14D151K	95	125	135	150	165	250	50	40.0	4500	0.60	2100	☆ ◎ □
CNR-14D181K	115	150	162	180	198	300	50	50.0	4500	0.60	1250	☆ ◎ □
CNR-14D201K	130	170	185	200	225	340	50	57.0	4500	0.60	1150	☆ △ ※ ◎ □
CNR-14D221K	140	180	198	220	242	360	50	60.0	4500	0.60	1100	☆ △ ※ ◎ □
CNR-14D241K	150	200	216	240	264	395	50	63.0	4500	0.60	1050	☆ △ ※ ◎ □
CNR-14D271K	175	225	247	270	303	455	50	70.0	4500	0.60	1000	☆ △ ※ ◎ □
CNR-14D301K	195	250	270	300	330	500	50	73.0	4500	0.60	900	☆ △ ※ ◎ □
CNR-14D331K	210	275	297	330	363	550	50	93.0	4500	0.60	850	☆ △ ※ ◎ □
CNR-14D361K	230	300	324	360	396	595	50	93.0	4500	0.60	800	☆ △ ※ ◎ □
CNR-14D391K	250	320	351	390	429	650	50	100.0	4500	0.60	800	☆ △ ※ ◎ □
CNR-14D431K	275	350	387	430	473	710	50	115.0	4500	0.60	650	☆ △ ※ ◎ □
CNR-14D471K	300	385	423	470	517	775	50	125.0	4500	0.60	550	☆ △ ※ ◎ □
CNR-14D511K	320	410	459	510	561	845	50	125.0	4500	0.60	450	☆ △ ※ ◎ □
CNR-14D561K	350	460	504	560	616	915	50	125.0	4500	0.60	400	☆ △ ※ ◎ □
CNR-14D621K	385	505	558	620	682	1025	50	125.0	4500	0.60	350	☆ △ ※ ◎ □
CNR-14D681K	420	560	612	680	748	1120	50	130.0	4500	0.60	350	☆ △ ※ ◎ □
CNR-14D751K	460	615	675	750	825	1240	50	143.0	4500	0.60	330	☆ △ ※ ◎ □
CNR-14D781K	485	640	702	780	858	1290	50	148.0	4500	0.60	330	☆ △ ※ ◎ □
CNR-14D821K	510	670	738	820	902	1355	50	157.0	4500	0.60	330	☆ △ ※ ◎ □
CNR-14D911K	550	745	819	910	1001	1500	50	175.0	4500	0.60	300	☆ △ ※ ◎ □
CNR-14D102K	625	825	900	1000	1100	1650	50	190.0	4500	0.60	300	☆ △ ※ ◎ □
CNR-14D112K	680	895	990	1100	1210	1815	50	213.0	4500	0.60	200	☆ ※ ◎ □
CNR-14D182K	1000	1465	1620	1800	1980	2970	50	337.0	4500	0.60	150	☆

Related Standards

安規說明

Standard No. 安規號碼	UL 1414	UL 1449 (3rd Edition)	CSA	VDE	CQC
Title 名稱	Across-The-Line Components	Surge Protective Device	Accessories and Parts for Electronic Products	Varistors for use in Electronic equipment	GB/T10193 GB/T10194 GB8898 GB4943.1
File No. 檔案號碼	E165143	E316325	LR109736-1	21557-4790-001	CQC02001002471 CQC08001023767 CQC08001023768 CQC08001023769
Symbols 符號	△	☆	※	◎	□

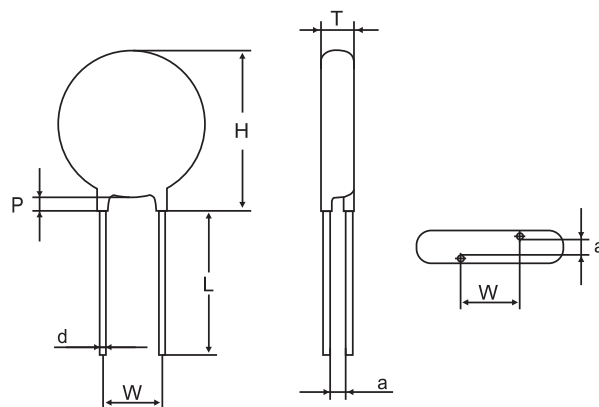
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Dimension of Component for Standard Product 標準品之尺寸規格

Dimension Table

Unit: mm

Model Symbol	05D	07D	10D	14D	18D	20D
D(max.)	7.5	9.0	14.0	17.5	23.0	25.0
H(max.)	10.0	12.0	17.0	20.5	26.0	28.0
W(±1.0)	5.0	5.0	7.5	7.5	7.5	7.5/10.0
P(max.)	3.0					
L(min)	25.0					
d(±0.05)	0.6	0.6	0.8	0.8	0.8	0.8/1.0
	Cuorcp	Cuorcp	Cuorcp	Cuorcp 182 Konly Cu	Cuorcp	Cuorcp 1.0 Konly Cu



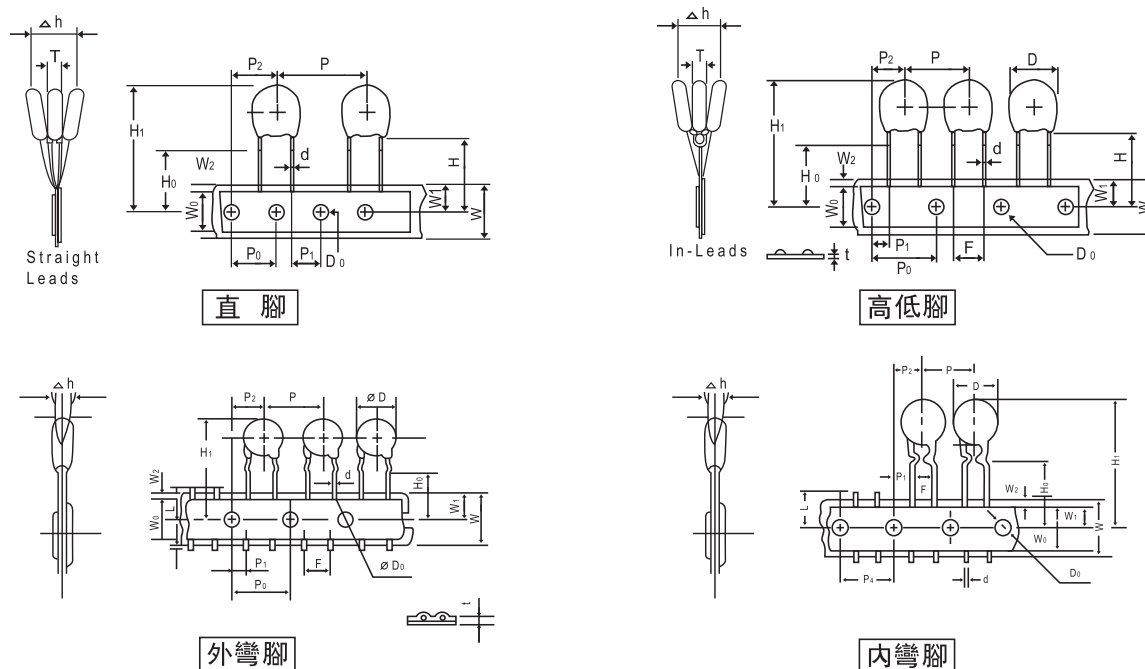
T max. Table

Unit: mm

Part No.	05D	07D	10D	14D	18D	20D	a (±0.4)
180K	3.3	3.5	3.9	4.0	4.2	4.3	1.0
220K	3.6	3.8	4.2	4.3	4.5	4.6	1.1
270K	3.8	4.0	4.4	4.5	4.7	4.8	1.2
330K	3.3	3.5	3.9	4.0	4.2	4.3	1.1
390K	3.5	3.7	4.1	4.2	4.4	4.5	1.3
470K	3.7	3.9	4.3	4.4	4.6	4.7	1.4
560K	4.0	4.2	4.6	4.7	4.9	5.0	1.5
680K	4.3	4.5	4.9	5.0	5.2	5.3	1.7
820K	3.3	3.5	3.9	4.0	4.2	4.3	1.0
101K	3.6	3.8	4.2	4.3	4.5	4.6	1.0
121K	3.8	4.0	4.4	4.5	4.7	4.8	1.1
151K	4.1	4.3	4.7	4.8	5.0	5.1	1.3
181K	3.2	3.4	3.8	3.9	4.1	4.2	1.0
201K	3.3	3.5	3.9	4.0	4.2	4.3	1.0
221K	3.4	3.6	4.0	4.1	4.3	4.4	1.1
241K	3.5	3.7	4.1	4.2	4.4	4.5	1.2
271K	3.7	3.9	4.2	4.3	4.5	4.6	1.3

Part No.	05D	07D	10D	14D	18D	20D	a (±0.4)
301K	3.9	4.1	4.3	4.4	4.6	4.7	1.4
331K	4.0	4.2	4.5	4.6	4.8	4.9	1.5
361K	4.1	4.3	4.7	4.8	5.0	5.1	1.2
391K	4.2	4.4	4.8	4.9	5.1	5.2	1.3
431K	4.4	4.6	5.0	5.1	5.3	5.4	1.4
471K	4.6	4.8	5.2	5.3	5.5	5.6	1.5
511K	4.8	5.0	5.3	5.4	5.6	5.7	1.7
561K	5.0	5.2	5.5	5.6	5.8	5.9	1.8
621K	5.3	5.5	5.7	5.8	6.0	6.1	2
681K	5.4	5.6	5.8	5.9	6.1	6.2	2.2
751K	5.6	5.8	6.0	6.1	6.3	6.4	2.4
781K	5.8	6.0	6.3	6.4	6.6	6.7	2.5
821K	-	6.3	6.5	6.6	6.8	6.9	2.6
911K	-	-	6.6	6.7	6.9	7.0	3
102K	-	-	7.0	7.1	7.3	7.4	3.3
112K	-	-	7.4	7.5	7.7	7.9	3.6
182K	-	-	-	11.5	11.7	11.9	5.5

Tape and Reel Specifications 捲帶裝尺寸規格



Symbol	PARAMETER	Model Size					
		□ 05D series	□ 07D series	□ 10D series	□ 10D series	□ 14D series	□ 14D series
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
P₀	Feed Hole Pitch	12.7±0.2	12.7±0.2	12.7±0.2	15.0±0.2	25.4±0.2	30.0±0.2
P₁	Feed Hole Center Lead	3.85±0.7	3.85±0.7	3.85±0.7	3.75±0.7	8.95±0.7	3.75±0.7
P₂	Hole Center to Component Center	6.35±0.7	6.35±0.7		7.5±1.3	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	5.0±0.8	7.5±0.8	7.5±0.8
△h	Component Alignment	2.0 Max	2.0 Max	2.0 Max	2.0 Max	2.0 Max	2.0 Max
W	Tape Width	18.0+1.0 18.0-0.5	18.0+1.0 18.0-0.5	18.0+1.0 18.0-0.5	18.0+1.0 18.0-0.5	18.0+1.0 18.0-0.5	18.0+1.0 18.0-0.5
W₀	Hold Down Tape Width	5.0 MIN.	5.0 MIN.	5.0 MIN.	5.0 MIN.	5.0 MIN.	5.0 MIN.
W₁	Hole Position	9.0+0.75 9.0-0.50	9.0+0.75 9.0-0.50	9.0+0.75 9.0-0.50	9.0+0.75 9.0-0.50	9.0+0.75 9.0-0.50	9.0+0.75 9.0-0.50
W₂	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 18.0-0.0	18.0+2.0 18.0-0.0	18.0+2.0 18.0-0.0	18.0+2.0 18.0-0.0	18.0+2.0 18.0-0.0	18.0+2.0 18.0-0.0
H₀	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
H₁	Component Height	29.0 Max	32.0 Max	36.0 Max	36.0 Max	40.0 Max	40.0 Max
D₀	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	Length of Clipped Lead	11.0 Max	11.0 Max	11.0 Max	11.0 Max	11.0 Max	11.0 Max

Unit : mm

Order Information of Taped Reel

Standard Products	Tape Reel Straight Lead	Tape Reel Crimped Lead	Min. Q'ty	Q'ty/Inner Box
CNR-05DXXXK	CNR-05DXXXK-TRS	CNR-05DXXXK-TRK	2000/1500	4000/3000
CNR-07DXXXK	CNR-07DXXXK-TRS	CNR-07DXXXK-TRK	2000/1500	4000/3000
CNR-10DXXXK	CNR-10DXXXK-TRS	CNR-10DXXXK-TRK	1500/1000	3000/2000
CNR-14DXXXK	CNR-14DXXXK-TRS	CNR-14DXXXK-TRK	1000/800	2000/1600

Note :

1."2000/1500" Packing in CNR-XXD180K to CNR-XXD271K are 2000 pcs, CNR-XXD301K to CNR-XXD471K with 1500 pcs.

2.Packing unit in pcs.

Packaging Specifications

Flat box				Reel				
Symbol	5D	7D	10D	Symbol	5D	7D	10D	14D
A	55 Max.			W	Approx. 45			55
B	330 Max.			D	360 Max.			
C	340 Max.			A	Approx. ϕ 30			
				B	Approx. ϕ 90			

Unit : mm

Order Information of Flat Box

Standard Products	Tape Box Straight Lead	Tape Box Crimped Lead	Max. Q'ty	Q'ty/Box
CNR-05DXXXK	CNR-05DXXXK-BTS	CNR-05DXXXK-BTK	2000/1500	4000/3000
CNR-07DXXXK	CNR-07DXXXK-BTS	CNR-07DXXXK-BTK	2000/1500	4000/3000
CNR-10DXXXK	CNR-10DXXXK-BTS	CNR-10DXXXK-BTK	1500/1000	3000/2000

Note :

1."2000/1500" Packing in CNR-XXD180K to CNR-XXD271K are 2000 pcs, CNR-XXD301K to CNR-XXD471K with 1500 pcs.

3.Packing unit in pcs.

Series			05D	07D	10D	14D
Symbol						
A max.	Varistor Voltage	18 to 270	13.0	15.0	19.5	22.5
	V1mA(V)	360 to 470	13.0	15.0	20.5	23.5
D max.			7.5	9.0	14.0	17.5
K			1.2 ± 0.4	1.2 ± 0.4	1.4 ± 0.4	1.4 ± 0.4
W			5.0 ± 1.0	5.0 ± 1.0	7.5 ± 1.0	7.5 ± 1.0
ϕ d			0.6	0.6	0.8	0.8

T max. See standard product specification table.

Order Information of Crimp Leads

Standard Products	Tape Reel Straight Lead	Tape Reel Crimped Lead	Min. Q'ty	Q'ty/Inner Box
CNR-05DXXXK	CNR-05DXXXK-TRS	CNR-05DXXXK-TRK	2000/1500	4000/3000
CNR-07DXXXK	CNR-07DXXXK-TRS	CNR-07DXXXK-TRK	2000/1500	4000/3000
CNR-10DXXXK	CNR-10DXXXK-TRS	CNR-10DXXXK-TRK	1500/1000	3000/2000
CNR-14DXXXK	CNR-14DXXXK-TRS	CNR-14DXXXK-TRK	1000/800	2000/1600

Note :

1.Packing unit in pcs.

Impulse Life Time Rating Curves 額定脈衝壽命次數曲線

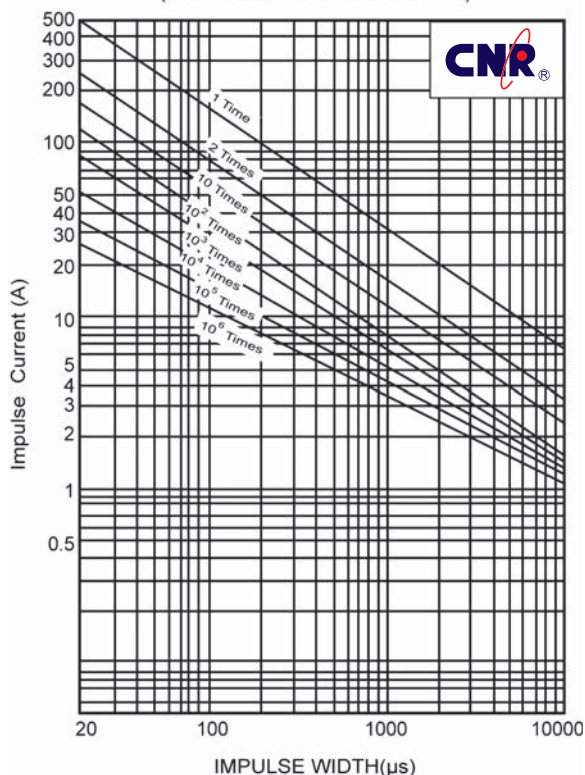
2 times: 5 minutes interval

up to 10 times: 2 minutes interval

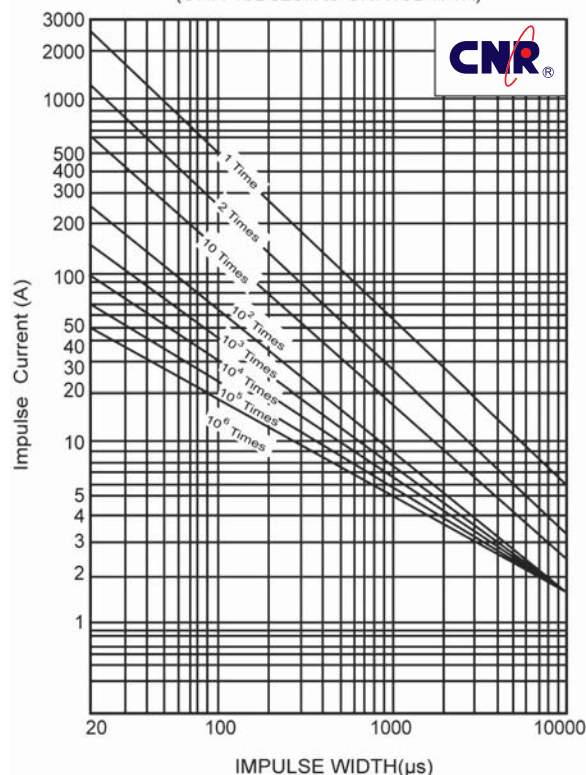
up to 10^6 times 10 seconds interval

10D Series

(CNR 10D180K to CNR10D680K)

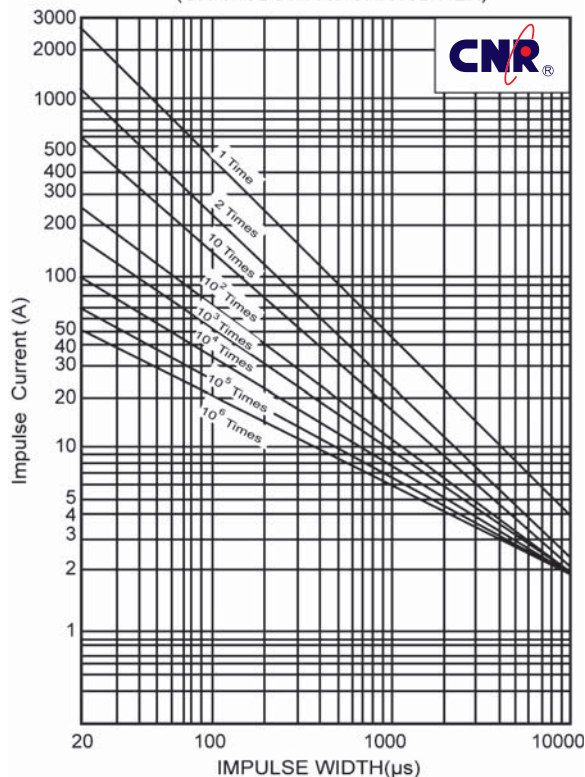


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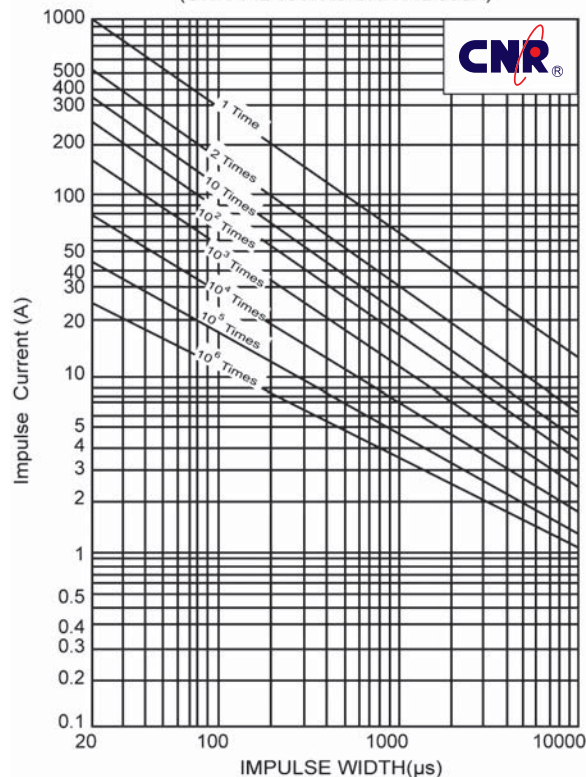


14D Series

(CNR 10D511K to CNR10D112K)



(CNR 14D180K to CNR14D680K)

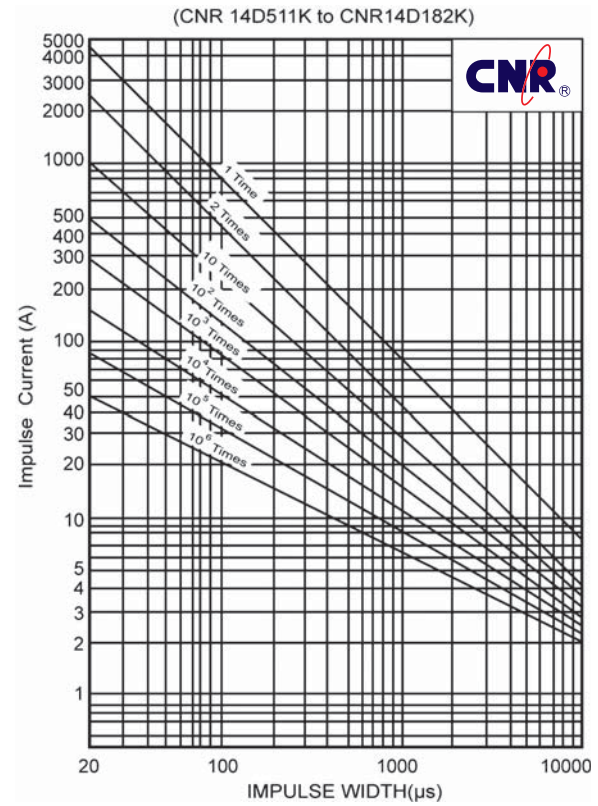
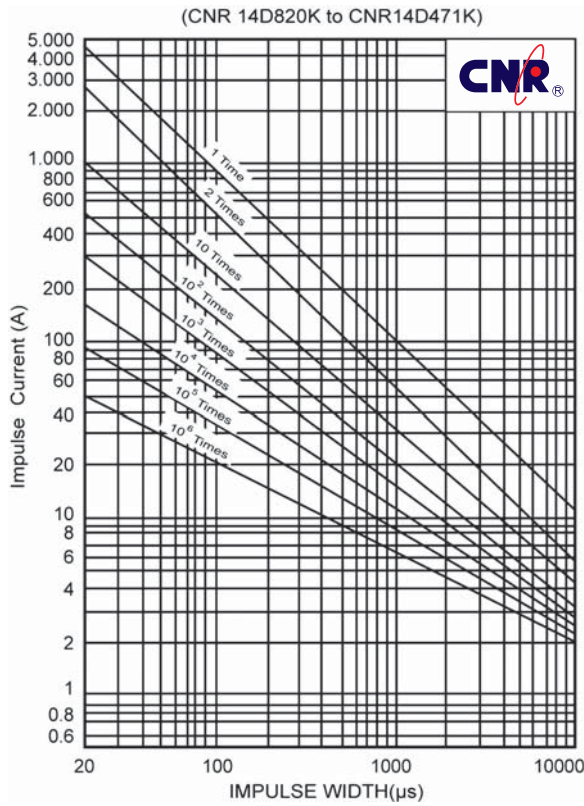


Impulse Life Time Rating Curves 額定脈衝壽命次數曲線

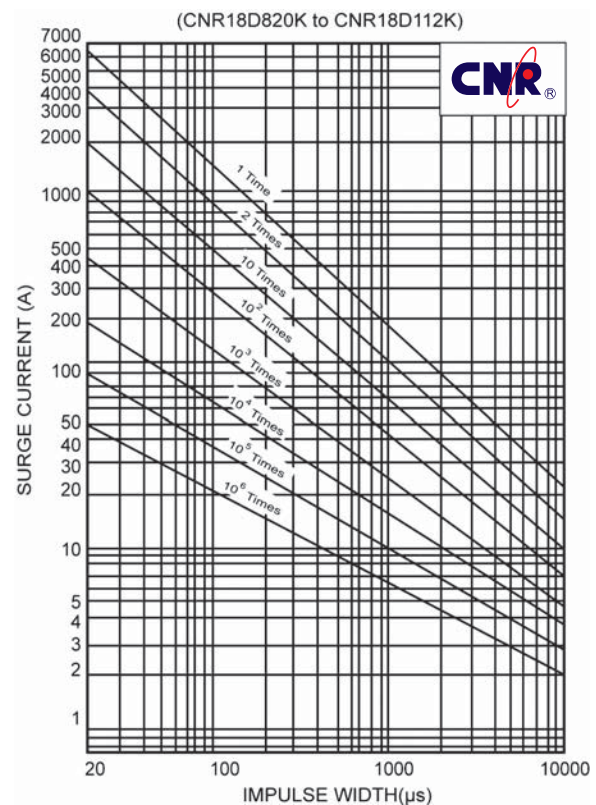
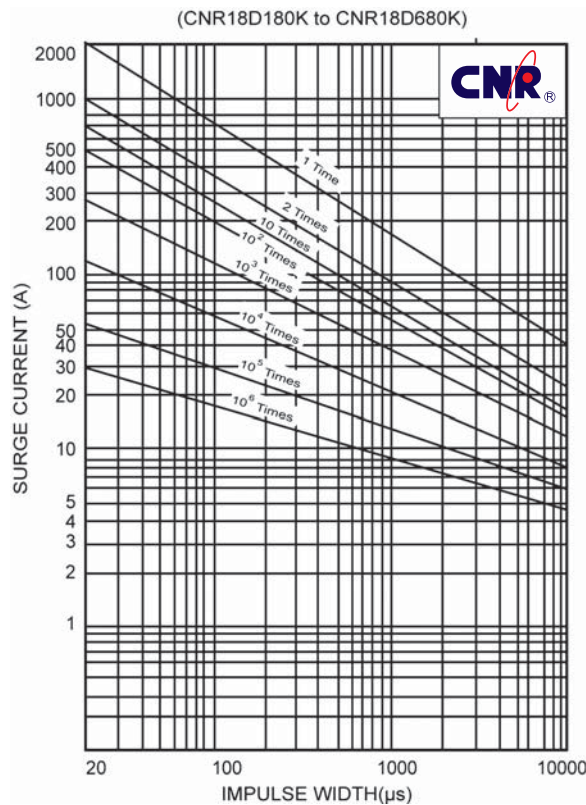
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up to 10 times: 2 minutes interval

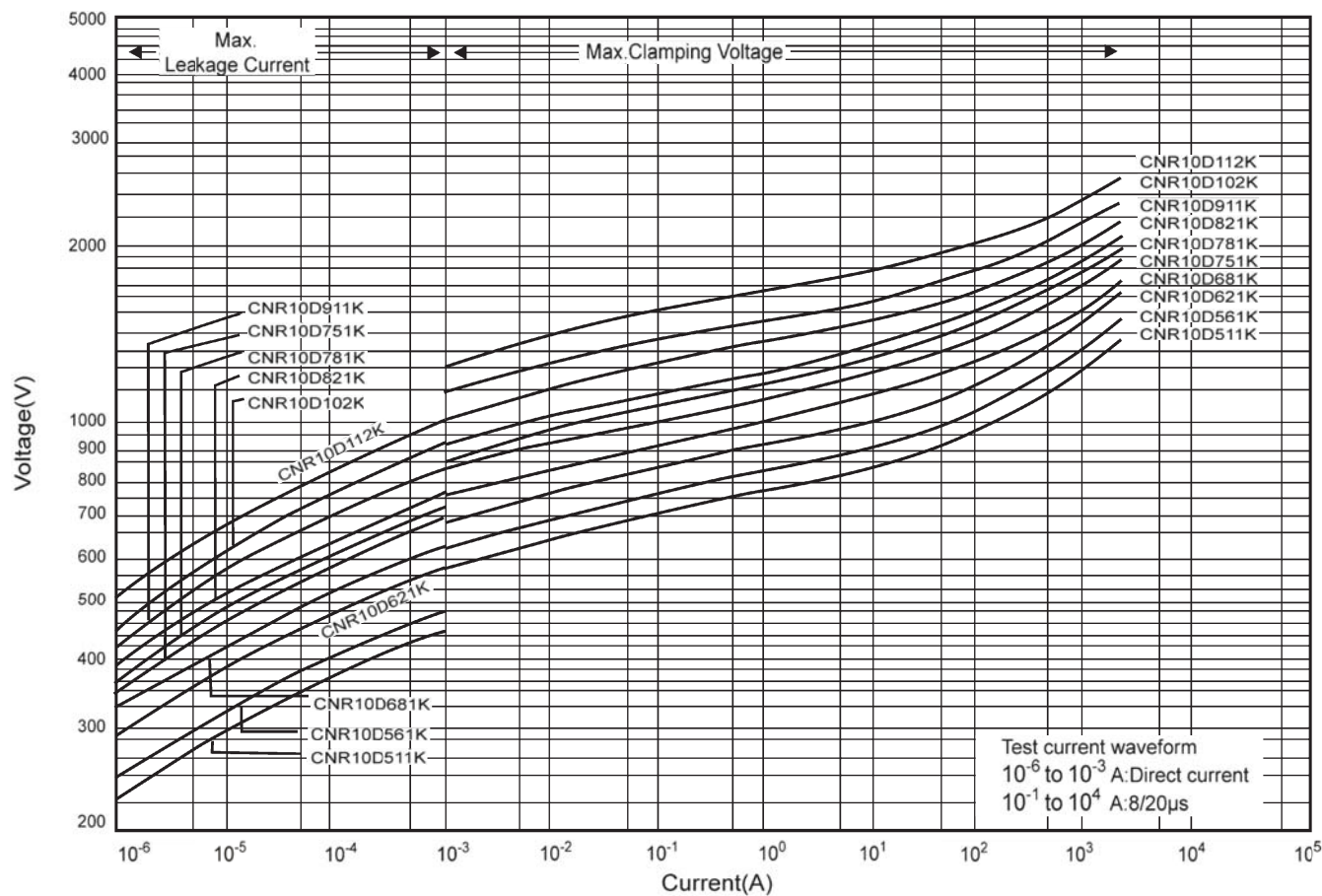
up to 10^6 times 10 seconds interval



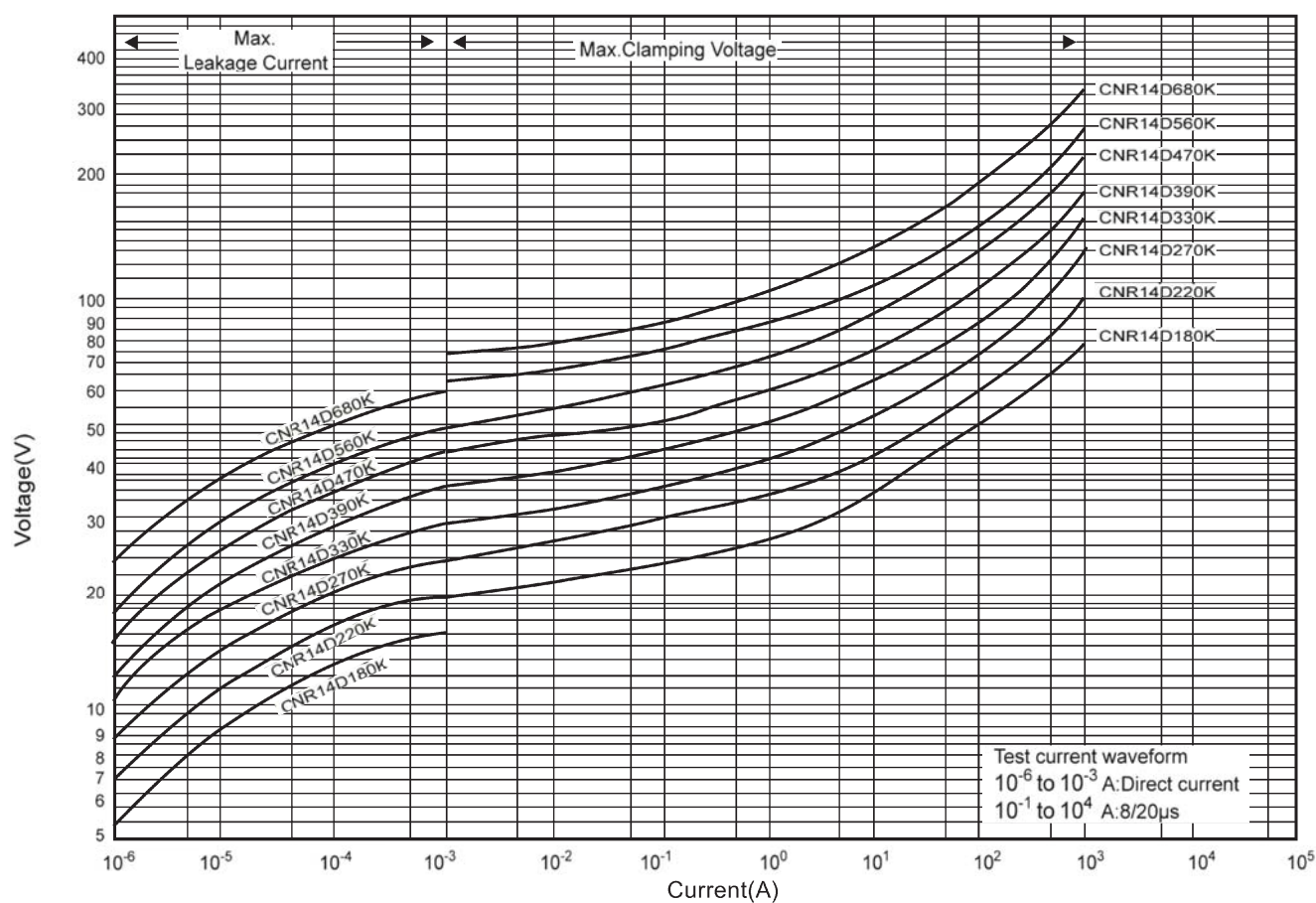
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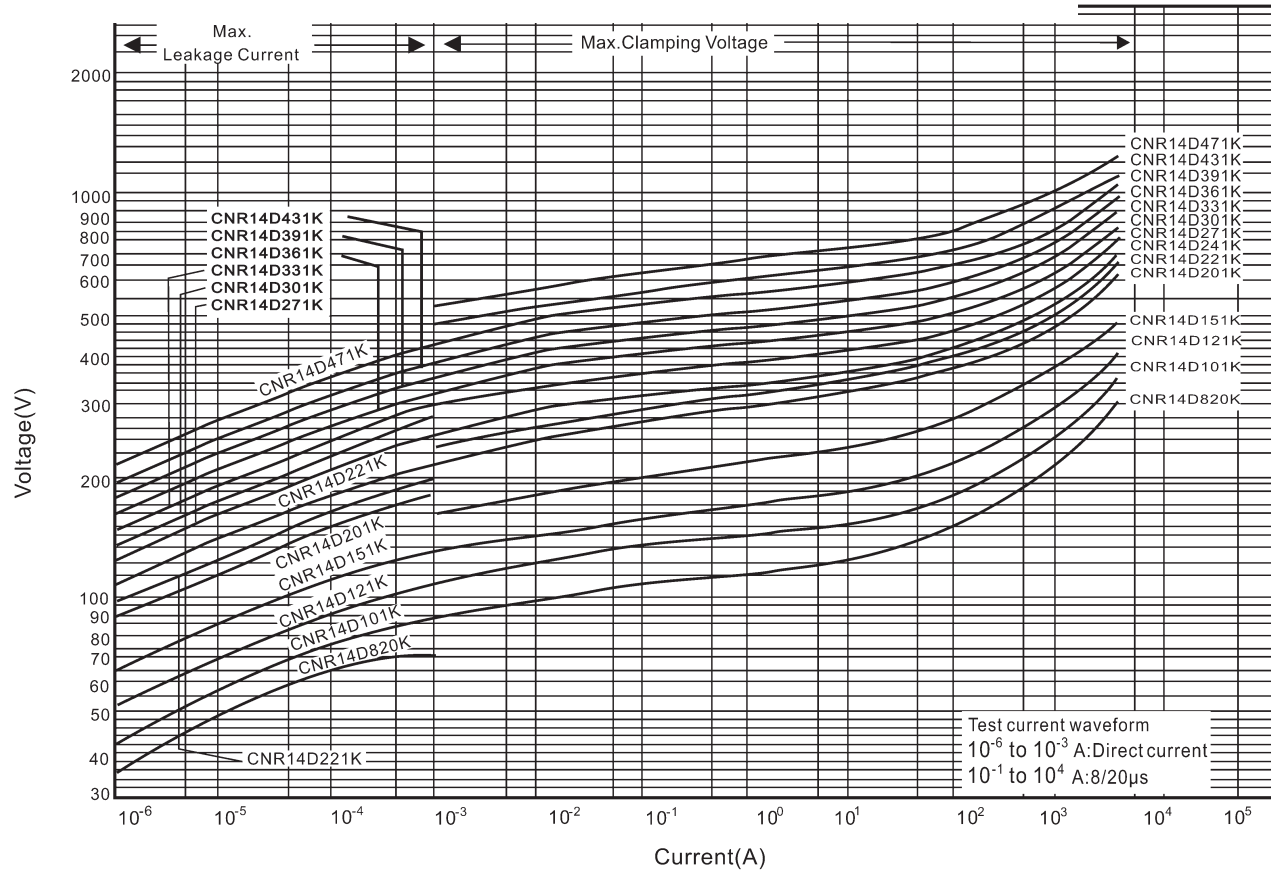
V-I Curve CNR10D511K to CNR10D112K 電壓-電流特性曲線



V-I Curve CNR14D180K to CNR14D680K 電壓-電流特性曲線



V-I Curve CNR14D820K to CNR14D471K 電壓-電流特性曲線



V-I Curve CNR14D511K to CNR14D182K 電壓-電流特性曲線

