

- Downsized from current Endurance with ripple current:10000hours at105°C;
- Non solvent resistant type, provides stability and keyed polarity
- Apply to traffic light controller, LED strobe lights and flashing lights

RoHS

Long life

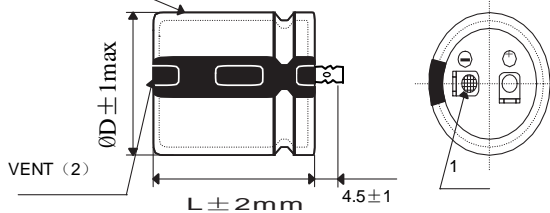


◆ SPECIFIC ATIONS

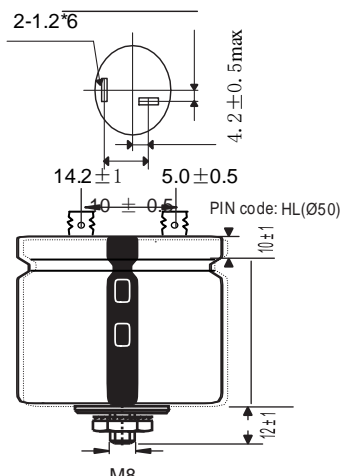
items	characteristics	
Category temperature Range	-25~+105°C	
Rated voltage Range	16~500 <sub>VDC</sub>	
Capacitance Tolerance	± 20% (M) <span style="float:right">20°C、120HZ</span>	
Leakage Current	I=3√CV or 5mA, whichever is smaller I: Where, I : Max. leakage current (µA)、C: Nominal capacitance (µF)、Rated voltage (V)at 20°Cafter 5 minutes)	
Dissipation Factor (MAX)	Rated voltage (Vdc)	16v~400V 420V~450V
	tanδ Max	0.15 0.20
Low Temperature characteristics	Rated voltage (Vdc)	16v~400V 420V~500V
	Z(-25°C)/Z(+20°C)	4 8
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with the rated ripple current is applied (the peak voltage shall not exceed the rated voltage) for 10,000 hours at 105°C	
	Capacitance change	≤±20% of the initial value
	D.F. (tanδ)	≤300% of the initial specified value
	Leakage current	≤The initial specified value
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1000 hours at 105°C without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to Item 4.1 of JIS C 5101-4	
	Capacitance change	≤±20% of the initial value
	D.F. (tanδ)	≤300% of the initial specified value
	Leakage current	≤The initial specified value

● Pin code HP (Ø22-35)

sleeve (PET: Black)

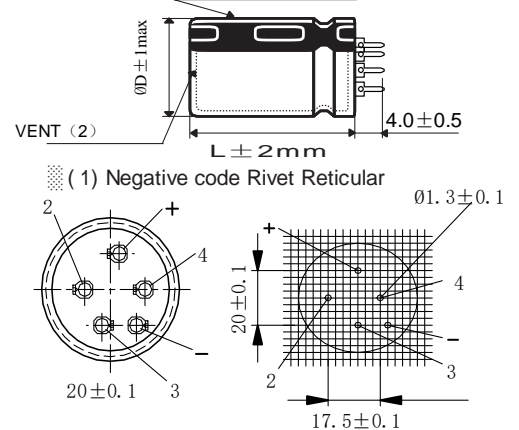


PC board pin-out

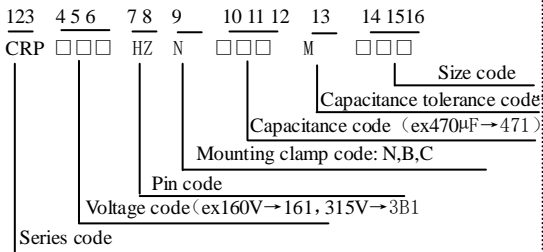


● Pin code :H5 (Ø 40) : Standard

sleeve (PET: Black)

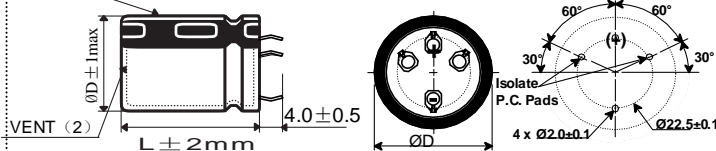


◆ PART NUMBERING SYSTEM

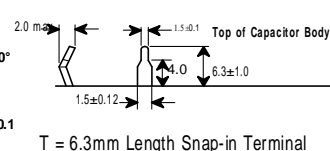


● Pin code: H4 (Ø 35) : Standard

sleeve (PET: Black)



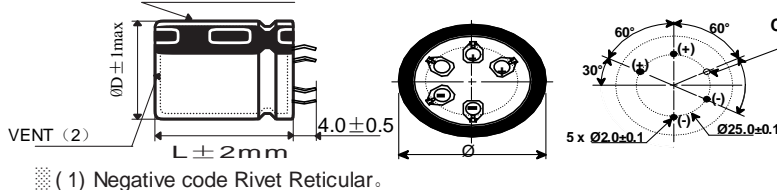
Circuit Board Mounting Holes



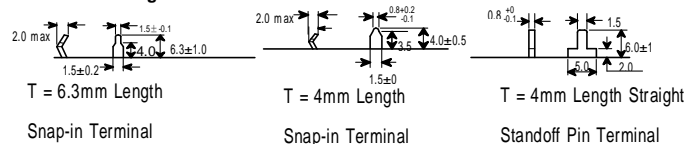
The standard design has no plastic disc

● Pin code :H5 (Ø 50) : Standard

sleeve (PET: Black)



Circuit Board Mounting Holes





**SRANDRAD RATINGS**

WV [Vdc]	cap [μ F]	Case size D x L [mm]	ESR 120 Hz 20°C [mΩ]	Ripple current (Ams/105 °C, 120Hz)	Par t NO.	WV [Vdc]	cap [μ F]	Case size D x L [mm]	ESR 120 Hz 20°C [mΩ]	Ripple current (Ams/105 °C, 120Hz)	Par t NO.
16V	22000	25×30	22	3.6	CRP160HPN223MQ30	25V	82000	35×100	6	13.5	CRP250HPN823MAA0
	27000	25×35	18	4.2	CRP160HPN273MQ35		82000	50×60	6	11.6	CRP250HPN823MC60
	39000	25×40	12	5.3	CRP160HPN393MQ40		120000	40×80	4	15.6	CRP250HPN124MU80
	33000	30×30	14	4.8	CRP160HPN333MR30		120000	40×100	4	17.1	CRP250HPN124MUA0
	39000	25×45	12	5.6	CRP160HPN393MQ45		120000	50×80	4	15.6	CRP250HPN124MV80
	47000	25×50	10	6.4	CRP160HPN473MQ50		150000	50×100	3	19.1	CRP250HPN154MCA0
	39000	30×35	12	5.5	CRP160HPN393MR35		40V	5600	25×30	68	2.0
	47000	35×30	10	6.4	CRP160HPN473MA30	6800		25×35	56	2.4	CRP400HPN682MQ35
	56000	30×40	9	7.0	CRP160HPN563MR40	8200		25×40	47	2.7	CRP400HPN822MQ40
	56000	35×35	9	7.4	CRP160HPN563MA35	8200		30×30	47	2.7	CRP400HPN822MR30
	68000	30×50	7	8.4	CRP160HPN683MR50	10000		25×45	38	3.2	CRP400HPN103MQ45
	68000	35×40	7	8.5	CRP160HPN683MA40	10000		30×35	38	3.1	CRP400HPN103MR35
	82000	35×45	6	9.7	CRP160HPN823MA45	10000		25×50	38	3.3	CRP400HPN103MQ50
	100000	30×70	5	11.6	CRP160HPN104MR70	12000		30×40	32	3.6	CRP400HPN123MR40
	82000	35×50	6	10.1	CRP160HPN823MA50	10000		35×30	38	3.3	CRP400HPN103MA30
	120000	40×50	4	12.9	CRP160HPN124MU50	15000		30×45	25	4.2	CRP400HPN153MR45
	150000	40×60	3	15.4	CRP160HPN154MU60	12000		35×35	32	3.8	CRP400HPN123MA35
	180000	35×100	3	19.7	CRP160HPN184MAA0	15000		30×50	25	4.4	CRP400HPN153MR50
	220000	40×80	2	20.8	CRP160HPN224MU80	15000		35×40	25	4.5	CRP400HPN153MA40
	180000	50×60	3	16.9	CRP160HPN184MC60	18000		35×45	21	5.1	CRP400HPN183MA45
270000	50×80	2	23.1	CRP160HPN274MV80	22000	35×50		17	5.8	CRP400HPN223MA50	
270000	40×100	2	25.3	CRP160HPN274MUA0	22000	30×70		17	6.1	CRP400HPN223MR70	
330000	50×100	1	27.9	CRP160HPN334MCA0	27000	35×60		14	6.9	CRP400HPN273MA60	
25V	10000	25×30	45	2.5	CRP250HPN103MQ30	27000		40×50	14	6.8	CRP400HPN273MU50
	12000	25×35	37	2.9	CRP250HPN123MQ35	33000		35×80	12	8.6	CRP400HPN333MA80
	15000	25×40	30	3.4	CRP250HPN153MQ40	33000		40×60	12	8.1	CRP400HPN333MU60
	15000	30×30	30	3.4	CRP250HPN153MR30	47000	35×100	8	11.3	CRP400HPN473MAA0	
	18000	25×45	25	3.9	CRP250HPN183MQ45	47000	40×80	8	10.8	CRP400HPN473MU80	
	18000	30×35	25	3.9	CRP250HPN183MR35	39000	50×60	10	8.8	CRP400HPN393MC60	
	18000	25×50	25	4.1	CRP250HPN183MQ50	56000	40×100	7	12.9	CRP400HPN563MUA0	
	22000	30×40	20	4.5	CRP250HPN223MR40	56000	50×80	7	11.7	CRP400HPN563MC80	
	18000	35×30	25	4.1	CRP250HPN183MA30	82000	50×100	5	15.5	CRP400HPN823MCA0	
	27000	30×45	17	5.1	CRP250HPN273MR45	63V	2700	25×30	106	1.6	CRP630HPN272MQ30
	27000	30×50	17	5.4	CRP250HPN273MR50		3300	25×35	87	1.9	CRP630HPN332MQ35
	22000	35×35	21	4.7	CRP250HPN223MA35		3900	25×40	73	2.2	CRP630HPN392MQ40
	27000	35×40	17	5.4	CRP250HPN273MA40		3900	30×30	73	2.1	CRP630HPN392MR30
	33000	35×45	14	6.3	CRP250HPN333MA45		4700	25×45	61	2.5	CRP630HPN472MQ45
	39000	30×70	12	7.4	CRP250HPN393MR70		4700	30×35	61	2.5	CRP630HPN472MR35
	39000	35×50	12	7.1	CRP250HPN393MA50		5600	25×50	51	0.0	CRP630HPN562MQ50
	47000	35×60	10	8.3	CRP250HPN473MA60		5600	30×40	51	2.8	CRP630HPN562MR40
	56000	40×50	8	8.9	CRP250HPN563MU50		5600	35×30	51	2.9	CRP630HPN562MA30
	56000	35×80	8	10.2	CRP250HPN563MA80		6800	30×45	42	3.3	CRP630HPN682MR45
	58000	40×60	7	10.5	CRP250HPN583MU60		6800	35×35	42	3.3	CRP630HPN682MA35

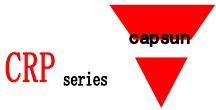
Product specifications in this catalog are subject to change without notice. Request our product specifications before purchase and/or use. Please use our products based on the information contained in this catalog and product specifications



WV [Vdc]	cap [μ F]	Case size D x L [mm]	ESR 120 Hz 20°C [mΩ]	Ripple current (Ams/105 °C, 120Hz)	Par t NO.	WV [Vdc]	cap [μ F]	Case size D x L [mm]	ESR 120 Hz 20°C [mΩ]	Ripple current (Ams/105 °C, 120Hz)	Par t NO.
63V	8200	30×50	35	3.7	CRP630HPN822MR50	100V	2200	25×45	72	2.3	CRP101HPN222MQ45
	8200	35×45	35	4.0	CRP630HPN822MA45		2200	25×50	72	2.4	CRP101HPN222MQ50
	12000	30×70	24	5.2	CRP630HPN123MR70		2200	35×30	72	2.4	CRP101HPN222MA30
	12000	35×60	24	5.3	CRP630HPN123MA60		2700	30×40	59	2.7	CRP101HPN272MR40
	15000	40×50	19	5.9	CRP630HPN153MU50		2700	30×45	59	2.8	CRP101HPN272MR45
	18000	35×80	16	7.3	CRP630HPN183MA80		2700	35×35	59	2.8	CRP101HPN272MA35
	18000	40×60	16	6.9	CRP630HPN183MU60		3300	30×50	48	3.2	CRP101HPN332MR50
	22000	50×60	13	7.6	CRP630HPN223MV60		3300	35×40	48	3.2	CRP101HPN332MA40
	22000	35×100	13	8.9	CRP630HPN223MAA0		3900	35×45	41	3.7	CRP101HPN392MA45
	22000	40×80	13	8.5	CRP630HPN223MU80		5600	30×70	28	4.7	CRP101HPN562MR70
	27000	40×100	11	10.3	CRP630HPN273MUA0		4700	35×50	34	4.2	CRP101HPN472MA50
	27000	50×80	11	9.4	CRP630HPN273MC80		5600	35×60	28	4.9	CRP101HPN562MA60
	39000	50×100	7	12.4	CRP630HPN393MCA0		5600	40×50	28	4.8	CRP101HPN562MU50
80V	1800	25×30	177	1.3	CRP800HPN182MQ30	6800	35×80	23	6.1	CRP101HPN682MA80	
	1800	25×35	177	1.3	CRP800HPN182MQ35	6800	40×60	23	5.7	CRP101HPN682MU60	
	2700	25×40	118	1.7	CRP800HPN272MQ40	10000	35×100	16	8.1	CRP101HPN103MAA0	
	2700	30×30	118	1.7	CRP800HPN272MR30	12000	40×80	13	8.4	CRP101HPN123MU80	
	3300	25×45	97	2.0	CRP800HPN332MQ45	10000	50×60	16	6.9	CRP101HPN103MC60	
	3900	25×50	82	2.3	CRP800HPN392MQ50	12000	50×80	13	8.4	CRP101HPN123MC80	
	3300	30×35	97	2.0	CRP800HPN332MR35	15000	40×100	11	10.3	CRP101HPN153MUA0	
	3900	35×30	82	2.3	CRP800HPN392MA30	18000	50×100	9	11.3	CRP101HPN183MCA0	
	3900	30×40	82	2.3	CRP800HPN392MR40	470	25×30	237	1.1	CRP161HPN471MQ30	
	4700	30×45	68	2.6	CRP800HPN472MR45	560	25×35	199	1.3	CRP161HPN561MQ35	
	4700	35×35	68	2.6	CRP800HPN472MA35	680	25×40	164	1.5	CRP161HPN681MQ40	
	5600	30×50	57	2.9	CRP800HPN562MR50	680	30×30	164	1.4	CRP161HPN681MR30	
	5600	35×40	57	3.0	CRP800HPN562MA40	820	25×45	136	1.7	CRP161HPN821MQ45	
	6800	35×45	47	3.4	CRP800HPN682MA45	820	30×35	136	1.7	CRP161HPN821MR35	
	6800	35×50	47	3.6	CRP800HPN682MA50	1000	25×50	111	1.9	CRP161HPN102MQ50	
	8200	30×70	39	4.1	CRP800HPN822MR70	1000	30×40	111	1.9	CRP161HPN102MR40	
	10000	35×60	32	4.6	CRP800HPN103MA60	1000	35×30	111	1.9	CRP161HPN102MA30	
	10000	40×50	32	4.6	CRP800HPN103MU50	1200	30×45	93	2.2	CRP161HPN122MR45	
	12000	35×80	27	5.7	CRP800HPN123MA80	1200	35×35	93	2.2	CRP161HPN122MA35	
	12000	40×60	27	5.3	CRP800HPN123MU60	1500	30×50	74	2.6	CRP161HPN152MR50	
18000	35×100	18	7.6	CRP800HPN183MAA0	1500	35×40	74	2.6	CRP161HPN152MA40		
15000	50×60	21	6.0	CRP800HPN153MV60	1800	35×45	62	3.0	CRP161HPN182MA45		
18000	40×80	18	7.3	CRP800HPN183MU80	1800	35×50	62	3.1	CRP161HPN182MA50		
22000	50×80	14	8.1	CRP800HPN223MC80	2200	30×70	51	3.6	CRP161HPN222MR70		
22000	40×100	14	8.8	CRP800HPN223MUA0	2200	35×60	51	3.7	CRP161HPN222MA60		
27000	50×100	12	9.8	CRP800HPN273MCA0	2700	40×50	41	4.0	CRP161HPN272MU50		
100V	1200	25×30	133	1.5	CRP101HPN122MQ30	3300	35×80	34	5.0	CRP161HPN332MA80	
	1500	25×35	106	1.7	CRP101HPN152MQ35	3300	40×60	34	4.7	CRP161HPN332MU60	
	1800	25×40	88	2.0	CRP101HPN182MQ40	3900	35×100	29	6.0	CRP161HPN392MAA0	
	1800	30×30	88	2.0	VSQ101HPN182MR30	3900	50×60	29	5.2	CRP161HPN392MC60	



WV [Vdc]	cap [μ F]	Case size D x L [mm]	ESR 120 Hz 20°C [mΩ]	Ripple current (Ams/105 °C, 120Hz)	Par t NO.	WV [Vdc]	cap [μ F]	Case size D x L [mm]	ESR 120 Hz 20°C [mΩ]	Ripple current (Ams/105 °C, 120Hz)	Par t NO.	
160V	4700	40×80	24	6.3	CRP161HPN472MU80	350V	560	35×45	171	1.8	CRP351HPN561MA45	
	5600	40×100	20	7.5	CRP161HPN562MUA0		680	35×50	141	2.1	CRP351HPN681MA50	
	5600	50×80	20	6.9	CRP161HPN562MC80		820	30×70	117	2.3	CRP351HPN821MR70	
	6800	50×100	16	8.3	CRP161HPN682MCA0		820	35×60	117	2.4	CRP351HPN821MA60	
200V	470	25×30	203	1.2	CRP201HPN471MQ30		1000	40×50	96	2.6	CRP351HPN102MU50	
	560	25×35	171	1.4	CRP201HPN561MQ35		1200	35×80	80	3.3	CRP351HPN122MA80	
	680	25×40	141	1.6	CRP201HPN681MQ40		1200	40×60	80	3.1	CRP351HPN122MU60	
	680	30×30	141	1.6	CRP201HPN681MR30		1500	35×100	64	4.0	CRP351HPN152MAA0	
	820	25×45	117	1.8	CRP201HPN821MQ45		1500	50×60	64	3.4	CRP351HPN152MC60	
	820	30×35	117	1.8	CRP201HPN821MR35		1800	40×80	53	4.2	CRP351HPN182MU80	
	1000	35×30	96	2.1	CRP201HPN102MA30		1800	40×100	53	4.6	CRP351HPN182MUA0	
	1000	25×50	96	2.1	CRP201HPN102MQ50		2200	50×80	43	4.7	CRP351HPN222MC80	
	1000	30×40	96	2.1	CRP201HPN102MR40		2700	50×100	35	5.6	CRP351HPN272MCA0	
	1200	30×45	80	2.4	CRP201HPN122MR45		400V	180	25×30	708	0.6	CRP401HPN181MQ30
	1500	30×50	64	2.8	CRP201HPN152MR50			180	22×40	708	0.7	CRP401HPN181ME40
	1200	35×35	80	2.4	CRP201HPN122MA35			220	25×35	579	0.7	CRP401HPN221MQ35
	1500	35×40	64	2.8	CRP201HPN152MA40	270		25×40	472	0.9	CRP401HPN271MQ40	
	1800	35×45	53	3.2	CRP201HPN182MA45	270		30×30	472	0.8	CRP401HPN271MR30	
	1800	35×50	53	3.3	CRP201HPN182MA50	330		25×45	386	1.0	CRP401HPN331MQ45	
	2200	30×70	43	3.8	CRP201HPN222MR70	330		25×50	386	1.0	CRP401HPN331MQ50	
	2200	35×60	43	4.0	CRP201HPN222MA60	330		30×35	386	1.0	CRP401HPN331MR35	
	3300	35×80	29	5.4	CRP201HPN332MA80	390		35×30	327	1.1	CRP401HPN391MA30	
	2700	40×50	35	4.3	CRP201HPN272MU50	390		30×40	327	1.1	CRP401HPN391MR40	
	3300	40×60	29	5.1	CRP201HPN332MU60	470		35×35	271	1.3	CRP401HPN471MA35	
	3900	35×100	24	6.5	CRP201HPN392MAA0	470		30×45	271	1.3	CRP401HPN471MR45	
	4700	40×80	20	6.8	CRP201HPN472MU80	560		30×50	227	1.5	CRP401HPN561MR50	
	3900	50×60	24	5.6	CRP201HPN392MV60	560		35×40	227	1.6	CRP401HPN561MA40	
	5600	40×100	17	8.1	CRP201HPN562MUA0	680		30×70	187	1.8	CRP401HPN681MR70	
5600	50×80	17	7.4	CRP201HPN562MC80	680	35×60		187	1.8	CRP401HPN681MA60		
6800	50×100	14	9.0	CRP201HPN682MCA0	820	35×50		155	2.0	CRP401HPN821MA50		
350V	180	25×30	531	0.7	CRP351HPN181MQ30	820		35×60	155	2.1	CRP401HPN821MA60	
	220	25×35	434	0.9	CRP351HPN221MQ35	820		40×50	155	2.1	CRP401HPN821MU50	
	270	25×40	354	1.0	CRP351HPN271MQ40	1200		35×80	106	2.8	CRP401HPN122MA80	
	270	30×30	354	1.0	CRP351HPN271MR30	1200		40×60	106	2.7	CRP401HPN122MU60	
	330	25×45	290	1.2	CRP351HPN331MQ45	1500		35×100	85	3.5	CRP401HPN152MAA0	
	330	30×35	290	1.1	CRP351HPN331MR35	1500		40×80	85	3.3	CRP401HPN152MU80	
	390	35×30	245	1.3	CRP351HPN391MA30	1800		50×60	71	3.3	CRP401HPN182MV60	
	390	25×50	245	1.3	CRP351HPN391MQ50	1800	40×100	71	4.0	CRP401HPN182MUA0		
	390	30×40	245	1.3	CRP351HPN391MR40	1800	50×80	71	3.6	CRP401HPN182MC80		
	470	30×45	203	1.5	CRP351HPN471MR45	2700	50×100	47	4.9	CRP401HPN272MCA0		
	470	35×35	203	1.5	CRP351HPN471MA35	450V	120	25×30	929	0.6	CRP451HPN121MQ30	
	560	30×50	171	1.7	CRP351HPN561MR50		150	25×35	743	0.7	CRP451HPN151MQ35	
	560	35×40	171	1.7	CRP351HPN561MA40		180	25×40	619	0.8	CRP451HPN181MQ40	



WV [Vdc]	cap [μ F]	Case size D x L [mm]	ESR 120 Hz 20°C [mΩ]	Ripple current (Ams/105 °C, 120Hz)	Par t NO.	WV [Vdc]	cap [μ F]	Case size D x L [mm]	ESR 120 Hz 20°C [mΩ]	Ripple current (Ams/105 °C, 120Hz)	Par t NO.
450V	220	25×45	507	0.9	CRP451HPN221MQ45	500V	120	25×35	796	0.6	CRP501HPN121MQ35
	180	30×30	619	0.7	CRP451HPN181MR30		150	25×40	637	0.7	CRP501HPN151MQ40
	220	30×35	507	0.9	CRP451HPN221MR35		180	25×45	531	0.9	CRP501HPN181MQ45
	220	25×50	507	0.9	CRP451HPN221MQ50		150	30×30	637	0.7	CRP501HPN151MR30
	270	30×40	413	1.0	CRP451HPN271MR40		180	30×35	531	0.8	CRP501HPN181MR35
	220	35×30	507	0.9	CRP451HPN221MA30		220	25×50	434	1.0	CRP501HPN221MQ50
	270	30×45	413	1.0	CRP451HPN271MR45		220	30×40	434	1.0	CRP501HPN221MR40
	270	35×35	413	1.1	CRP451HPN271MA35		180	35×30	531	0.9	CRP501HPN181MA30
	330	30×50	338	1.2	CRP451HPN331MR50		270	30×45	354	1.1	CRP501HPN271MR45
	390	35×40	286	1.3	CRP451HPN391MA40		270	35×35	354	1.1	CRP501HPN271MA35
	390	35×45	286	1.4	CRP451HPN391MA45		270	30×50	354	1.2	CRP501HPN271MR50
	560	30×70	199	1.8	CRP451HPN561MR70		270	35×40	354	1.2	CRP501HPN271MA40
	470	35×50	237	1.6	CRP451HPN471MA50		390	35×45	245	1.5	CRP501HPN391MA45
	560	35×60	199	1.9	CRP451HPN561MA60		470	30×70	203	1.8	CRP501HPN471MR70
	560	40×50	199	1.8	CRP451HPN561MU50		390	35×50	245	1.6	CRP501HPN391MA50
	820	35×80	136	2.5	CRP451HPN821MA80		560	35×60	171	2.0	CRP501HPN561MA60
	1200	40×60	93	2.8	CRP451HPN122MU60		680	35×80	141	2.5	CRP501HPN681MA80
	1000	35×100	111	3.0	CRP451HPN102MAA0		680	40×60	141	2.3	CRP501HPN681MU60
	1000	50×60	111	2.6	CRP451HPN102MC60		820	35×100	117	3.0	CRP501HPN821MAA0
	1200	40×80	93	3.3	CRP451HPN122MU80		820	50×60	117	2.6	CRP501HPN821MC60
1500	40×100	74	4.0	CRP451HPN152MUA0	820	40×100	117	3.1	CRP501HPN821MUA0		
1200	50×80	93	3.2	CRP451HPN122MC80	1200	40×80	80	3.4	CRP501HPN122MU80		
1800	50×100	62	4.3	CRP451HPN182MCA0	1200	50×80	80	3.4	CRP501HPN122MC80		
500V	120	25×30	796	0.6	CRP501HPN121MQ30	1500	50×100	64	4.2	CRP501HPN152MCA0	

## ◆ RATED RIPPLE CURRENT MULTIPLIERS

## ● Frequency Multipliers

Frequency (HZ)	50	60	120	500	1M	10M
16~100vc	0.93	0.95	1.00	1.05	1.08	1.15
160~500vc	0.75	0.80	1.00	1.20	1.25	1.40

×The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5°C rise when long life performance is required in actual use, the rms ripple current has to be reduced.