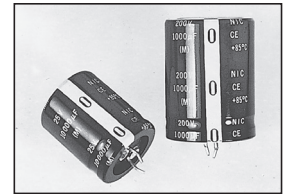


FEATURES

- EXPANDED VALUE RANGE
- LONG LIFE AT +105°C (2,000 HOURS)
- HIGH RIPPLE CURRENT IN SMALL SIZE
- SUITABLE FOR SWITCHING POWER SUPPLIES

EXPANDED VALUE RANGE

**RoHS
Compliant**
includes all homogeneous materials



SPECIFICATIONS

*See Part Number System for Details

Operating Temperature Range		-25 ~ +105°C					
Rated Voltage Range		400 ~ 500Vdc					
Rated Capacitance Range		56 ~ 1200μF					
Capacitance Tolerance		±20% (M)					
Max. Leakage Current (μA) After 5 minutes (20°C)		3 x √C(μF)V					
Max. Tan δ at 120Hz/20°C	W.V. (Vdc)	400	420	450	475	500	
	Tan δ max.	0.20	0.20	0.20	0.25	0.25	
Surge Voltage	W.V. (Vdc)	400	420	450	475	500	
	S.V. (Vdc)	450	470	500	525	550	
Ripple Current Frequency Correction Factors	Frequency (Hz)	50 (60)	100 (120)	300	500	1K	10K
	Multiplier	0.80	1.00	1.15	1.20	1.25	1.40
Low Temperature Stability	W.V. (Vdc)	400	420	450	475	500	
	Z-25°C/Z+20°C	8 max.			12 max.		
Load Life Test 2,000 hours at +105°C	Capacitance Change	Within ±20% of initial measured value					
	Tan δ	Less than 200% of specified maximum value					
	Leakage Current	Less than specified maximum value					
Shelf Life Test 1,000 hours at +105°C (no load)	Capacitance Change	Within ±20% of initial measured value					
	Tan δ	Less than 200% of specified maximum value					
	Leakage Current	Less than specified maximum value					
Resistance to Soldering Heat Immersion +260°C ± 5°C for 10 ± 1 seconds up to 2.0mm from capacitor body	Capacitance Change	Within ±10% of initial measured value					
	Tan δ	Less than specified maximum value					
	Leakage Current	Less than specified maximum value					

MECHANICAL CHARACTERISTICS:

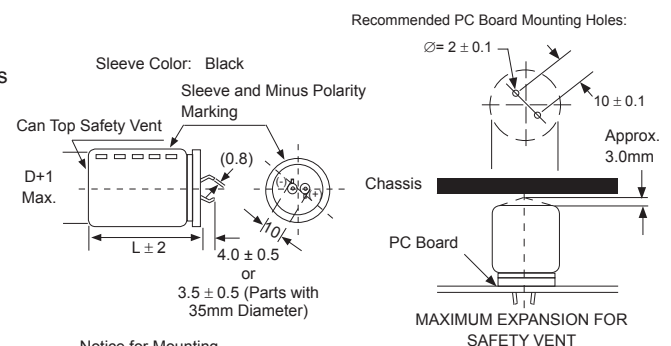
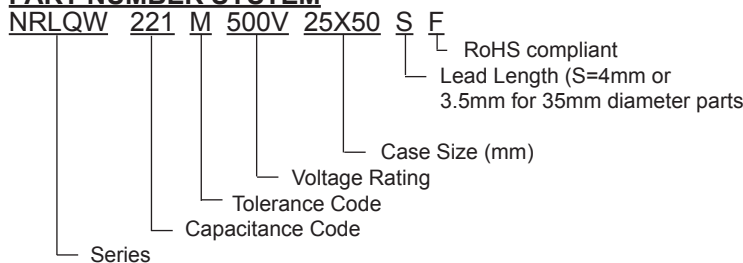
1. Safety Vent:

The capacitors are provided with a pressure sensitive safety vent on the top of can. The vent is designed to rupture in the event that high internal gas pressure is developed by circuit malfunction or mis-use like reverse voltage.

2. Terminal Strength:

Each terminal of the capacitor shall withstand an axial pull force of 2.0Kg for a period 10 seconds or a radial bent force of 2.5Kg for a period of 30 seconds.

PART NUMBER SYSTEM



Notice for Mounting

The space from the top of the can shall be more than (3mm) from chassis or other construction materials so that safety vent has room to expand in case of emergency.

PRECAUTIONS

Please review the notes on correct use, safety and precautions found at: www.niccomp.com/precautions
 If in doubt or uncertainty, please review your specific application - process details with NIC's technical support personnel: tpmg@niccomp.com



STANDARD PRODUCT LIST, CASE SIZE AND SPECIFICATIONS

Part Number	Cap. (μ F)	W.V. (Vdc)	Case Size DxL (mm)	Leakage Current (μ A)	ESR (Ω @20°C)	Max. Ripple Current (Arms @ 105°C)	
					120Hz	120Hz	10K ~ 50KHz
NRLQW121M400V22X25SF	120	400	22X25	657	2.76	0.92	1.288
NRLQW151M400V22X30SF	150		22X30	734	2.21	1.08	1.512
NRLQW181M400V22X30SF	180		22X30	804	1.84	1.15	1.610
NRLQW181M400V25X25SF	180		25X25	804	1.84	1.12	1.568
NRLQW221M400V22X35SF	220		22X35	889	1.50	1.32	1.848
NRLQW221M400V25X30SF	220		25X30	889	1.50	1.30	1.820
NRLQW271M400V22X40SF	270		22X40	985	1.22	1.50	2.100
NRLQW271M400V25X35SF	270		25X35	985	1.22	1.49	2.086
NRLQW271M400V30X25SF	270		30X25	985	1.22	1.33	1.862
NRLQW331M400V22X50SF	330		22X50	1089	1.00	1.76	2.464
NRLQW331M400V25X40SF	330		25X40	1089	1.00	1.68	2.352
NRLQW331M400V30X30SF	330		30X30	1089	1.00	1.55	2.170
NRLQW331M400V35X25SF	330		35X25	1089	1.00	1.44	2.016
NRLQW391M400V22X55SF	390		22X55	1184	0.85	1.94	2.716
NRLQW391M400V25X45SF	390		25X45	1184	0.85	1.86	2.604
NRLQW391M400V30X35SF	390		30X35	1184	0.85	1.75	2.450
NRLQW391M400V35X30SF	390		35X30	1184	0.85	1.63	2.282
NRLQW471M400V25X50SF	470		25X50	1300	0.70	2.07	2.898
NRLQW471M400V30X40SF	470		30X40	1300	0.70	1.97	2.758
NRLQW471M400V35X30SF	470		35X30	1300	0.70	1.68	2.352
NRLQW561M400V25X60SF	560		25X60	1419	0.59	2.37	3.318
NRLQW561M400V30X45SF	560		30X45	1419	0.59	2.18	3.052
NRLQW561M400V35X35SF	560		35X35	1419	0.59	1.92	2.688
NRLQW681M400V30X50SF	680		30X50	1564	0.48	2.41	3.374
NRLQW681M400V35X40SF	680		35X40	1564	0.48	2.15	3.010
NRLQW821M400V30X60SF	820		30X60	1718	0.40	2.76	3.864
NRLQW821M400V35X45SF	820		35X45	1718	0.40	2.37	3.318
NRLQW102M400V35X55SF	1000		35X55	1897	0.33	2.78	3.892
NRLQW122M400V35X60SF	1200		35X60	2078	0.27	2.95	4.130
NRLQW101M420V22X25SF	100	420	22X25	614	3.31	0.85	1.190
NRLQW121M420V22X30SF	120		22X30	673	2.76	0.98	1.372
NRLQW151M420V22X30SF	150		22X30	752	2.21	1.06	1.484
NRLQW151M420V25X25SF	150		25X25	752	2.21	1.04	1.456
NRLQW181M420V22X35SF	180		22X35	824	1.84	1.20	1.680
NRLQW181M420V25X30SF	180		25X30	824	1.84	1.20	1.680
NRLQW221M420V22X40SF	220		22X40	911	1.50	1.37	1.918
NRLQW221M420V25X30SF	220		25X30	911	1.50	1.28	1.792
NRLQW221M420V30X25SF	220		30X25	911	1.50	1.24	1.736
NRLQW271M420V22X50SF	270		22X50	1010	1.22	1.62	2.268
NRLQW271M420V25X35SF	270		25X35	1010	1.22	1.47	2.058
NRLQW271M420V30X30SF	270		30X30	1010	1.22	1.44	2.016
NRLQW271M420V35X25SF	270		35X25	1010	1.22	1.32	1.848
NRLQW331M420V22X60SF	330		22X60	1116	1.00	1.87	2.618
NRLQW331M420V25X45SF	330		25X45	1116	1.00	1.75	2.450
NRLQW331M420V30X35SF	330		30X35	1116	1.00	1.65	2.310
NRLQW331M420V35X30SF	330		35X30	1116	1.00	1.56	2.184
NRLQW391M420V25X50SF	390		25X50	1214	0.85	1.93	2.702
NRLQW391M420V30X40SF	390		30X40	1214	0.85	1.84	2.576
NRLQW391M420V35X30SF	390		35X30	1214	0.85	1.62	2.268
NRLQW471M420V25X60SF	470		25X60	1332	0.70	2.21	3.094
NRLQW471M420V30X45SF	470		30X45	1332	0.70	2.05	2.870
NRLQW471M420V35X35SF	470		35X35	1332	0.70	1.86	2.604
NRLQW561M420V30X50SF	560		30X50	1454	0.59	2.25	3.150
NRLQW561M420V35X40SF	560		35X40	1454	0.59	2.10	2.940
NRLQW681M420V30X60SF	680		30X60	1603	0.48	2.59	3.626
NRLQW681M420V35X45SF	680		35X45	1603	0.48	2.29	3.206
NRLQW821M420V35X50SF	820		35X50	1760	0.40	2.50	3.500
NRLQW102M420V35X60SF	1000		35X60	1944	0.33	2.88	4.032

New Part Numbers are Highlighted



STANDARD PRODUCT LIST, CASE SIZE AND SPECIFICATIONS

Part Number	Cap. (μ F)	W.V. (Vdc)	Case Size DxL (mm)	Leakage Current (μ A)	ESR (Ω @20°C)	Max. Ripple Current (Arms @ 105°C)	
					120Hz	120Hz	10K ~ 50KHz
NRLQW101M450V22X25SF	100	450	22X25	636	3.31	0.85	1.190
NRLQW121M450V22X30SF	120		22X30	697	2.76	0.98	1.372
NRLQW121M450V25X25SF	120		25X25	697	2.76	0.96	1.344
NRLQW151M450V22X35SF	150		22X35	779	2.21	1.13	1.582
NRLQW151M450V25X30SF	150		25X30	779	2.21	1.12	1.568
NRLQW181M450V22X40SF	180		22X40	853	1.84	1.28	1.792
NRLQW181M450V25X30SF	180		25X30	853	1.84	1.20	1.680
NRLQW181M450V30X25SF	180		30X25	853	1.84	1.18	1.652
NRLQW221M450V22X45SF	220		22X45	943	1.50	1.44	2.016
NRLQW221M450V25X35SF	220		25X35	943	1.50	1.37	1.918
NRLQW221M450V30X30SF	220		30X30	943	1.50	1.36	1.904
NRLQW271M450V22X50SF	270		22X50	1045	1.22	1.61	2.254
NRLQW271M450V25X40SF	270		25X40	1045	1.22	1.56	2.184
NRLQW271M450V30X30SF	270		30X30	1045	1.22	1.44	2.016
NRLQW271M450V35X25SF	270		35X25	1045	1.22	1.33	1.862
NRLQW331M450V22X60SF	330		22X60	1156	1.00	1.86	2.604
NRLQW331M450V25X50SF	330		25X50	1156	1.00	1.82	2.548
NRLQW331M450V30X35SF	330		30X35	1156	1.00	1.64	2.296
NRLQW331M450V35X30SF	330		35X30	1156	1.00	1.54	2.156
NRLQW391M450V25X55SF	390		25X55	1256	0.85	2.01	2.814
NRLQW391M450V30X40SF	390		30X40	1256	0.85	1.83	2.562
NRLQW391M450V35X35SF	390		35X35	1256	0.85	1.76	2.464
NRLQW471M450V25X60SF	470		25X60	1379	0.70	2.21	3.094
NRLQW471M450V30X45SF	470		30X45	1379	0.70	2.05	2.870
NRLQW471M450V35X40SF	470		35X40	1379	0.70	1.97	2.758
NRLQW561M450V30X50SF	560		30X50	1505	0.59	2.26	3.164
NRLQW561M450V35X45SF	560		35X45	1505	0.59	2.18	3.052
NRLQW681M450V30X60SF	680		30X60	1659	0.48	2.59	3.626
NRLQW681M450V35X50SF	680		35X50	1659	0.48	2.38	3.332
NRLQW821M450V35X60SF	820		35X60	1822	0.40	2.74	3.836
NRLQW680M475V22X25SF	68	475	22X25	539	6.09	0.67	0.938
NRLQW820M475V22X30SF	82		22X30	592	5.05	0.77	1.078
NRLQW101M475V22X35SF	100		22X35	653	4.14	0.88	1.232
NRLQW101M475V25X25SF	100		25X25	653	4.14	0.83	1.162
NRLQW121M475V22X40SF	120		22X40	716	3.45	0.99	1.386
NRLQW121M475V25X30SF	120		25X30	716	3.45	0.96	1.344
NRLQW151M475V22X45SF	150		22X45	800	2.76	1.14	1.596
NRLQW151M475V25X35SF	150		25X35	800	2.76	1.10	1.540
NRLQW151M475V30X25SF	150		30X25	800	2.76	1.04	1.456
NRLQW181M475V22X50SF	180		22X50	877	2.30	1.27	1.778
NRLQW181M475V25X40SF	180		25X40	877	2.30	1.24	1.736
NRLQW181M475V30X30SF	180		30X30	877	2.30	1.19	1.666
NRLQW181M475V35X25SF	180		35X25	877	2.30	1.15	1.610
NRLQW221M475V22X60SF	220		22X60	969	1.88	1.47	2.058
NRLQW221M475V25X45SF	220		25X45	969	1.88	1.40	1.960
NRLQW221M475V30X35SF	220		30X35	969	1.88	1.36	1.904
NRLQW221M475V35X30SF	220		35X30	969	1.88	1.33	1.862
NRLQW271M475V25X55SF	270		25X55	1074	1.53	1.62	2.268
NRLQW271M475V30X40SF	270		30X40	1074	1.53	1.54	2.156
NRLQW271M475V35X35SF	270		35X35	1074	1.53	1.52	2.128
NRLQW331M475V30X45SF	330		30X45	1187	1.25	1.73	2.422
NRLQW331M475V35X40SF	330		35X40	1187	1.25	1.71	2.394
NRLQW391M475V30X55SF	390		30X55	1291	1.06	1.98	2.772
NRLQW391M475V35X40SF	390		35X40	1291	1.06	1.79	2.506
NRLQW471M475V30X60SF	470		30X60	1417	0.88	2.18	3.052
NRLQW471M475V35X50SF	470		35X50	1417	0.88	2.09	2.926
NRLQW561M475V35X55SF	560		35X55	1547	0.74	2.29	3.206

New Part Numbers are Highlighted



Large Can Aluminum Electrolytic Capacitors

STANDARD PRODUCT LIST, CASE SIZE AND SPECIFICATIONS

Part Number	Cap. (μ F)	W.V. (Vdc)	Case Size DxL (mm)	Leakage Current (μ A)	ESR (Ω @20°C)	Max. Ripple Current (Arms @ 105°C)	
					120Hz	120Hz	10K ~ 50KHz
NRLQW560M500V22X25SF	56	500	22X25	501	7.4	0.63	0.882
NRLQW680M500V22X30SF	68		22X30	553	6.09	0.72	1.008
NRLQW820M500V22X30SF	82		22X30	607	5.05	0.80	1.120
NRLQW820M500V25X25SF	82		25X25	607	5.05	0.78	1.092
NRLQW101M500V22X35SF	100		22X35	670	4.14	0.92	1.288
NRLQW101M500V25X30SF	100		25X30	670	4.14	0.90	1.260
NRLQW121M500V22X40SF	120		22X40	734	3.45	1.03	1.442
NRLQW121M500V25X35SF	120		25X35	734	3.45	1.02	1.428
NRLQW121M500V30X25SF	120		30X25	734	3.45	0.97	1.358
NRLQW151M500V22X50SF	150		22X50	821	2.76	1.20	1.680
NRLQW151M500V25X40SF	150		25X40	821	2.76	1.17	1.638
NRLQW151M500V30X30SF	150		30X30	821	2.76	1.13	1.582
NRLQW151M500V35X25SF	150		35X25	821	2.76	1.09	1.526
NRLQW181M500V22X60SF	180		22X60	900	2.3	1.37	1.918
NRLQW181M500V25X45SF	180		25X45	900	2.3	1.31	1.834
NRLQW181M500V30X35SF	180		30X35	900	2.3	1.28	1.792
NRLQW181M500V35X30SF	180		35X30	900	2.3	1.26	1.764
NRLQW221M500V25X50SF	220		25X50	994	1.88	1.46	2.044
NRLQW221M500V30X40SF	220		30X40	994	1.88	1.45	2.030
NRLQW221M500V35X35SF	220		35X35	994	1.88	1.44	2.016
NRLQW271M500V25X60SF	270		25X60	1102	1.53	1.70	2.380
NRLQW271M500V30X45SF	270		30X45	1102	1.53	1.63	2.282
NRLQW271M500V35X35SF	270		35X35	1102	1.53	1.52	2.128
NRLQW331M500V30X50SF	330		30X50	1218	1.25	1.81	2.534
NRLQW331M500V35X40SF	330		35X40	1218	1.25	1.71	2.394
NRLQW391M500V30X60SF	390		30X60	1324	1.06	2.06	2.884
NRLQW391M500V35X50SF	390		35X50	1324	1.06	1.99	2.786
NRLQW471M500V35X55SF	470		35X55	1454	0.88	2.19	3.066

New Part Numbers are Highlighted

