

# Large Can Aluminum Electrolytic Capacitors

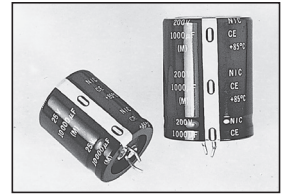
NRLRW Series

## FEATURES

- EXPANDED VALUE RANGE
- LONG LIFE AT +105°C (3,000 HOURS)
- HIGH RIPPLE CURRENT
- LOW PROFILE, HIGH DENSITY DESIGN
- SUITABLE FOR SWITCHING POWER SUPPLIES

**RoHS Compliant**  
includes all homogeneous materials

\*See Part Number System for Details



## SPECIFICATIONS

Operating Temperature Range		-40 ~ +105°C						-25 ~ +105°C				
Rated Voltage Range		10 ~ 100Vdc						160 ~ 450Vdc				
Rated Capacitance Range		560 ~ 68,000μF						47 ~ 2,700μF				
Capacitance Tolerance		±20% (M)										
Max. Leakage Current (μA) After 5 minutes (20°C)		$3 \times \sqrt{C(\mu F)V}$										
Max. Tan δ at 120Hz/20°C	W.V. (Vdc)	10	16	25	35	50	63	80	100	160-400	420-450	
	Tan δ max.	0.55	0.50	0.45	0.40	0.35	0.30	0.25	0.20	0.15	0.20	
Surge Voltage	W.V. (Vdc)	10	16	25	35	50	63	80	100	160	180	
	S.V. (Vdc)	13	20	32	44	63	79	100	125	200	220	
	W.V. (Vdc)	200	220	250	315	350	385	400	420	450	-	
	S.V. (Vdc)	250	270	300	365	400	435	450	470	500	-	
Ripple Current Correction Factors	Frequency (Hz)	50 (60)	120	500	1K	10K <sub>≥</sub>	-	-	-	-	-	
	Multiplier at 85°C	10 ~ 100Vdc	0.90	1.00	1.05	1.10	1.15	-	-	-	-	
		160 ~ 250Vdc	0.80	1.00	1.20	1.30	1.50	-	-	-	-	
		315 ~ 450Vdc	0.80	1.00	1.20	1.25	1.40	-	-	-	-	
Low Temperature Stability (10 to 250Vdc)	Temperature (°C)	0	-25	-40	-	-	-	-	-	-	-	
	Capacitance Change	-5%	-15%	-30%	-	-	-	-	-	-	-	
	Impedance Ratio	1.5	3	12	-	-	-	-	-	-	-	
Load Life Test 3,000 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										
Surge Voltage Test Per JIS-C-5141 (table #6, #4) Surge voltage applied: 30 seconds "On" and 5.5 minutes no voltage "Off"	Capacitance Change	Within ±20% of initial measured value										
	Tan δ	Less than 200% of specified maximum value										
	Leakage Current	Less than specified maximum value										
Soldering Effect Refer to JISC5102.8.5	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:

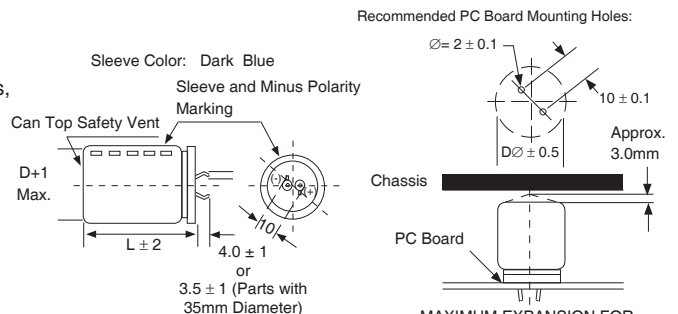
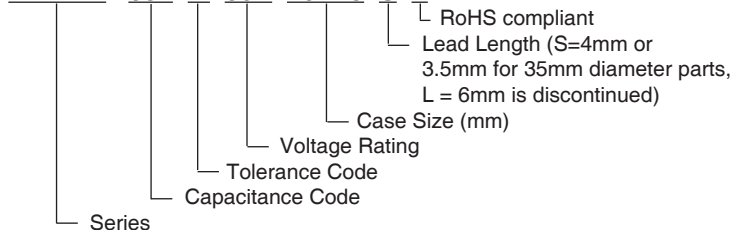
The capacitors are provided with a pressure sensitive safety vent on the top of can. The vent is designed to rupture in the event that high internal gas pressure is developed by circuit malfunction or mis-use like reverse voltage.

### 2. Terminal Strength:

Each terminal of the capacitor shall withstand an axial pull force of 4.5Kg for a period 10 seconds or a radial bent force of 2.5Kg for a period of 30 seconds.

## PART NUMBER SYSTEM

NRLRW 682 M 50V 20X25 S F



**PRECAUTIONS**  
Please review the notes on correct use, safety and precautions found on pages T10 & T11 of NIC's Electrolytic Capacitor catalog.  
Also found at [www.niccomp.com/precautions](http://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](mailto:tpmg@niccomp.com)

### 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.



## STANDARD PRODUCT LIST, CASE SIZE AND SPECIFICATIONS

Part Number	Cap. (μF)	W.V. (Vdc)	Case Size DxL (mm)	ESR (Ω@20°C)		Max. Ripple Current (Arms @ 105°C)		
				120Hz	20KHz	120Hz	10K ~ 50KHz	
NRLRW682M10V20X25SF	6,800	10	20x25	0.135	0.104	1.31	1.50	
NRLRW822M10V20X30SF	8,200		20x30	0.112	0.086	1.59	1.82	
NRLRW103M10V20X30SF	10,000		20x30	0.092	0.071	1.88	2.16	
NRLRW103M10V22X25SF			22x25	0.092	0.071	1.77	2.03	
NRLRW123M10V20X35SF	12,000		20x35	0.076	0.059	2.18	2.50	
NRLRW123M10V22X30SF			22x30	0.076	0.059	2.10	2.41	
NRLRW123M10V25X25SF			25x25	0.076	0.059	1.94	2.23	
NRLRW153M10V20X40SF	15,000		20x40	0.061	0.047	2.27	2.61	
NRLRW153M10V22X35SF			22x35	0.061	0.047	2.23	2.56	
NRLRW153M10V25X30SF			25x30	0.061	0.047	2.10	2.41	
NRLRW183M10V22X40SF	18,000		22x40	0.051	0.039	2.41	2.77	
NRLRW183M10V25X30SF			25x30	0.051	0.039	2.34	2.69	
NRLRW183M10V30X25SF			30x25	0.051	0.039	2.25	2.58	
NRLRW223M10V22X45SF	22,000		22x45	0.042	0.032	2.58	2.96	
NRLRW223M10V25X35SF			25x35	0.042	0.032	2.54	2.92	
NRLRW223M10V30X30SF			30x30	0.042	0.032	2.50	2.87	
NRLRW273M10V22X50SF	27,000		22x50	0.034	0.026	3.17	3.64	
NRLRW273M10V25X40SF			25x40	0.034	0.026	3.07	3.53	
NRLRW273M10V30X30SF			30x30	0.034	0.026	2.95	3.39	
NRLRW333M10V25X45SF	33,000		25x45	0.028	0.022	3.39	3.89	
NRLRW333M10V30X35SF			30x35	0.028	0.022	3.33	3.82	
NRLRW333M10V35X30SF			35x30	0.028	0.022	3.21	3.69	
NRLRW393M10V30X40SF	39,000		30x40	0.024	0.018	3.70	4.25	
NRLRW393M10V35X35SF			35x35	0.024	0.018	3.68	4.23	
NRLRW473M10V30X45SF	47,000		30x45	0.020	0.015	4.22	4.85	
NRLRW473M10V35X40SF			35x40	0.020	0.015	4.16	4.78	
NRLRW563M10V35X45SF	56,000		35x45	0.017	0.013	5.00	5.75	
NRLRW682M16V20X25SF	6,800		16	20x25	0.122	0.094	1.80	2.07
NRLRW822M16V20X30SF	8,200			20x30	0.102	0.078	2.08	2.39
NRLRW822M16V22X25SF				22x25	0.102	0.078	2.08	2.39
NRLRW103M16V20X35SF	10,000	20x35		0.083	0.064	2.15	2.47	
NRLRW103M16V22X30SF		22x30		0.083	0.064	2.15	2.47	
NRLRW123M16V20X40SF	12,000	20x40		0.070	0.054	2.31	2.65	
NRLRW123M16V22X30SF		22x30		0.070	0.054	2.31	2.65	
NRLRW123M16V25X25SF		25x25		0.070	0.054	2.31	2.65	
NRLRW153M16V22X35SF	15,000	22x35		0.056	0.043	2.68	3.08	
NRLRW153M16V25X30SF		25x30		0.056	0.043	2.68	3.08	
NRLRW183M16V22X40SF	18,000	22x40		0.047	0.036	3.20	3.68	
NRLRW183M16V25X30SF		25x30		0.047	0.036	3.20	3.68	
NRLRW183M16V30X25SF		30x25		0.047	0.036	3.20	3.68	
NRLRW223M16V22X45SF	22,000	22x45		0.038	0.029	3.36	3.86	
NRLRW223M16V25X35SF		25x35		0.038	0.029	3.36	3.86	
NRLRW223M16V30X30SF		30x30		0.038	0.029	3.36	3.86	
NRLRW273M16V22X50SF	27,000	22x50		0.031	0.024	3.85	4.42	
NRLRW273M16V25X40SF		25x40		0.031	0.024	3.85	4.42	
NRLRW273M16V30X30SF		30x30		0.031	0.024	3.85	4.42	
NRLRW333M16V25X45SF	33,000	25x45		0.026	0.020	4.30	4.94	
NRLRW333M16V30X35SF		30x35		0.026	0.020	4.30	4.94	
NRLRW333M16V35X30SF		35x30		0.026	0.020	4.30	4.94	
NRLRW393M16V25X50SF	39,000	25x50		0.022	0.017	4.81	5.53	
NRLRW393M16V30X40SF		30x40		0.022	0.017	4.81	5.53	
NRLRW393M16V35X35SF		35x35		0.022	0.017	4.81	5.53	
NRLRW473M16V30X45SF	47,000	30x45		0.018	0.014	5.53	6.35	
NRLRW473M16V35X40SF		35x40		0.018	0.014	5.53	6.35	
NRLRW563M16V30X50SF	56,000	30x50		0.015	0.012	6.00	6.90	
NRLRW563M16V35X45SF		35x45		0.015	0.012	6.00	6.90	
NRLRW683M16V35X50SF	68,000	35x50		0.013	0.010	6.40	7.36	



## STANDARD PRODUCT LIST, CASE SIZE AND SPECIFICATIONS

Part Number	Cap. (μF)	W.V. (Vdc)	Case Size DxL (mm)	ESR (Ω@20°C)		Max. Ripple Current (Arms @ 105°C)	
				120Hz	20KHz	120Hz	10K ~ 50KHz
NRLRW472M25V20X25SF	4,700	25	20x25	0.159	0.123	1.65	1.89
NRLRW562M25V20X30SF	5,600		20x30	0.134	0.103	1.85	2.12
NRLRW562M25V22X25SF			6,800	22x25	0.134	0.103	1.85
NRLRW682M25V20X35SF	20x35			0.110	0.085	2.11	2.42
NRLRW682M25V22X30SF	22x30			0.110	0.085	2.11	2.42
NRLRW822M25V20X40SF	8,200		20x40	0.091	0.070	2.34	2.69
NRLRW822M25V22X30SF			22x30	0.091	0.070	2.34	2.69
NRLRW822M25V25X25SF			25x25	0.091	0.070	2.34	2.69
NRLRW103M25V22X35SF	10,000		22x35	0.075	0.058	2.65	3.04
NRLRW103M25V25X30SF			25x30	0.075	0.058	2.65	3.04
NRLRW123M25V22X40SF	12,000		22x40	0.063	0.048	2.81	3.23
NRLRW123M25V25X30SF			25x30	0.063	0.048	2.81	3.23
NRLRW123M25V30X25SF			30x25	0.063	0.048	2.81	3.23
NRLRW153M25V22X45SF	15,000		22x45	0.050	0.039	3.13	3.59
NRLRW153M25V25X35SF			25x35	0.050	0.039	3.13	3.59
NRLRW153M25V30X30SF			30x30	0.050	0.039	3.13	3.59
NRLRW183M25V25X40SF	18,000		25x40	0.042	0.032	3.56	4.09
NRLRW183M25V30X30SF			30x30	0.042	0.032	3.56	4.09
NRLRW223M25V25X50SF	22,000		25x50	0.034	0.027	4.04	4.64
NRLRW223M25V30X35SF			30x35	0.034	0.027	4.04	4.64
NRLRW223M25V35X30SF			35x30	0.034	0.027	4.04	4.64
NRLRW273M25V30X40SF	27,000		30x40	0.028	0.022	4.74	5.45
NRLRW273M25V35X35SF			35x35	0.028	0.022	4.74	5.45
NRLRW333M25V30X50SF	33,000		30x50	0.023	0.018	5.50	6.32
NRLRW333M25V35X40SF			35x40	0.023	0.018	5.50	6.32
NRLRW393M25V35X45SF	39,000		35x45	0.020	0.015	5.80	6.67
NRLRW473M25V35X50SF	47,000		35x50	0.016	0.013	6.30	7.24
NRLRW272M35V20X25SF	2,700		35	20x25	0.246	0.189	1.29
NRLRW332M35V20X30SF	3,300	20x30		0.201	0.155	1.57	1.80
NRLRW392M35V20X30SF	3,900	20x30		0.171	0.131	1.78	2.04
NRLRW392M35V22X25SF		22x25		0.171	0.131	1.78	2.04
NRLRW472M35V20X35SF	4,700	20x35		0.142	0.109	2.02	2.32
NRLRW472M35V22X30SF		22x30		0.142	0.109	2.02	2.32
NRLRW562M35V20X40SF	5,600	20x40		0.119	0.092	2.13	2.44
NRLRW562M35V22X35SF		22x35		0.119	0.092	2.13	2.44
NRLRW562M35V20X25SF		25x25		0.119	0.092	2.13	2.44
NRLRW682M35V22X40SF	6,800	22x40		0.098	0.076	2.41	2.77
NRLRW682M35V25X30SF		25x30		0.098	0.076	2.41	2.77
NRLRW822M35V22X45SF	8,200	22x45		0.081	0.063	2.85	3.27
NRLRW822M35V25X35SF		25x35		0.081	0.063	2.85	3.27
NRLRW822M35V30X25SF		30x25		0.081	0.063	2.85	3.27
NRLRW103M35V22X50SF	10,000	22x50		0.067	0.052	3.05	3.50
NRLRW103M35V25X40SF		25x40		0.067	0.052	3.05	3.50
NRLRW103M35V30X30SF		30x30		0.067	0.052	3.05	3.50
NRLRW123M35V25X45SF	12,000	25x45		0.056	0.043	3.37	3.87
NRLRW123M35V30X35SF		30x35		0.056	0.043	3.37	3.87
NRLRW123M35V35X30SF		35x30		0.056	0.043	3.37	3.87
NRLRW153M35V25X50SF	15,000	25x50		0.045	0.035	3.72	4.27
NRLRW153M35V30X40SF		30x40		0.045	0.035	3.72	4.27
NRLRW153M35V35X35SF		35x35		0.045	0.035	3.72	4.27
NRLRW183M35V30X45SF	18,000	30x45		0.037	0.029	4.37	5.02
NRLRW183M35V35X35SF		35x35		0.037	0.029	4.37	5.02
NRLRW223M35V30X50SF	22,000	30x50		0.031	0.024	4.92	5.65
NRLRW223M35V35X40SF		35x40		0.031	0.024	4.92	5.65
NRLRW273M35V35X50SF	27,000	35x50		0.025	0.019	5.30	6.09



## STANDARD PRODUCT LIST, CASE SIZE AND SPECIFICATIONS

Part Number	Cap. (μF)	W.V. (Vdc)	Case Size DxL (mm)	ESR (Ω@20°C)		Max. Ripple Current (Arms @ 105°C)	
				120Hz	20KHz	120Hz	10K ~ 50KHz
NRLRW182M50V20X25SF	1,800	50	20x25	0.323	0.248	1.39	1.59
NRLRW222M50V20X30SF	2,200		20x30	0.264	0.203	1.60	1.84
NRLRW222M50V22X25SF			22x25	0.264	0.203	1.60	1.84
NRLRW272M50V20X35SF	2,700		20x35	0.215	0.166	1.73	1.98
NRLRW272M50V22X30SF			22x30	0.215	0.166	1.73	1.98
NRLRW272M50V25X25SF			25x25	0.215	0.166	1.73	1.98
NRLRW332M50V20X40SF	3,300		20x40	0.176	0.136	1.97	2.26
NRLRW332M50V22X35SF			22x35	0.176	0.136	1.97	2.26
NRLRW332M50V25X30SF			25x30	0.176	0.136	1.97	2.26
NRLRW392M50V22X40SF	3,900		22x40	0.149	0.115	2.22	2.55
NRLRW392M50V25X30SF			25x30	0.149	0.115	2.22	2.55
NRLRW472M50V22X45SF	4,700		22x45	0.124	0.095	2.43	2.79
NRLRW472M50V25X35SF			25x35	0.124	0.095	2.43	2.79
NRLRW472M50V30X25SF			30x25	0.124	0.095	2.43	2.79
NRLRW562M50V22X50SF	5,600		22x50	0.104	0.080	2.75	3.16
NRLRW562M50V25X40SF			25x40	0.104	0.080	2.75	3.16
NRLRW562M50V30X30SF			30x30	0.104	0.080	2.75	3.16
NRLRW682M50V25X45SF	6,800		25x45	0.086	0.066	3.30	3.79
NRLRW682M50V30X35SF			30x35	0.086	0.066	3.30	3.79
NRLRW822M50V25X50SF	8,200		25x50	0.071	0.055	3.60	4.14
NRLRW822M50V30X40SF			30x40	0.071	0.055	3.60	4.14
NRLRW822M50V35X30SF			35x30	0.071	0.055	3.60	4.14
NRLRW103M50V30X45SF	10,000		30x45	0.059	0.045	4.05	4.65
NRLRW103M50V35X35SF			35x35	0.059	0.045	4.05	4.65
NRLRW123M50V30X50SF	12,000		30x50	0.049	0.038	4.56	5.24
NRLRW123M50V35X40SF			35x40	0.049	0.038	4.56	5.24
NRLRW153M50V35X50SF	15,000		35x50	0.039	0.030	4.77	5.48
NRLRW122M63V20X25SF	1,200	63	20x25	0.415	0.319	1.20	1.38
NRLRW152M63V20X30SF	1,500		20x30	0.332	0.256	1.47	1.69
NRLRW152M63V22X25SF			22x25	0.332	0.256	1.47	1.69
NRLRW182M63V20X35SF	1,800		20x35	0.277	0.213	1.58	1.81
NRLRW182M63V22X30SF			22x30	0.277	0.213	1.58	1.81
NRLRW222M63V20X40SF	2,200		20x40	0.227	0.174	1.82	2.09
NRLRW222M63V22X35SF			22x35	0.227	0.174	1.82	2.09
NRLRW222M63V25X25SF			25x25	0.227	0.174	1.82	2.09
NRLRW272M63V22X35SF	2,700		22x35	0.185	0.142	2.11	2.42
NRLRW272M63V25X30SF			25x30	0.185	0.142	2.11	2.42
NRLRW332M63V22X45SF	3,300		22x45	0.151	0.116	2.33	2.67
NRLRW332M63V25X35SF			25x35	0.151	0.116	2.33	2.67
NRLRW332M63V30X25SF			30x25	0.151	0.116	2.33	2.67
NRLRW392M63V22X50SF	3,900		22x50	0.128	0.099	2.55	2.93
NRLRW392M63V25X40SF			25x40	0.128	0.099	2.55	2.93
NRLRW392M63V30X30SF	4,700		30x30	0.128	0.099	2.55	2.93
NRLRW472M63V25X45SF			25x45	0.106	0.082	2.97	3.41
NRLRW472M63V30X35SF			30x35	0.106	0.082	2.97	3.41
NRLRW562M63V25X50SF	5,600		25x50	0.089	0.069	3.22	3.70
NRLRW562M63V20X35SF			30x35	0.089	0.069	3.22	3.70
NRLRW562M63V35X30SF	6,800		35x30	0.089	0.069	3.22	3.70
NRLRW682M63V30X40SF			30x40	0.074	0.057	3.65	4.19
NRLRW682M63V35X35SF			35x35	0.074	0.057	3.65	4.19
NRLRW822M63V30X50SF	8,200		30x50	0.061	0.047	4.04	4.64
NRLRW822M63V35X40SF			35x40	0.061	0.047	4.04	4.64
NRLRW103M63V35X45SF	10,000		35x45	0.050	0.039	4.48	5.15
NRLRW123M63V35X50SF	12,000		35x50	0.042	0.032	4.75	5.46



## STANDARD PRODUCT LIST, CASE SIZE AND SPECIFICATIONS

Part Number	Cap. (μF)	W.V. (Vdc)	Case Size D x L (mm)	ESR (Ω@20°C)		Max. Ripple Current (Arms @ 105°C)		
				120Hz	20KHz	120Hz	10K ~ 50KHz	
NRLRW821M80V20X25SF	820	80	20x25	0.506	0.389	1.04	1.19	
NRLRW102M80V20X30SF	1,000		20x30	0.415	0.319	1.24	1.42	
NRLRW102M80V22X25SF			22x25	0.415	0.319	1.24	1.42	
NRLRW122M80V20X35SF	1,200		20x35	0.346	0.266	1.44	1.65	
NRLRW122M80V22X30SF			22x30	0.346	0.266	1.44	1.65	
NRLRW152M80V20X35SF	1,500		20x35	0.277	0.213	1.59	1.82	
NRLRW152M80V22X30SF			22x30	0.277	0.213	1.59	1.82	
NRLRW152M80V25X25SF			25x25	0.277	0.213	1.59	1.82	
NRLRW182M80V20X40SF	1,800		20x40	0.231	0.178	1.79	2.05	
NRLRW182M80V22X35SF			22x35	0.231	0.178	1.79	2.05	
NRLRW182M80V25X30SF			25x30	0.231	0.178	1.79	2.05	
NRLRW222M80V22X40SF	2,200		22x40	0.189	0.145	2.03	2.33	
NRLRW222M80V25X30SF			25x30	0.189	0.145	2.03	2.33	
NRLRW222M80V30X25SF			30x25	0.189	0.145	2.03	2.33	
NRLRW272M80V22X45SF	2,700		22x45	0.154	0.119	2.39	2.74	
NRLRW272M80V25X35SF			25x35	0.154	0.119	2.39	2.74	
NRLRW272M80V30X30SF			30x30	0.154	0.119	2.39	2.74	
NRLRW332M80V25X40SF	3,300		25x40	0.126	0.097	2.64	3.03	
NRLRW332M80V30X35SF			30x35	0.126	0.097	2.64	3.03	
NRLRW332M80V25X50SF	3,900		25x50	0.107	0.082	2.97	3.41	
NRLRW332M80V30X35SF			30x35	0.107	0.082	2.97	3.41	
NRLRW332M80V35X30SF			35x30	0.107	0.082	2.97	3.41	
NRLRW472M80V30X40SF	4,700		30x40	0.089	0.068	3.38	3.88	
NRLRW472M80V35X35SF			35x35	0.089	0.068	3.38	3.88	
NRLRW562M80V30X45SF	5,600		30x45	0.075	0.057	3.8	4.37	
NRLRW562M80V35X40SF			35x40	0.075	0.057	3.8	4.37	
NRLRW682M80V35X45SF	6,800		35x45	0.061	0.047	4.1	4.71	
NRLRW822M80V35X50SF	8,200		35x50	0.051	0.039	4.3	4.94	
NRLRW561M100V20X25SF	560		100	20x25	0.593	0.456	0.95	1.09
NRLRW681M100V20X30SF	680			20x30	0.488	0.376	1.15	1.32
NRLRW681M100V22X25SF		22x25		0.488	0.376	1.15	1.32	
NRLRW821M100V20X35SF	820	20x35		0.405	0.312	1.32	1.51	
NRLRW821M100V22X30SF		22x30		0.405	0.312	1.32	1.51	
NRLRW102M100V20X35SF	1,000	20x35		0.332	0.256	1.47	1.69	
NRLRW102M100V22X30SF		22x30		0.332	0.256	1.47	1.69	
NRLRW102M100V25X25SF		25x25		0.332	0.256	1.47	1.69	
NRLRW122M100V20X40SF	1,200	20x40		0.277	0.213	1.69	1.94	
NRLRW122M100V22X35SF		22x35		0.277	0.213	1.69	1.94	
NRLRW122M100V25X30SF		25x30		0.277	0.213	1.69	1.94	
NRLRW152M100V22X40SF	1,500	22x40		0.222	0.171	1.98	2.27	
NRLRW152M100V25X35SF		25x35		0.222	0.171	1.98	2.27	
NRLRW152M100V30X25SF		30x25		0.222	0.171	1.98	2.27	
NRLRW182M100V22X45SF	1,800	22x45		0.185	0.142	2.23	2.56	
NRLRW182M100V25X35SF		25x35		0.185	0.142	2.23	2.56	
NRLRW182M100V30X30SF		30x30		0.185	0.142	2.23	2.56	
NRLRW222M100V25X45SF	2,200	25x45		0.151	0.116	2.55	2.93	
NRLRW222M100V30X35SF		30x35		0.151	0.116	2.55	2.93	
NRLRW222M100V35X30SF		35x30		0.151	0.116	2.55	2.93	
NRLRW272M100V25X50SF	2,700	25x50		0.123	0.095	2.89	3.32	
NRLRW272M100V30X40SF		30x40		0.123	0.095	2.89	3.32	
NRLRW272M100V35X30SF		35x30		0.123	0.095	2.89	3.32	
NRLRW332M100V30X45SF	3,300	30x45		0.101	0.078	3.3	3.79	
NRLRW332M100V35X35SF		35x35		0.101	0.078	3.3	3.79	
NRLRW392M100V30X50SF	3,900	30x50		0.086	0.066	3.67	4.22	
NRLRW392M100V35X40SF		35x40		0.086	0.066	3.67	4.22	
NRLRW472M100V35X45SF	4,700	35x45		0.071	0.055	3.8	4.37	
NRLRW562M100V35X50SF	5,600	35x50		0.06	0.046	4.05	4.65	





## STANDARD PRODUCT LIST, CASE SIZE AND SPECIFICATIONS

Part Number	Cap. (µF)	W.V. (Vdc)	Case Size DxL (mm)	ESR (Ω@20°C)		Max. Ripple Current (Arms @ 105°C)		
				120Hz	20KHz	120Hz	10K ~ 50KHz	
NRLRW221M160V20X25SF	220	160	20x25	1.130	0.870	1.17	1.75	
NRLRW271M160V20X25SF	270		20x25	0.922	0.709	1.10	1.65	
NRLRW331M160V20X30SF	330		20x30	0.754	0.580	1.20	1.80	
NRLRW331M160V22X25SF			22x25	0.754	0.580	1.21	1.81	
NRLRW391M160V20X30SF	390		20x30	0.638	0.491	1.24	1.86	
NRLRW391M160V22X25SF			22x25	0.638	0.491	1.30	1.95	
NRLRW471M160V20X35SF	470		20x35	0.53	0.408	1.42	2.13	
NRLRW471M160V22X30SF			22x30	0.53	0.408	1.41	2.11	
NRLRW561M160V20X40SF	560		20x40	0.445	0.342	1.57	2.35	
NRLRW561M160V22X35SF			22x35	0.445	0.342	1.54	2.31	
NRLRW561M160V25X25SF			25x25	0.445	0.342	1.51	2.26	
NRLRW681M160V20X45SF	680		20x45	0.366	0.282	1.70	2.55	
NRLRW681M160V22X40SF			22x40	0.366	0.282	1.74	2.61	
NRLRW681M160V25X30SF			25x30	0.366	0.282	1.74	2.61	
NRLRW681M160V30X25SF			30x25	0.366	0.282	1.74	2.61	
NRLRW821M160V22X45SF	820		22x45	0.304	0.234	2.00	3.00	
NRLRW821M160V25X35SF			25x35	0.304	0.234	2.00	3.00	
NRLRW821M160V30X30SF			30x30	0.304	0.234	2.00	3.00	
NRLRW102M160V22X50SF	1,000		22x50	0.249	0.192	2.25	3.37	
NRLRW102M160V25X40SF			25x40	0.249	0.192	2.25	3.37	
NRLRW102M160V30X30SF			30x30	0.249	0.192	2.25	3.37	
NRLRW102M160V35X25SF			35x25	0.249	0.192	2.25	3.37	
NRLRW122M160V25X45SF	1,200		25x45	0.208	0.160	2.49	3.73	
NRLRW122M160V30X35SF			30x35	0.208	0.160	2.49	3.73	
NRLRW122M160V35X30SF			35x30	0.208	0.160	2.45	3.67	
NRLRW152M160V30X40SF	1,500		30x40	0.166	0.128	2.84	4.26	
NRLRW152M160V35X30SF			35x30	0.166	0.128	2.68	4.02	
NRLRW182M160V30X45SF	1,800		30x45	0.139	0.107	3.32	4.98	
NRLRW182M160V35X35SF			35x35	0.139	0.107	3.00	4.50	
NRLRW222M160V35X45SF	2,200		35x45	0.114	0.087	3.50	5.25	
NRLRW272M160V35X50SF	2,700		35x50	0.093	0.071	4.00	6.00	
NRLRW271M180V20X25SF	270		180	20x25	0.922	0.709	0.93	1.39
NRLRW331M180V20X30SF	330			20x30	0.754	0.580	1.20	1.80
NRLRW331M180V22X25SF		22x25		0.754	0.580	1.20	1.80	
NRLRW391M180V20X35SF	390	20x35		0.638	0.491	1.30	1.95	
NRLRW391M180V22X30SF		22x30		0.638	0.491	1.35	2.02	
NRLRW471M180V20X40SF	470	20x40		0.530	0.408	1.40	2.10	
NRLRW471M180V25X35SF		22x35		0.530	0.408	1.42	2.13	
NRLRW471M180V25X25SF		25x25		0.530	0.408	1.38	2.07	
NRLRW561M180V20X45SF	560	20x45		0.445	0.342	1.55	2.32	
NRLRW561M180V22X40SF		22x40		0.445	0.342	1.60	2.40	
NRLRW561M180V25X30SF		25x30		0.445	0.342	1.55	2.32	
NRLRW681M180V22X45SF	680	22x45		0.366	0.282	1.78	2.67	
NRLRW681M180V25X35SF		25x35		0.366	0.282	1.78	2.67	
NRLRW681M180V30X25SF		30x25		0.366	0.282	1.55	2.32	
NRLRW821M180V22X50SF	820	22x50		0.304	0.234	2.00	3.00	
NRLRW821M180V25X40SF		25x40		0.304	0.234	2.00	3.00	
NRLRW821M180V30X30SF		30x30		0.304	0.234	2.00	3.00	
NRLRW821M180V35X25SF		35x25		0.304	0.234	2.00	3.00	
NRLRW102M180V25X45SF	1,000	25x45		0.249	0.192	2.25	3.37	
NRLRW102M180V30X25SF		30x35		0.249	0.192	2.25	3.37	
NRLRW102M180V35X30SF		35x30		0.249	0.192	2.26	3.39	
NRLRW122M180V25X50SF	1,200	25x50		0.208	0.160	2.54	3.81	
NRLRW122M180V30X40SF		30x40		0.208	0.160	2.52	3.78	
NRLRW122M180V35X30SF		35x30		0.208	0.160	2.60	3.90	
NRLRW152M180V30X45SF	1,500	30x45		0.166	0.128	2.90	4.35	
NRLRW152M180V35X35SF		35x35		0.166	0.128	2.95	4.42	

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## STANDARD PRODUCT LIST, CASE SIZE AND SPECIFICATIONS

Part Number	Cap. (µF)	W.V. (Vdc)	Case Size DxD (mm)	ESR (Ω@20°C)		Max. Ripple Current (Arms @ 105°C)	
				120Hz	20KHz	120Hz	10K ~ 50KHz
NRLRW182M180V30X50SF	1,800	180	30x50	0.139	0.107	3.00	4.50
NRLRW182M180V35X40SF			35x40	0.139	0.107	3.30	4.95
NRLRW222M180V35X50SF			35x50	0.114	0.087	3.65	5.47
NRLRW221M200V20X25SF	220	200	20x25	1.131	0.870	1.00	1.50
NRLRW271M200V20X30SF	270		20x30	0.922	0.709	1.10	1.65
NRLRW271M200V22X25SF			22x25	0.922	0.709	1.10	1.65
NRLRW331M200V20X30SF	330		20x30	0.754	0.580	1.15	1.72
NRLRW331M200V22X30SF			22x30	0.754	0.580	1.25	1.87
NRLRW391M200V20X35SF	390		20x35	0.638	0.491	1.25	1.87
NRLRW391M200V22X30SF			22x30	0.638	0.491	1.31	1.96
NRLRW391M200V25X25SF			25x25	0.638	0.491	1.31	1.96
NRLRW471M200V20X40SF	470		20x40	0.530	0.408	1.42	2.13
NRLRW471M200V22X35SF			22x35	0.530	0.408	1.45	2.17
NRLRW471M200V25X30SF			25x30	0.530	0.408	1.45	2.17
NRLRW561M200V22X40SF	560		22x40	0.445	0.342	1.60	2.40
NRLRW561M200V25X30SF			25x30	0.445	0.342	1.60	2.40
NRLRW561M200V30X25SF			30x25	0.445	0.342	1.60	2.40
NRLRW681M200V22X45SF	680		22x45	0.366	0.282	1.75	2.62
NRLRW681M200V25X35SF			25x35	0.366	0.282	1.78	2.67
NRLRW681M200V30X30SF			30x30	0.366	0.282	1.78	2.67
NRLRW821M200V22X50SF	820		22x50	0.304	0.234	1.95	2.92
NRLRW821M200V25X40SF			25x40	0.304	0.234	1.95	2.92
NRLRW821M200V30X30SF			30x30	0.304	0.234	2.00	3.00
NRLRW102M200V25X45SF	1,000	25x45	0.249	0.192	2.10	3.15	
NRLRW102M200V30X35SF		30x35	0.249	0.192	2.30	3.45	
NRLRW102M200V35X30SF		35x30	0.249	0.192	2.30	3.45	
NRLRW122M200V30X40SF	1,200	30x40	0.208	0.160	2.64	3.96	
NRLRW122M200V35X35SF		35x35	0.208	0.160	2.65	3.97	
NRLRW152M200V30X50SF	1,500	30x50	0.166	0.128	3.08	4.62	
NRLRW152M200V35X40SF		35x40	0.166	0.128	3.08	4.62	
NRLRW182M200V35X45SF	1,800	35x45	0.139	0.107	3.48	5.22	
NRLRW222M200V35X50SF	2,200	35x50	0.114	0.087	3.55	5.32	
NRLRW181M220V20X25SF	180	220	20x25	1.382	1.063	0.86	1.29
NRLRW221M220V20X30SF	220		20x30	1.131	0.870	1.04	1.56
NRLRW221M220V22X25SF			22x25	1.131	0.870	0.99	1.48
NRLRW271M220V20X30SF	270		20x30	0.922	0.709	1.08	1.62
NRLRW271M220V22X25SF			22x25	0.922	0.709	1.04	1.56
NRLRW331M220V20X35SF	330		20x35	0.754	0.580	1.30	1.95
NRLRW331M220V22X30SF			22x30	0.754	0.580	1.32	1.98
NRLRW331M220V25X25SF			25x25	0.754	0.580	1.26	1.89
NRLRW391M220V20X40SF	390		20x40	0.638	0.491	1.45	2.17
NRLRW391M220V22X35SF			22x35	0.638	0.491	1.42	2.13
NRLRW391M220V25X30SF			25x30	0.638	0.491	1.45	2.17
NRLRW471M220V20X45SF	470		20x45	0.530	0.408	1.63	2.44
NRLRW471M220V22X40SF			22x40	0.530	0.408	1.67	2.50
NRLRW471M220V25X30SF			25x30	0.530	0.408	1.54	2.31
NRLRW471M220V30X25SF	560		30x25	0.530	0.408	1.48	2.22
NRLRW561M220V22X45SF			22x45	0.445	0.342	1.77	2.65
NRLRW561M220V25X35SF			25x35	0.445	0.342	1.66	2.49
NRLRW561M220V30X30SF	680		30x30	0.445	0.342	1.65	2.47
NRLRW681M220V25X40SF			25x40	0.366	0.282	1.87	2.80
NRLRW681M220V30X30SF			30x30	0.366	0.282	1.82	2.73
NRLRW681M220V35X25SF	820	35x25	0.366	0.282	1.78	2.67	
NRLRW821M220V25X45SF		25x45	0.304	0.234	2.04	3.06	
NRLRW821M220V30X35SF		30x35	0.304	0.234	2.00	3.00	
NRLRW821M220V35X30SF		35x30	0.304	0.234	1.93	2.89	

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## STANDARD PRODUCT LIST, CASE SIZE AND SPECIFICATIONS

Part Number	Cap. (µF)	W.V. (Vdc)	Case Size DxL (mm)	ESR (Ω@20°C)		Max. Ripple Current (Arms @ 105°C)		
				120Hz	20KHz	120Hz	10K ~ 50KHz	
NRLRW102M220V30X40SF	1,000	220	30x40	0.249	0.192	2.48	3.72	
NRLRW102M220V35X35SF			35x35	0.249	0.192	2.33	3.49	
NRLRW122M220V30X45SF	1,200		30x45	0.208	0.16	2.88	4.32	
NRLRW122M220V35X40SF			35x40	0.208	0.16	2.65	3.97	
NRLRW152M220V35X45SF	1,500		35x45	0.166	0.128	2.96	4.44	
NRLRW152M220V35X50SF	1,800		35x50	0.139	0.107	3.39	5.08	
NRLRW221M250V20X30SF	220	250	20x30	1.131	0.870	1.00	1.50	
NRLRW221M250V22X25SF			22x25	1.131	0.870	1.00	1.50	
NRLRW271M250V20X35SF	270		20x35	0.922	0.709	1.10	1.65	
NRLRW271M250V22X30SF			22x30	0.922	0.709	1.15	1.72	
NRLRW331M250V20X40SF	330		20x40	0.754	0.580	1.20	1.80	
NRLRW331M250V22X35SF			22x35	0.754	0.580	1.28	1.92	
NRLRW391M250V20X45SF	390		20x45	0.638	0.491	1.35	2.02	
NRLRW391M250V22X40SF			22x40	0.638	0.491	1.49	2.23	
NRLRW391M250V25X30SF			25x30	0.638	0.491	1.35	2.02	
NRLRW391M250V30X25SF			30x25	0.638	0.491	1.49	2.23	
NRLRW471M250V22X45SF			470	22x45	0.530	0.408	1.60	2.40
NRLRW471M250V25X35SF				25x35	0.530	0.408	1.57	2.35
NRLRW471M250V30X30SF	30x30			0.530	0.408	1.65	2.47	
NRLRW561M250V22X50SF	560		22x50	0.445	0.342	1.72	2.58	
NRLRW561M250V25X40SF			25x40	0.445	0.342	1.80	2.70	
NRLRW561M250V30X30SF			30x30	0.445	0.342	1.80	2.70	
NRLRW681M250V25X45SF	680		25x45	0.366	0.282	1.85	2.77	
NRLRW681M250V30X35SF			30x35	0.366	0.282	2.00	3.00	
NRLRW681M250V35X30SF			35x30	0.366	0.282	2.00	3.00	
NRLRW821M250V25X50SF			25x50	0.304	0.234	2.10	3.15	
NRLRW821M250V30X40SF	820		30x40	0.304	0.234	2.18	3.27	
NRLRW821M250V35X35SF			35x35	0.304	0.234	2.30	3.45	
NRLRW102M250V30X45SF	1,000		30x45	0.249	0.192	2.40	3.60	
NRLRW102M250V35X35SF			35x35	0.249	0.192	2.35	3.52	
NRLRW122M250V35X40SF	1,200	35x40	0.208	0.160	2.50	3.75		
NRLRW152M250V35X50SF	1,500	35x50	0.166	0.128	3.00	4.50		
NRLRW820M315V20X25SF	82	315	20x25	3.033	2.333	0.64	0.89	
NRLRW101M315V20X30SF	100		20x30	2.487	1.913	0.69	0.96	
NRLRW101M315V22X25SF			22x25	2.487	1.913	0.62	0.86	
NRLRW121M315V20X30SF			120	20x30	2.073	1.595	0.75	1.05
NRLRW121M315V22X25SF	22x25			2.073	1.595	0.75	1.05	
NRLRW121M315V25X25SF	150		25x25	2.073	1.595	0.76	1.06	
NRLRW151M315V20X35SF			20x35	1.658	1.276	0.82	1.14	
NRLRW151M315V22X30SF			22x30	1.658	1.276	0.82	1.14	
NRLRW151M315V25X25SF	180		25x25	1.658	1.276	0.82	1.14	
NRLRW181M315V20X40SF			20x40	1.382	1.063	0.90	1.26	
NRLRW181M315V22X35SF			22x35	1.382	1.063	0.92	1.28	
NRLRW181M315V25X25SF	220		25x25	1.382	1.063	0.90	1.26	
NRLRW221M315V20X50SF			20x50	1.131	0.870	1.00	1.40	
NRLRW221M315V22X40SF			22x40	1.131	0.870	1.04	1.45	
NRLRW221M315V25X30SF	270		25x30	1.131	0.870	1.04	1.45	
NRLRW221M315V30X25SF			30x25	1.131	0.870	1.04	1.45	
NRLRW271M315V22X45SF			22x45	0.922	0.709	1.16	1.62	
NRLRW271M315V25X35SF	330		25x35	0.922	0.709	1.15	1.61	
NRLRW271M315V30X25SF			30x25	0.922	0.709	1.15	1.61	
NRLRW271M315V35X25SF			35x25	0.922	0.709	1.15	1.61	
NRLRW331M315V22X50SF	330		22x50	0.754	0.580	1.22	1.70	
NRLRW331M315V25X40SF			25x40	0.754	0.580	1.23	1.72	
NRLRW331M315V30X30SF			30x30	0.754	0.580	1.33	1.86	
NRLRW331M315V35X25SF			35x25	0.754	0.580	1.32	1.84	

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## STANDARD PRODUCT LIST, CASE SIZE AND SPECIFICATIONS

Part Number	Cap. (µF)	W.V. (Vdc)	Case Size DxL (mm)	ESR (Ω@20°C)		Max. Ripple Current (Arms @ 105°C)		
				120Hz	20KHz	120Hz	10K ~ 50KHz	
NRLRW391M315V25X45SF	390	315	25x45	0.638	0.491	1.40	1.96	
NRLRW391M315V30X35SF			30x35	0.638	0.491	1.47	2.05	
NRLRW391M315V35X30SF			35x30	0.638	0.491	1.47	2.05	
NRLRW471M315V30X40SF	470		30x40	0.530	0.408	1.70	2.38	
NRLRW471M315V35X30SF			35x30	0.530	0.408	1.70	2.38	
NRLRW561M315V30X45SF	560		30x45	0.445	0.342	2.05	2.87	
NRLRW561M315V35X35SF			35x35	0.445	0.342	1.90	2.66	
NRLRW681M315V30X50SF	680		30x50	0.366	0.282	2.14	2.99	
NRLRW681M315V35X40SF			35x40	0.366	0.282	2.17	3.03	
NRLRW821M315V35X45SF			820	35x45	0.304	0.234	2.20	3.08
NRLRW680M350V20X25SF	68	350	20x25	3.658	2.814	0.47	0.65	
NRLRW820M350V20X30SF	82		20x30	3.033	2.333	0.55	0.77	
NRLRW101M350V20X30SF	100		20x30	2.487	1.913	0.60	0.84	
NRLRW101M350V22X25SF			22x25	2.487	1.913	0.69	0.96	
NRLRW121M350V20X35SF	120		20x35	2.073	1.595	0.70	0.98	
NRLRW121M350V22X30SF			22x30	2.073	1.595	0.75	1.05	
NRLRW121M350V25X25SF			25x25	2.073	1.595	0.75	1.05	
NRLRW151M350V20X40SF	150		20x40	1.658	1.276	0.78	1.09	
NRLRW151M350V22X35SF			22x35	1.658	1.276	0.82	1.14	
NRLRW151M350V25X30SF			25x30	1.658	1.276	0.83	1.16	
NRLRW181M350V20X45SF	180		20x45	1.382	1.063	0.88	1.23	
NRLRW181M350V22X40SF			22x40	1.382	1.063	0.92	1.28	
NRLRW181M350V25X30SF			25x30	1.382	1.063	0.92	1.28	
NRLRW181M350V30X25SF	220		30x25	1.382	1.063	0.92	1.28	
NRLRW221M350V22X45SF			22x45	1.131	0.870	1.05	1.47	
NRLRW221M350V25X35SF			25x35	1.131	0.870	1.05	1.47	
NRLRW221M350V30X30SF	270		30x30	1.131	0.870	1.02	1.42	
NRLRW271M350V22X50SF			22x50	0.922	0.709	1.18	1.65	
NRLRW271M350V25X40SF			25x40	0.922	0.709	1.18	1.65	
NRLRW271M350V30X30SF	330		30x30	0.922	0.709	1.18	1.65	
NRLRW271M350V35X25SF			35x25	0.922	0.709	1.20	1.68	
NRLRW331M350V25X45SF			25x45	0.754	0.580	1.30	1.82	
NRLRW331M350V30X35SF	390		30x35	0.754	0.580	1.35	1.89	
NRLRW331M350V35X30SF			35x30	0.754	0.580	1.22	1.70	
NRLRW391M350V25X50SF	470		25x50	0.638	0.491	1.45	2.03	
NRLRW391M350V30X40SF			30x40	0.638	0.491	1.52	2.12	
NRLRW391M350V35X35SF			35x35	0.638	0.491	1.48	2.07	
NRLRW471M350V30X45SF	560		30x45	0.530	0.408	1.65	2.31	
NRLRW471M350V35X35SF			35x35	0.530	0.408	1.70	2.38	
NRLRW561M350V30X50SF	680		30x50	0.445	0.342	1.85	2.59	
NRLRW561M350V35X40SF			35x40	0.445	0.342	1.90	2.66	
NRLRW681M350V35X45SF	820		35x45	0.366	0.282	2.00	2.80	
NRLRW560M385V20X25SF	56		385	20x25	4.441	3.416	0.42	0.58
NRLRW680M385V20X30SF	68			20x30	3.658	2.814	0.47	0.65
NRLRW680M385V22X25SF				22x25	3.658	2.814	0.49	0.68
NRLRW820M385V20X30SF	82			20x30	3.033	2.333	0.52	0.72
NRLRW820M385V22X25SF				22x25	3.033	2.333	0.55	0.77
NRLRW101M385V20X35SF	100			20x35	2.487	1.913	0.60	0.84
NRLRW101M385V22X30SF				22x30	2.487	1.913	0.66	0.92
NRLRW101M385V25X25SF				25x25	2.487	1.913	0.66	0.92
NRLRW121M385V20X40SF	120	20x40		2.073	1.595	0.68	0.95	
NRLRW121M385V22X35SF		22x35		2.073	1.595	0.71	0.99	
NRLRW121M385V25X25SF		25x25		2.073	1.595	0.71	0.99	
NRLRW151M385V22X40SF	150	22x40		1.658	1.276	0.83	1.16	
NRLRW151M385V25X30SF		25x30		1.658	1.276	0.83	1.16	
NRLRW151M385V30X25SF		30x25		1.658	1.276	0.77	1.07	

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## STANDARD PRODUCT LIST, CASE SIZE AND SPECIFICATIONS

Part Number	Cap. (µF)	W.V. (Vdc)	Case Size DxL (mm)	ESR (Ω@20°C)		Max. Ripple Current (Arms @ 105°C)		
				120Hz	20KHz	120Hz	10K ~ 50KHz	
NRLRW181M385V22X35SF	180	385	22x45	1.382	1.063	0.92	1.28	
NRLRW181M385V25X35SF			25x35	1.382	1.063	0.92	1.28	
NRLRW181M385V30X30SF			30x30	1.382	1.063	0.89	1.24	
NRLRW221M385V22X50SF	220		22x50	1.131	0.870	1.03	1.44	
NRLRW221M385V25X40SF			25x40	1.131	0.870	1.03	1.44	
NRLRW221M385V30X30SF			30x30	1.131	0.870	1.01	1.41	
NRLRW221M385V35X25SF	270		35x25	1.131	0.870	1.03	1.44	
NRLRW271M385V25X45SF			25x45	0.922	0.709	1.14	1.59	
NRLRW271M385V30X35SF			30x35	0.922	0.709	1.15	1.61	
NRLRW271M385V35X30SF	330		35x30	0.922	0.709	1.13	1.58	
NRLRW331M385V30X40SF			30x40	0.754	0.580	1.32	1.84	
NRLRW331M385V35X30SF	390		35x30	0.754	0.580	1.35	1.89	
NRLRW391M385V30X45SF			30x45	0.638	0.491	1.46	2.04	
NRLRW391M385V35X35SF	470		35x35	0.638	0.491	1.50	2.10	
NRLRW471M385V30X50SF			30x50	0.530	0.408	1.72	2.40	
NRLRW471M385V35X40SF	560	35x40	0.530	0.408	1.79	2.50		
NRLRW561M385V35X45SF		35x45	0.445	0.342	1.99	2.78		
NRLRW560M400V20X25SF	56	400	20x25	4.441	3.416	0.51	0.71	
NRLRW680M400V20X30SF	68		20x30	3.658	2.814	0.56	0.78	
NRLRW680M400V22X25SF			22x25	3.658	2.814	0.52	0.72	
NRLRW820M400V20X30SF	82		20x30	3.033	2.333	0.64	0.89	
NRLRW820M400V22X25SF			22x25	3.033	2.333	0.64	0.89	
NRLRW101M400V20X35SF	100		20x35	2.487	1.913	0.70	0.98	
NRLRW101M400V22X30SF			22x30	2.487	1.913	0.70	0.98	
NRLRW101M400V25X25SF			25x25	2.487	1.913	0.70	0.98	
NRLRW121M400V20X40SF	120		20x40	2.073	1.595	0.75	1.05	
NRLRW121M400V22X35SF			22x35	2.073	1.595	0.75	1.05	
NRLRW121M400V25X25SF	150		25x25	2.073	1.595	0.75	1.05	
NRLRW151M400V20X45SF			20x45	1.658	1.276	0.83	1.16	
NRLRW151M400V22X40SF			22x40	1.658	1.276	0.88	1.23	
NRLRW151M400V25X30SF	180		25x30	1.658	1.276	0.88	1.23	
NRLRW151M400V30X25SF			30x25	1.658	1.276	0.82	1.14	
NRLRW181M400V22X45SF			22x45	1.382	1.063	0.98	1.37	
NRLRW181M400V25X35SF	220		25x35	1.382	1.063	0.98	1.37	
NRLRW181M400V30X30SF			30x30	1.382	1.063	0.95	1.33	
NRLRW221M400V22X50SF	270		22x50	1.131	0.870	1.10	1.54	
NRLRW221M400V25X40SF			25x40	1.131	0.870	1.10	1.54	
NRLRW221M400V30X30SF			30x30	1.131	0.870	1.10	1.54	
NRLRW221M400V35X25SF	330		35x25	1.131	0.870	1.10	1.54	
NRLRW271M400V25X45SF			25x45	0.922	0.709	1.21	1.69	
NRLRW271M400V30X35SF	390		30x35	0.922	0.709	1.22	1.70	
NRLRW271M400V35X30SF			35x30	0.922	0.709	1.22	1.70	
NRLRW331M400V30X40SF	470		30x40	0.754	0.580	1.44	2.01	
NRLRW331M400V35X30SF			35x30	0.754	0.580	1.44	2.01	
NRLRW391M400V30X45SF	560		30x45	0.638	0.491	1.55	2.17	
NRLRW391M400V35X35SF			35x35	0.638	0.491	1.60	2.24	
NRLRW471M400V35X40SF	82		35x40	0.530	0.408	1.90	2.66	
NRLRW561M400V35X45SF			35x45	0.445	0.342	2.12	2.96	
NRLRW560M420V20X25SF	56		420	20x25	5.921	4.555	0.44	0.61
NRLRW680M420V20X30SF	68			20x30	4.877	3.751	0.49	0.68
NRLRW680M420V22X25SF				22x25	4.877	3.751	0.51	0.71
NRLRW820M420V20X35SF	82			20x35	4.044	3.111	0.54	0.75
NRLRW820M420V22X30SF		22x30		4.044	3.111	0.65	0.91	
NRLRW820M420V25X25SF		25x25		4.044	3.111	0.65	0.91	

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## STANDARD PRODUCT LIST, CASE SIZE AND SPECIFICATIONS

Part Number	Cap. (µF)	W.V. (Vdc)	Case Size DxL (mm)	ESR (Ω@20°C)		Max. Ripple Current (Arms @ 105°C)	
				120Hz	20KHz	120Hz	10K ~ 50KHz
NRLRW101M420V20X35SF	100	420	20x35	3.316	2.551	0.61	0.85
NRLRW101M420V22X30SF			22x30	3.316	2.551	0.68	0.95
NRLRW101M420V25X25SF			25x25	3.316	2.551	0.67	0.93
NRLRW121M420V20X40SF	120		20x40	2.764	2.126	0.70	0.98
NRLRW121M420V22X35SF			22x35	2.764	2.126	0.73	1.02
NRLRW121M420V25X30SF			25x30	2.764	2.126	0.76	1.06
NRLRW121M420V30X25SF	150		30x25	2.764	2.126	0.81	1.13
NRLRW151M420V20X45SF			20x45	2.211	1.701	0.78	1.09
NRLRW151M420V22X40SF			22x40	2.211	1.701	0.86	1.20
NRLRW151M420V25X35SF	180		25x35	2.211	1.701	0.87	1.21
NRLRW151M420V30X25SF			30x25	2.211	1.701	0.84	1.17
NRLRW181M420V22X45SF			22x45	1.843	1.417	0.96	1.34
NRLRW181M420V25X35SF	220		25x35	1.843	1.417	0.95	1.33
NRLRW181M420V30X30SF			30x30	1.843	1.417	0.97	1.35
NRLRW181M420V35X25SF			35x25	1.843	1.417	0.91	1.27
NRLRW221M420V25X40SF	270		25x40	1.508	1.160	1.08	1.51
NRLRW221M420V30X35SF			30x35	1.508	1.160	1.14	1.59
NRLRW221M420V35X30SF			35x30	1.508	1.160	1.07	1.49
NRLRW271M420V25X50SF	330	25x50	1.229	0.945	1.38	1.93	
NRLRW271M420V30X35SF		30x35	1.229	0.945	1.20	1.68	
NRLRW271M420V35X35SF		35x35	1.229	0.945	1.29	1.80	
NRLRW331M420V30X40SF	390	30x40	1.005	0.773	1.37	1.91	
NRLRW331M420V35X35SF		35x35	1.005	0.773	1.44	2.01	
NRLRW391M420V30X45SF		30x45	0.851	0.654	1.50	2.10	
NRLRW391M420V35X40SF	470	35x40	0.851	0.654	1.63	2.28	
NRLRW471M420V35X45SF		35x45	0.706	0.543	1.88	2.63	
NRLRW470M450V20X25SF		47	20x25	7.055	5.427	0.39	0.54
NRLRW560M450V20X30SF	56	20x30	5.921	4.555	0.51	0.71	
NRLRW560M450V22X25SF		22x25	5.921	4.555	0.44	0.61	
NRLRW680M450V20X35SF	68	20x35	4.877	3.751	0.56	0.78	
NRLRW680M450V22X30SF		22x30	4.877	3.751	0.53	0.74	
NRLRW820M450V20X35SF	82	20x35	4.044	3.111	0.64	0.89	
NRLRW820M450V22X30SF		22x30	4.044	3.111	0.64	0.89	
NRLRW820M450V25X25SF		25x25	4.044	3.111	0.64	0.89	
NRLRW101M450V20X45SF	100	20x45	3.316	2.551	0.69	0.96	
NRLRW101M450V22X35SF		22x35	3.316	2.551	0.69	0.96	
NRLRW101M450V25X30SF		25x30	3.316	2.551	0.69	0.96	
NRLRW101M450V30X25SF	120	30x25	3.316	2.551	0.69	0.96	
NRLRW121M450V20X50SF		20x50	2.764	2.126	0.75	1.05	
NRLRW121M450V22X40SF		22x40	2.764	2.126	0.75	1.05	
NRLRW121M450V25X30SF	150	25x30	2.764	2.126	0.75	1.05	
NRLRW121M450V30X25SF		30x25	2.764	2.126	0.80	1.12	
NRLRW151M450V22X45SF		22x45	2.211	1.701	0.88	1.23	
NRLRW151M450V25X35SF	180	25x35	2.211	1.701	0.88	1.23	
NRLRW151M450V30X30SF		30x30	2.211	1.701	0.88	1.23	
NRLRW151M450V35X25SF		35x25	2.211	1.701	0.75	1.05	
NRLRW181M450V25X40SF	220	25x40	1.843	1.417	0.95	1.33	
NRLRW181M450V30X30SF		30x30	1.843	1.417	1.00	1.40	
NRLRW181M450V35X30SF		35x30	1.843	1.417	0.86	1.20	
NRLRW221M450V25X45SF	270	25x45	1.508	1.160	1.10	1.54	
NRLRW221M450V30X35SF		30x35	1.508	1.160	1.12	1.56	
NRLRW221M450V35X30SF		35x30	1.508	1.160	1.05	1.47	
NRLRW271M450V30X40SF	330	30x40	1.229	0.945	1.28	1.79	
NRLRW271M450V35X35SF		35x35	1.229	0.945	1.27	1.77	
NRLRW331M450V30X50SF		30x50	1.005	0.773	1.45	2.03	
NRLRW331M450V35X40SF	390	35x40	1.005	0.773	1.45	2.03	
NRLRW391M450V35X40SF		35x40	0.851	0.654	1.65	2.31	
NRLRW471M450V35X50SF		470	35x50	0.706	0.543	1.85	2.59

