

NRB-XW Series

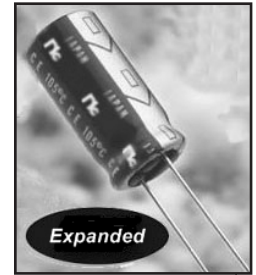
Radial Leaded High Temperature Long Life Aluminum Electrolytic Capacitors



FEATURES

- HIGH RIPPLE CURRENT
- LONG LIFE AT HIGH TEMPERATURE (10,000 Hours @ +105°C)
- MEETS THE REQUIREMENTS OF AEC-Q200*

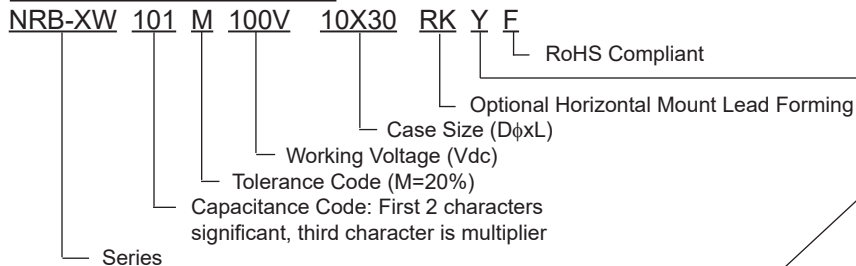
*Contact NIC for supporting test data



CHARACTERISTICS

Rated Voltage Range		35 ~ 100VDC				
Capacitance Range		33 ~ 1,800µF				
Operating Temperature Range		-40°C ~ +105°C				
Capacitance Tolerance		±20% (M)				
Maximum Leakage Current @ +20°C		35V ~ 100V		0.01CV or 3µA whichever is greater after 2 minutes at rated voltage		
Max. Tan δ at 120Hz/20°C	W.V. (Vdc)	35	50	63	80	100
	S.V. (Vdc)	44	63	80	100	125
	Tan δ	0.12	0.10	0.09	0.08	0.08
	W.V. (Vdc)	220	250	350	400	420
	S.V. (Vdc)	270	300	400	450	470
Low Temperature Stability Impedance Ratio @ 120Hz	Tan δ	0.20	0.20	0.20	0.20	0.25
	W.V. (Vdc)	35	50	63	80	100
	Z-25°C/Z+20°C	2	2	2	2	2
Load Life at W.V. & 105°C 6.3mm: 7,000 Hours 8 ~ 10mm: 10,000 Hours	Δ Capacitance	35V ~ 100V		Within ±25% of initial measured value		
		160V ~ 450V		Within ±20% of initial measured value		
	Δ Tan δ	Less than 200% of specified value				
	Δ LC	Less than specified value				

PART NUMBER SYSTEM



Optional: Suitable for automotive equipment, sourced to special production and inspection at IATF-16949 certified production site

PRECAUTIONS

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

NRB-XW Series

Radial Leaded High Temperature Long Life Aluminum Electrolytic Capacitors



35V ~ 80V STANDARD VALUES, SPECIFICATIONS AND CASE SIZES (mm)

Part Number	Cap. (µF)	W.V. (Vdc)	Dissipation Factor +20°C/120Hz	Ripple Current Rating (Arms)		Max. ESR (Ω) +20°C/120Hz	Load Life Hours @+105°C
				+105°C/120Hz	+105°C/100KHz		
NRB-XW181M35V6.3X25F	180	35	0.12	0.605	1.21	1.11	7000
NRB-XW221M35V6.3X30F	220		0.12	0.685	1.37	0.90	7000
NRB-XW331M35V6.3X40F	330		0.12	0.924	1.68	0.60	7000
NRB-XW391M35V6.3X50F	390		0.12	1.110	2.02	0.51	7000
NRB-XW391M35V8X25F	390		0.12	0.951	1.73	0.51	10000
NRB-XW471M35V8X30F	470		0.12	1.11	2.03	0.42	10000
NRB-XW681M35V8X40F	680		0.12	1.41	2.57	0.29	10000
NRB-XW821M35V8X50F	820		0.12	1.82	3.04	0.24	10000
NRB-XW821M35V10X30F	820		0.12	1.48	2.47	0.24	10000
NRB-XW102M35V8X60F	1000		0.12	2.08	3.48	0.20	10000
NRB-XW122M35V10X40F	1200		0.12	1.87	3.12	0.17	10000
NRB-XW152M35V10X50F	1500		0.12	2.21	3.69	0.13	10000
NRB-XW182M35V10X60F	1800		0.12	2.50	4.17	0.11	10000
NRB-XW101M50V6.3X25F	100		50	0.10	0.510	1.02	1.66
NRB-XW121M50V6.3X30F	120	0.10		0.580	1.16	1.38	7000
NRB-XW181M50V6.3X40F	180	0.10		0.710	1.42	0.92	7000
NRB-XW221M50V6.3X50F	220	0.10		0.860	1.72	0.75	7000
NRB-XW221M50V8X25F	220	0.10		0.74	1.48	0.75	10000
NRB-XW271M50V8X30F	270	0.10		0.87	1.74	0.61	10000
NRB-XW391M50V8X40F	390	0.10		1.22	2.23	0.43	10000
NRB-XW471M50V8X50F	470	0.10		1.45	2.65	0.35	10000
NRB-XW471M50V10X30F	470	0.10		1.22	2.22	0.35	10000
NRB-XW561M50V8X60F	560	0.10		1.68	3.07	0.30	10000
NRB-XW681M50V10X40F	680	0.10		1.55	2.82	0.24	10000
NRB-XW821M50V10X50F	820	0.10		2.02	3.37	0.20	10000
NRB-XW102M50V10X60F	1000	0.10		2.31	3.86	0.17	10000
NRB-XW820M63V6.3X25F	82	63		0.09	0.455	0.910	1.82
NRB-XW101M63V6.3X30F	100		0.09	0.515	1.03	1.49	7000
NRB-XW151M63V6.3X40F	150		0.09	0.635	1.27	1.00	7000
NRB-XW181M63V6.3X50F	180		0.09	0.775	1.55	0.83	7000
NRB-XW181M63V8X25F	180		0.09	0.665	1.33	0.83	10000
NRB-XW221M63V8X30F	220		0.09	0.785	1.57	0.68	10000
NRB-XW331M63V8X40F	330		0.09	1.11	2.02	0.45	10000
NRB-XW391M63V8X50F	390		0.09	1.32	2.41	0.38	10000
NRB-XW391M63V10X30F	390		0.09	1.16	2.10	0.38	10000
NRB-XW471M63V8X60F	470		0.09	1.54	2.80	0.32	10000
NRB-XW561M63V10X40F	560		0.09	1.43	2.60	0.27	10000
NRB-XW681M63V10X50F	680		0.09	1.71	3.12	0.22	10000
NRB-XW821M63V10X60F	820		0.09	2.15	3.59	0.16	10000
NRB-XW470M80V6.3X25F	47		80	0.08	0.455	0.91	2.82
NRB-XW560M80V6.3X30F	56	0.08		0.515	1.03	2.37	7000
NRB-XW820M80V6.3X40F	82	0.08		0.635	1.27	1.62	7000
NRB-XW101M80V6.3X50F	100	0.08		0.775	1.55	1.33	7000
NRB-XW101M80V8X25F	100	0.08		0.665	1.33	1.33	10000
NRB-XW121M80V8X30F	120	0.08		0.785	1.57	1.11	10000
NRB-XW181M80V8X40F	180	0.08		1.01	2.02	0.74	10000
NRB-XW221M80V8X50F	220	0.08		1.20	2.41	0.60	10000
NRB-XW221M80V10X30F	220	0.08		1.05	2.10	0.60	10000
NRB-XW271M80V8X60F	270	0.08		1.40	2.80	0.49	10000
NRB-XW271M80V10X40F	270	0.08		1.30	2.60	0.49	10000
NRB-XW391M80V10X50F	390	0.08		1.71	3.12	0.34	10000
NRB-XW471M80V10X60F	470	0.08		1.97	3.59	0.28	10000

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100V STANDARD VALUES, SPECIFICATIONS AND CASE SIZES (mm)

Part Number	Cap. (μF)	W.V. (Vdc)	Dissipation Factor +20°C/120Hz	Ripple Current Rating (Arms)		Max. ESR (Ω) +20°C/120Hz	Load Life Hours @+105°C
				+105°C/120Hz	+105°C/100KHz		
NRB-XW330M100V6.3X25F	33	100	0.08	0.382	0.91	4.02	7000
NRB-XW390M100V6.3X30F	39		0.08	0.515	1.03	3.40	7000
NRB-XW560M100V6.3X40F	56		0.08	0.635	1.27	2.37	7000
NRB-XW680M100V6.3X50F	68		0.08	0.775	1.55	1.95	7000
NRB-XW820M100V8X25F	82		0.08	0.665	1.33	1.62	10000
NRB-XW101M100V8X30F	100		0.08	0.785	1.57	1.33	10000
NRB-XW121M100V8X40F	120		0.08	1.01	2.02	1.11	10000
NRB-XW151M100V8X50F	150		0.08	1.20	2.41	0.88	10000
NRB-XW151M100V10X30F	150		0.08	1.05	2.10	0.88	10000
NRB-XW221M100V8X60F	220		100	0.08	1.40	2.80	0.60
NRB-XW221M100V10X40F	220	0.08		1.30	2.60	0.60	10000
NRB-XW271M100V10X50F	270	0.08		1.56	3.12	0.49	10000
NRB-XW331M100V10X60F	330	0.08		1.97	3.59	0.40	10000

RIPPLE CURRENT FREQUENCY CORRECTION FACTOR (35V ~ 100V)

Cap. Values	120Hz	500Hz	1KHz	10KHz ~ up
33μF	0.42	0.70	0.90	1.00
39 ~ 270μF	0.50	0.73	0.92	1.00
330 ~ 680μF	0.55	0.77	0.94	1.00
820 ~ 1800μF	0.60	0.80	0.96	1.00

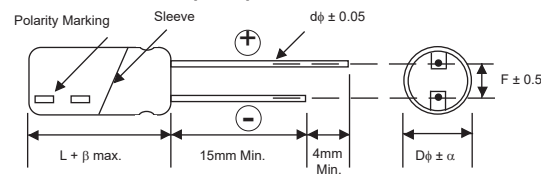
LEAD SPACING AND DIAMETER (mm)

Case Dia. (Dφ)	6.3	8	10
Lead Dia. (Dφ)	0.5	0.6	0.6
Lead Spacing (F)	2.5	3.5	5.0
Dim. α	0.5	0.5	0.5
Dim. β 35 ~ 100V	2.0		

HORIZONTAL MOUNT LEAD FORMING (mm)

Case Dia. (Dφ)	8		10	
Lead Dia. (φd)	0.6		0.6	
Lead Space (F)	3.5		5.0	
Forming Code	RI	RK	RX	SG
Form Type	A	B	A	B
Lead Length (H)	4.0		3.5	

DIMENSIONS (mm)



Drawing is representative of parts as supplied in bulk or straight lead format, please see taping specification for details on taped format packaging.

