NRB-XW Series

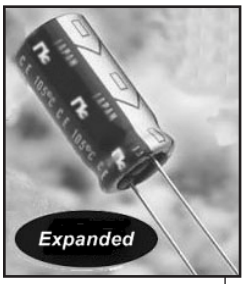
Radial Leaded High Temperature Long Life Aluminum Electrolytic Capacitors

ROHS/REACH COMPLIANT HALOGEN FREE | 9001:2015 CERTIFIED | AEC-Q200 QUALIFIED | NIC Components Corp.

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	
	Tan δ	0.20	0.20	0.20	0.20	0.25	
Low Temperature Stability Impedance Ratio @ 120Hz	W.V. (Vdc)	35	50	63	80	100	
	Z-25°C/Z+20°C	2	2	2	2	2	
	Z-40°C/Z+20°C	3	3	3	3	3	
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

NRB-XW 101 M 100V 10X30 RK Y F

- F — RoHS Compliant
- Y — Optional: Suitable for automotive equipment, sourced to special production and inspection at IATF-16949 certified production site
- RK — Optional Horizontal Mount Lead Forming
- 10X30 — Case Size (DϕxL)
- 100V — Working Voltage (Vdc)
- M — Tolerance Code (M=20%)
- 101 — Capacitance Code: First 2 characters significant, third character is multiplier
- NRB-XW — Series

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

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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	7000
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	7000
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	7000
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	10000
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

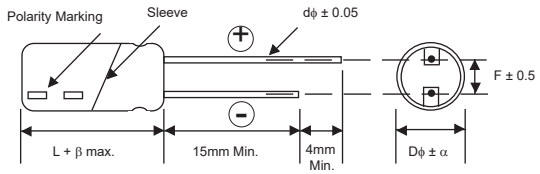
RIPPLE CURRENT FREQUENCY CORRECTION FACTOR (35V ~ 100V)

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		

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.

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