



www.niccomp.com/pcn | Technical Support:

tpmg@niccomp.com

Issued: November 29th, 2022
SUB: EOL Notice

Product Type: Radial Leaded Aluminum Electrolytic Capacitors
NIC Series: NRB-XF Series
Product Specification: <http://www.niccomp.com/products/catalog/nrbxf.pdf>

Notification: End of Life Notification

The following is notice of end of life for the NRB-XF series of radial leaded aluminum electrolytic capacitors. The end of life notification applies to all packaging and lead configurations, automotive and non-automotive parts.

Effective: November 29th, 2022

Last Order Date: April 28th, 2023

Last Ship Date: December 31st, 2023

Link to complete list of part numbers: [PART NUMBER LIST \(Excel\)](#)

Reason for Discontinuation: Diminishing Demand

EOL Part Numbers	Capacitance	Voltage Rating	Case Size	Possible Alternative	Comments
NRB-XF470M160V10X16_F	47	160	10X16	NRB-XZ470M160V10X16_F	N/A
NRB-XF680M160V10X20_F	68	160	10X20	NRB-XZ680M160V10X20_F	N/A
NRB-XF820M160V16X16_F	82	160	16X16	NRB-XZ820M160V16X16_F	N/A
NRB-XF101M160V12.5X20_F	100	160	12.5X20	NRB-XZ101M160V12.5X20_F	N/A
NRB-XF101M160V18X16_F	100	160	18X16	NRB-XZ101M160V18X16_F	N/A
NRB-XF181M160V16X20_F	180	160	16X20	NRB-XZ181M160V16X20_F	N/A
NRB-XF221M160V18X20_F	220	160	18X20	NRB-XZ221M160V18X20_F	N/A
NRB-XF330M200V10X16_F	33	200	10X16	NRB-XZ330M200V10X16_F	N/A
NRB-XF470M200V10X20_F	47	200	10X20	NRB-XZ470M200V10X20_F	N/A
NRB-XF560M200V16X16_F	56	200	16X16	NRB-XZ560M200V16X16_F	N/A
NRB-XF680M200V12.5X20_F	68	200	12.5X20	NRB-XZ680M200V12.5X20_F	N/A
NRB-XF820M200V18X16_F	82	200	18X16	NRB-XZ820M200V18X16_F	N/A
NRB-XF121M200V16X20_F	120	200	16X20	NRB-XZ121M200V16X20_F	N/A
NRB-XF181M200V18X20_F	180	200	18X20	NRB-XZ181M200V18X20_F	N/A
NRB-XF270M250V10X16_F	27	250	10X16	NRB-XZ270M250V10X16_F	N/A
NRB-XF390M250V10X20_F	39	250	10X20	NRB-XZ390M250V10X20_F	N/A
NRB-XF470M250V16X16_F	47	250	16X16	NRB-XZ470M250V16X16_F	N/A
NRB-XF560M250V12.5X20_F	56	250	12.5X20	NRB-XZ560M250V12.5X20_F	N/A
NRB-XF560M250V18X16_F	56	250	18X16	NRB-XZ560M250V18X16_F	N/A
NRB-XF101M250V16X20_F	100	250	16X20	NRB-XZ101M250V16X20_F	N/A
NRB-XF121M250V18X20_F	120	250	18X20	NRB-XZ121M250V18X20_F	N/A
NRB-XF180M350V10X16_F	18	350	10X16	NRB-XZ180M350V10X16_F	N/A
NRB-XF220M350V10X20_F	22	350	10X20	NRB-XZ220M350V10X20_F	N/A
NRB-XF270M350V16X16_F	27	350	16X16	NRB-XZ270M350V16X16_F	N/A
NRB-XF330M350V12.5X20_F	33	350	12.5X20	NRB-XZ330M350V12.5X20_F	N/A
NRB-XF330M350V18X16_F	33	350	18X16	NRB-XZ330M350V18X16_F	N/A
NRB-XF560M350V16X20_F	56	350	16X20	NRB-XZ560M350V16X20_F	N/A
NRB-XF820M350V18X20_F	82	350	18X20	NRB-XZ820M350V18X20_F	N/A
NRB-XF120M400V10X16_F	12	400	10X16	NRB-XZ120M400V10X16_F	N/A
NRB-XF180M400V10X20_F	18	400	10X20	NRB-XZ180M400V10X20_F	N/A
NRB-XF180M400V16X16_F	18	400	16X16	NRB-XZ180M400V16X16_F	N/A
NRB-XF270M400V12.5X20_F	27	400	12.5X20	NRB-XZ270M400V12.5X20_F	N/A
NRB-XF270M400V18X16_F	27	400	18X16	NRB-XZ270M400V18X16_F	N/A
NRB-XF470M400V16X20_F	47	400	16X20	NRB-XZ470M400V16X20_F	N/A

EOL Part Numbers	Capacitance	Voltage Rating	Case Size	Possible Alternative	Comments
NRB-XF560M400V18X20_F	56	400	18X20	NRB-XZ560M400V18X20_F	N/A
NRB-XF100M450V10X16_F	10	450	10X16	NRB-XZ100M450V10X16_F	N/A
NRB-XF150M450V10X20_F	15	450	10X20	NRB-XZ150M450V10X20_F	N/A
NRB-XF150M450V16X16_F	15	450	16X16	NRB-XZ150M450V16X16_F	N/A
NRB-XF220M450V12.5X20_F	22	450	12.5X20	NRB-XZ220M450V12.5X20_F	N/A
NRB-XF220M450V18X16_F	22	450	18X16	NRB-XZ220M450V18X16_F	N/A
NRB-XF330M450V16X20_F	33	450	16X20	NRB-XM330M450V16X20_F	Lower Ripple Current Rating
NRB-XF470M450V18X20_F	47	450	18X20	NRB-XZ470M450V18X20_F	N/A

Prepared by: Technical Product Marketing Group / tpmg@niccomp.com

➔ Follow NIC PCN alerts to get email notifications of EOL and PCN announcements at www.niccomp.com/pcn

Use our Quickbuilder tool to find possible alternatives for the discontinued parts:

http://www.niccomp.com/QuickBUILDER/qb_capacitor.php

Miniature Aluminum Electrolytic Capacitors

NRB-XF Series

REDUCED SIZE, RADIAL LEADS, POLARIZED, ALUMINUM ELECTROLYTIC

FEATURES

- LONG LIFE AT 105°C (10,000 hrs.)
- HIGH VOLTAGE (UP TO 450V)
- REDUCED SIZE FROM NRWS SERIES

**RoHS
Compliant**
includes all homogeneous materials

*See Part Number System for Details



CHARACTERISTICS

Rated Voltage Range	160 ~ 450Vdc						
Capacitance Range	10 ~ 220μF						
Operating Temperature Range	-25°C ~ +105°C						
Capacitance Tolerance	±20% (M)						
Maximum Leakage Current at 20°C	1 minute 0.04CV +100μA						
	5 minutes 0.02CV +25μA						
Max. Tan δ at 120Hz/20°C	W.V. (Vdc)	160	200	250	350	400	450
	S.V. (Vdc)	200	250	300	400	450	500
	Tan δ	0.15	0.15	0.15	0.20	0.20	0.20
Low Temperature Stability Impedance Ratio @ 120Hz	W.V. (Vdc)	160	200	250	350	400	450
	Z-25°C/Z+20°C	3	3	3	6	6	6
Load Life Hours Load Life Test at Rated W.V. & 105°C	Test	10,000 Hours					
	Capacitance Change	Within ±25% of initial measured value					
	Tan δ	Less than 200% of specified value					
	Leakage Current	Less than specified value					

PART NUMBER SYSTEM

NRB-XF 180 M 400V 10X20 TB E

Series Capacitance Code in μF Tolerance Code M=20% Working Voltage Case Size (mm) TB = Tape & Box* E RoHS Compliant

*see tape specification for details

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



NIC COMPONENTS CORP.

www.niccomp.com

SPECIFICATIONS ARE SUBJECT TO CHANGE

STANDARD PRODUCT, SPECIFICATIONS AND CASE SIZES D ϕ x L (mm)

Part Number	Cap. (μ F)	W.V. (Vdc)	Dissipation Factor +20°C/120Hz	Ripple Current Rating (mA rms) +105°C/100KHz	Max. ESR (Ω) 120Hz	Load Life Hours @+105°C
NRB-XF470M160V10X16F	47	160	0.15	650	5.29	10,000
NRB-XF680M160V10X20F	68		0.15	800	3.66	10,000
NRB-XF820M160V16X16F	82		0.15	1350	3.03	10,000
NRB-XF101M160V12.5X20F	100		0.15	1350	2.49	10,000
NRB-XF101M160V18X16F	100		0.15	1550	2.49	10,000
NRB-XF181M160V16X20F	180		0.15	1800	1.38	10,000
NRB-XF221M160V18X20F	220		0.15	2250	1.13	10,000
NRB-XF330M200V10X16F	33	200	0.15	650	7.54	10,000
NRB-XF470M200V10X20F	47		0.15	800	5.29	10,000
NRB-XF560M200V16X16F	56		0.15	1350	4.44	10,000
NRB-XF680M200V12.5X20F	68		0.15	1350	3.66	10,000
NRB-XF820M200V18X16F	82		0.15	1550	3.03	10,000
NRB-XF121M200V16X20F	120		0.15	1800	2.07	10,000
NRB-XF181M200V18X20F	180		0.15	2250	1.38	10,000
NRB-XF270M250V10X16F	27	250	0.15	650	9.22	10,000
NRB-XF390M250V10X20F	39		0.15	800	6.38	10,000
NRB-XF470M250V16X16F	47		0.15	1350	5.29	10,000
NRB-XF560M250V12.5X20F	56		0.15	1350	4.44	10,000
NRB-XF560M250V18X16F	56		0.15	1550	4.44	10,000
NRB-XF101M250V16X20F	100		0.15	1800	2.49	10,000
NRB-XF121M250V18X20F	120		0.15	2250	2.07	10,000
NRB-XF180M350V10X16F	18	350	0.2	450	18.43	10,000
NRB-XF220M350V10X20F	22		0.2	500	15.08	10,000
NRB-XF270M350V16X16F	27		0.2	780	12.29	10,000
NRB-XF330M350V12.5X20F	33		0.2	850	10.05	10,000
NRB-XF330M350V18X16F	33		0.2	960	10.05	10,000
NRB-XF560M350V16X20F	56		0.2	1200	5.92	10,000
NRB-XF820M350V18X20F	82		0.2	1300	4.05	10,000
NRB-XF120M400V10X16F	12	400	0.2	450	27.65	10,000
NRB-XF180M400V10X20F	18		0.2	500	18.43	10,000
NRB-XF180M400V16X16F	18		0.2	780	18.43	10,000
NRB-XF270M400V12.5X20F	27		0.2	850	12.29	10,000
NRB-XF270M400V18X16F	27		0.2	960	12.29	10,000
NRB-XF470M400V16X20F	47		0.2	1200	7.06	10,000
NRB-XF560M400V18X20F	56		0.2	1300	5.92	10,000
NRB-XF100M450V10X16F	10	450	0.2	350	33.17	10,000
NRB-XF150M450V10X20F	15		0.2	400	22.12	10,000
NRB-XF150M450V16X16F	15		0.2	700	22.12	10,000
NRB-XF220M450V12.5X20F	22		0.2	700	15.08	10,000
NRB-XF220M450V18X16F	22		0.2	850	15.08	10,000
NRB-XF330M450V16X20F	33		0.2	970	10.05	10,000
NRB-XF470M450V18X20F	47		0.2	1170	7.06	10,000

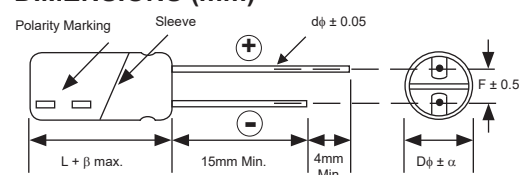
RIPPLE CURRENT FREQUENCY CORRECTION FACTOR

Frequency (Hz) 6.3V ~ 50V	120	1K	10K	$\leq 100K$
10 ~ 18	0.30	0.60	0.80	1.00
22 ~ 82	0.40	0.70	0.90	1.00
100 ~ 220	0.45	0.75	0.90	1.00

DIAMETER AND LEADSPACE (mm)

Case Dia. (D ϕ)	10	12.5	16	18
Lead Dia. (d ϕ)	0.6	0.6	0.8	0.8
Lead Spacing (F)	5.0	5.0	7.5	7.5
Dim. α	0.5	0.5	0.5	0.5
Dim. β	2.0	2.0	2.0	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.

RADIAL TAPING (5mm LEAD SPACING) TB

Taping Dimensions (mm)

Case Dia. (D ϕ)	10	12.5
Case Size	All	
Dim.		
d ϕ	0.6 $\pm$ 0.05	
H	18.5 +0.75/-0.5	
F	5.0 +0.8/-0.2	
P	12.7 $\pm$ 1.0	25.4* $\pm$ 1.0
P ₀	12.7 $\pm$ 0.2	
P ₁	3.85	
P ₂	6.35 $\pm$ 1.0	
W	18.0 $\pm$ 0.5	
W ₀	11.5 min	
W ₁	9.0 $\pm$ 0.5	
W ₂	0 ~ 2.5	
H ₀	16.0 $\pm$ 0.5	
I	1.0 max.	
D ₀ ϕ	4.0 $\pm$ 0.2	
Δ h	0 $\pm$ 1.0 (at top of can)	
t	0.7 $\pm$ 0.2 (not including lead)	
*Optional Taping Specifications		
12.5mm diameter available with P dim. = 15mm, P ₁ = 5.0mm, P ₀ = 15.0mm & P ₂ = 7.5mm (P/N Suffix: TB15MMP)		

NOTE: ANODE (+) LEAD FEEDS OFF FIRST.
FOR OPTION OF NEGATIVE (–) LEAD FIRST,
SPECIFY “TBN”.

