Miniature Aluminum Electrolytic Capacitors

NRB-XY Series

HIGH RIPPLE CURRENT, RADIAL LEADS, POLARIZED, ALUMINUM ELECTROLYTIC



FEATURES

- LONG LIFE AT 105°C (5,000 hrs.)
- HIGH VOLTAGE (UP TO 450V)
- HIGH RIPPLE CURRENT (UP TO 1.2A)

RoHS Compliant
includes all homogeneous materials

*See Part Number System for Details

CHARACTERISTICS

Rated Voltage Range	400 ~ 450Vdc			
Capacitance Range	33 ~ 220µF			
Operating Temperature Range	-40°C ~ +105°C			
Capacitance Tolerance	±20% (M)			
Maximum Leakage Current at 20°C	3 * √CV after 5 minutes			
Max. Tan δ at 120Hz/20°C	W.V. (Vdc)	400	420	450
	S.V. (Vdc)	450	470	500
	Tan δ	0.20	0.20	0.20
Low Temperature Stability Impedance Ratio @ 120Hz	W.V. (Vdc)	400	420	450
	Z-25°C/Z+20°C	5	6	6
Load Life Hours Load Life Test at Rated W.V. & 105°C	Test	5,000 Hours		
	Capacitance Change	Within ±20% of initial measured value		
	Tan δ	Less than 200% of specified value		
	Leakage Current	Less than specified value		

PART NUMBER SYSTEM

NRB-XY 121 M 400V 16X35 TB F

- F — RoHS Compliant
- TB = Tape & Box*
- 16X35 — Case Size (mm)
- 400V — Working Voltage
- M — Tolerance Code M=20%
- 121 — Capacitance Code in µF
- NRB-XY — Series

*see tape specification for details

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**
If in doubt or uncertainty, please review your specific application - process details with NIC's technical support personnel: **tpmg@niccomp.com**

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

Part Number	Cap. (µF)	W.V. (Vdc)	Dissipation Factor +20°C/120Hz	Ripple Current Rating (Arms) +105°C/120Hz	Max. ESR (Ω) 120Hz	Load Life Hours @+105°C
NRB-XY390M400V10X40F	39	400	0.2	0.37	8.51	5,000
NRB-XY470M400V10X45F	47		0.2	0.42	7.06	5,000
NRB-XY560M400V10X50 F	56		0.2	0.47	5.92	5,000
NRB-XY680M400V12.5X40F	68		0.2	0.54	4.88	5,000
NRB-XY820M400V12.5X45F	82		0.2	0.61	4.05	5,000
NRB-XY820M400V14.5X31.5F	82		0.2	0.57	4.05	5,000
NRB-XY101M400V12.5X50F	100		0.2	0.68	3.32	5,000
NRB-XY101M400V14.5X40F	100		0.2	0.69	3.32	5,000
NRB-XY101M400V16X31.5F	100		0.2	0.71	3.32	5,000
NRB-XY121M400V14.5X45F	120		0.2	0.79	2.76	5,000
NRB-XY121M400V16X35F	120		0.2	0.8	2.76	5,000
NRB-XY151M400V16X40F	150		0.2	0.92	2.21	5,000
NRB-XY151M400V18X31.5F	150		0.2	0.89	2.21	5,000
NRB-XY151M400V18X40F	150		0.2	1.05	2.21	5,000
NRB-XY181M400V16X50F	180		0.2	1.08	1.84	5,000
NRB-XY181M400V18X40F	180		0.2	1.06	1.84	5,000
NRB-XY221M400V18X45F	220		0.2	1.2	1.51	5,000
NRB-XY390M420V10X40F	39	420	0.2	0.36	8.51	5,000
NRB-XY470M420V10X50F	47		0.2	0.43	7.06	5,000
NRB-XY560M420V12.5X40F	56		0.2	0.48	5.92	5,000
NRB-XY680M420V12.5X40F	68		0.2	0.52	4.88	5,000
NRB-XY680M420V14.5X31.5F	68		0.2	0.52	4.88	5,000
NRB-XY820M420V12.5X45F	82		0.2	0.59	4.05	5,000
NRB-XY820M420V14.5X35F	82		0.2	0.59	4.05	5,000
NRB-XY101M420V14.5X40F	100		0.2	0.67	3.32	5,000
NRB-XY101M420V16X31.5F	100		0.2	0.69	3.32	5,000
NRB-XY121M420V14.5X45F	120		0.2	0.75	2.76	5,000
NRB-XY121M420V16X35F	120		0.2	0.78	2.76	5,000
NRB-XY121M420V18X31.5F	120		0.2	0.8	2.76	5,000
NRB-XY151M420V16X45F	150		0.2	0.94	2.21	5,000
NRB-XY151M420V18X35F	150		0.2	0.92	2.21	5,000
NRB-XY181M420V16X50F	180		0.2	1.05	1.84	5,000
NRB-XY181M420V18X40F	180		0.2	1.04	1.84	5,000
NRB-XY221M420V18X50F	220		0.2	1.22	1.51	5,000
NRB-XY330M450V10X40F	33	450	0.2	0.34	10.05	5,000
NRB-XY390M450V10X45F	39		0.2	0.38	8.51	5,000
NRB-XY470M450V12.5X40F	47		0.2	0.44	7.06	5,000
NRB-XY560M450V12.5X40F	56		0.2	0.49	5.92	5,000
NRB-XY680M450V12.5X45F	68		0.2	0.55	4.88	5,000
NRB-XY680M450V14.5X31.5F	68		0.2	0.52	4.88	5,000
NRB-XY820M450V12.5X50F	82		0.2	0.62	4.05	5,000
NRB-XY820M450V14.5X40F	82		0.2	0.63	4.05	5,000
NRB-XY820M450V16X31.5F	82		0.2	0.64	4.05	5,000
NRB-XY101M450V14.5X45F	100		0.2	0.71	3.32	5,000
NRB-XY101M450V16X35F	100		0.2	0.73	3.32	5,000
NRB-XY121M450V14.5X50F	120		0.2	0.79	2.76	5,000
NRB-XY121M450V16X40F	120		0.2	0.82	2.76	5,000
NRB-XY121M450V18X31.5F	120		0.2	0.8	2.76	5,000
NRB-XY151M450V16X50F	150		0.2	0.98	2.21	5,000
NRB-XY151M450V18X40F	150		0.2	0.97	2.21	5,000
NRB-XY181M450V18X45F	180		0.2	1.09	1.84	5,000
NRB-XY221M450V18X50F	220		0.2	1.22	1.51	5,000

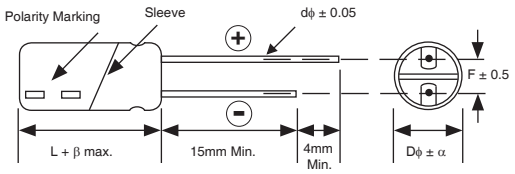
RIPPLE CURRENT FREQUENCY CORRECTION FACTOR

Frequency (Hz)	60	120	500	1K	≥10K
400 ~ 450V	0.8	1.0	1.25	1.40	1.50

DIAMETER AND LEADSPACE (mm)

Case Dia. (Dϕ)	10	12.5	14.5	16	18
Lead Dia. (dϕ)	0.6	0.6	0.8	0.8	0.8
Lead Spacing (F)	5.0	5.0	7.5	7.5	7.5
Dim. α	0.5	0.5	0.5	0.5	0.5
Dim. β	2.0	2.0	2.0	2.0	2.0

DIMENSIONS (mm)

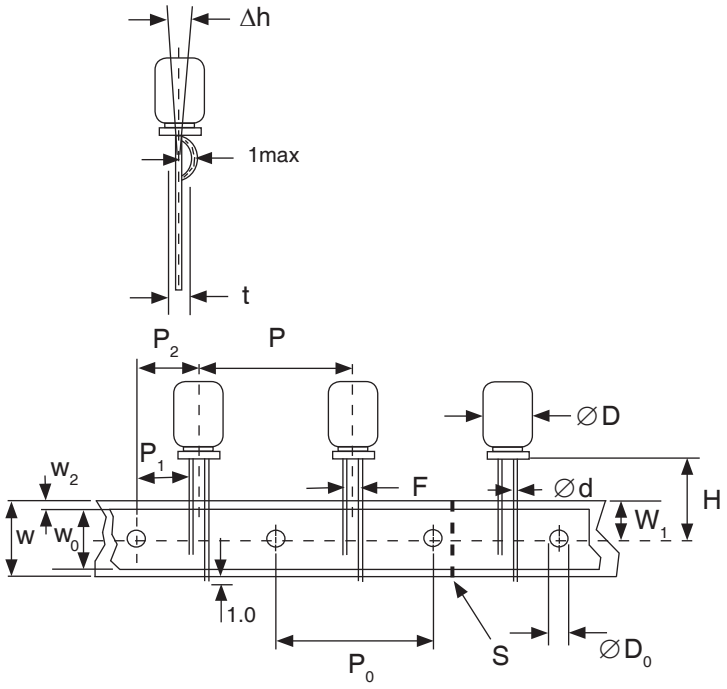


Drawing is representative of parts as supplied in bulk or straight lead format, please see taping specification for details on taped format packaging.

RADIAL TAPING (5mm LEAD SPACING) TB

Taping Dimensions (mm)

Case Dia. (Dϕ)	10	12.5
Case Size	All	
Dim.		
dϕ	0.6 ± 0.05	
H	18.5 +0.75/-0.5	
F	5.0 +0.8/-0.2	
P	12.7 ± 1.0	25.4* ± 1.0
P_0	12.7 ±0.2	
P_1	3.85	
P_2	6.35 ± 1.0	
W	18.0 ± 0.5	
W_0	11.5 min	
W_1	9.0 ± 0.5	
W_2	0 ~ 2.5	
H_0	16.0 ± 0.5	
I	1.0 max.	
$D_0\phi$	4.0 ± 0.2	
Δh	0 ±1.0 (at top of can)	
t	0.7 ± 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".