

Miniature Aluminum Electrolytic Capacitors

NRB-XG Series

HIGH RIPPLE CURRENT, RADIAL LEADS, POLARIZED, ALUMINUM ELECTROLYTIC

FEATURES

- LONG LIFE AT 105°C (8,000 HOURS)
- HIGH VOLTAGE (UP TO 400V)
- REDUCED SIZE & HIGH RIPPLE CURRENT

**RoHS
Compliant**
includes all homogeneous materials

*See Part Number System for Details



CHARACTERISTICS

Rated Voltage Range	200 ~ 400Vdc		
Capacitance Range	1.5 ~ 27μF		
Operating Temperature Range	-40°C ~ +105°C		
Capacitance Tolerance	±20% (M)		
Maximum Leakage Current at 20°C		CV ≤ 1,000	CV > 1,000
		0.1CV + 40μA after 1 minutes	0.04CV + 100μA after 1 minutes
		0.03CV + 15μA after 5 minutes	0.02CV + 25μA after 5 minutes
Max. Tan δ at 120Hz/20°C	W.V. (Vdc)	200	400
	S.V. (Vdc)	250	450
	Tan δ	0.20	0.25
Low Temperature Stability Impedance Ratio @ 120Hz	W.V. (Vdc)	200	400
	Z-25°C/Z+20°C	3	6
	Z-40°C/Z+20°C	8	16
Load Life Hours Load Life Test at Rated W.V. & 105°C	Test	8,000 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-XG 100 M 200V 8X11.5 TB E

Series Capacitance Code in μF 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 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. (μ F)	W.V. (Vdc)	Dissipation Factor +20°C/120Hz	LC (μ A) after 5 min.	Ripple Current Rating (Arms) +105°C/120Hz	Max. ESR (Ω) 120Hz	Load Life Hours @+105°C
NRB-XG4R7M200V6.3X11F	4.7	200	0.2	43.2	56	70.6	8000
NRB-XG5R6M200V6.3X11F	5.6		0.2	47.4	60	59.2	8000
NRB-XG6R8M200V6.3X11F	6.8		0.2	52.2	68	48.8	8000
NRB-XG8R2M200V8X11.5F	8.2		0.2	57.8	96	40.5	8000
NRB-XG100M200V8X11.5F	10		0.2	65	104	33.2	8000
NRB-XG120M200V8X11.5F	12		0.2	73	112	27.6	8000
NRB-XG150M200V8X16F	15		0.2	85	144	22.1	8000
NRB-XG150M200V10X12.5F	15		0.2	85	148	22.1	8000
NRB-XG180M200V10X12.5F	18		0.2	97	164	18.4	8000
NRB-XG220M200V10X16F	22		0.2	113	200	15.1	8000
NRB-XG270M200V10X16F	27		0.2	133	208	12.3	8000
NRB-XG1R5M400V6.3X11F	1.5	400	0.25	33	36	276.5	8000
NRB-XG1R8M400V6.3X11F	1.8		0.25	36.6	38	230.4	8000
NRB-XG2R2M400V6.3X11F	2.2		0.25	41.4	40	188.5	8000
NRB-XG2R7M400V8X11.5F	2.7		0.25	46.6	60	153.6	8000
NRB-XG3R3M400V8X11.5F	3.3		0.25	51.4	64	125.7	8000
NRB-XG3R9M400V8X11.5F	3.9		0.25	56.2	68	106.3	8000
NRB-XG4R7M400V8X16F	4.7		0.25	62.6	88	88.2	8000
NRB-XG4R7M400V10X12.5F	4.7		0.25	62.6	92	88.2	8000
NRB-XG5R6M400V10X12.5F	5.6		0.25	69.8	100	74.0	8000
NRB-XG6R8M400V10X16F	6.8		0.25	79.4	120	61.0	8000
NRB-XG8R2M400V10X16F	8.2		0.25	90.6	128	50.6	8000

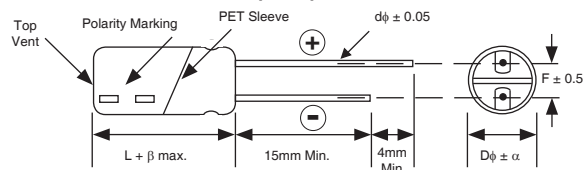
RIPPLE CURRENT FREQUENCY CORRECTION FACTOR

Frequency (Hz)	120	1K	10K	100K
1.5 μ F ~ 27 μ F	1.0	1.7	2.2	2.5

DIAMETER AND LEADSPACE (mm)

Case Dia. (D ϕ)	6.3	8.0	10
Lead Dia. (d ϕ)	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	2.0	2.0	2.0

DIMENSIONS (mm)

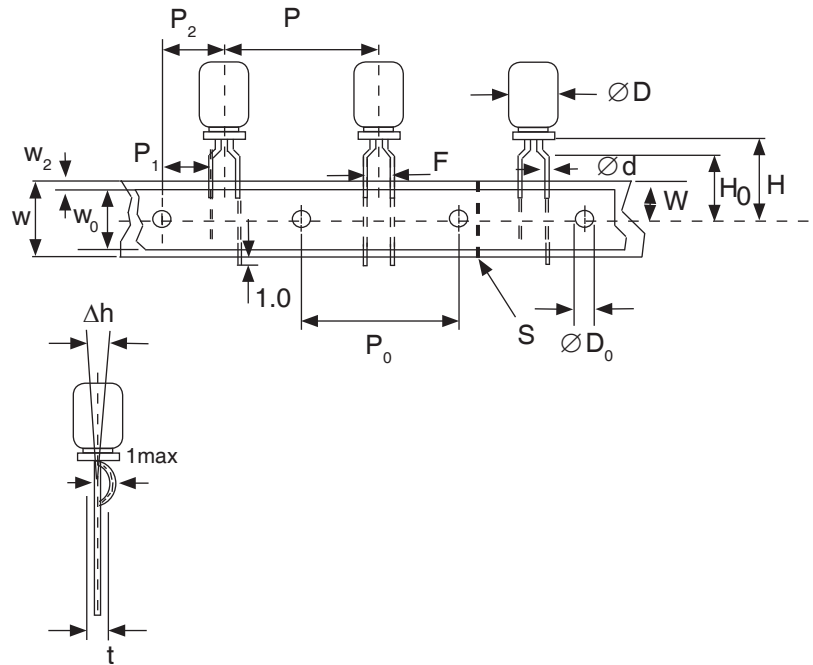


Drawing is representative of parts as supplied in bulk or straight lead format, please see taping specification for details on taped format packaging.

STANDARD RADIAL TAPING (5mm LEAD SPACING, FORMED LEADS) TB

Taping Dimensions (mm)

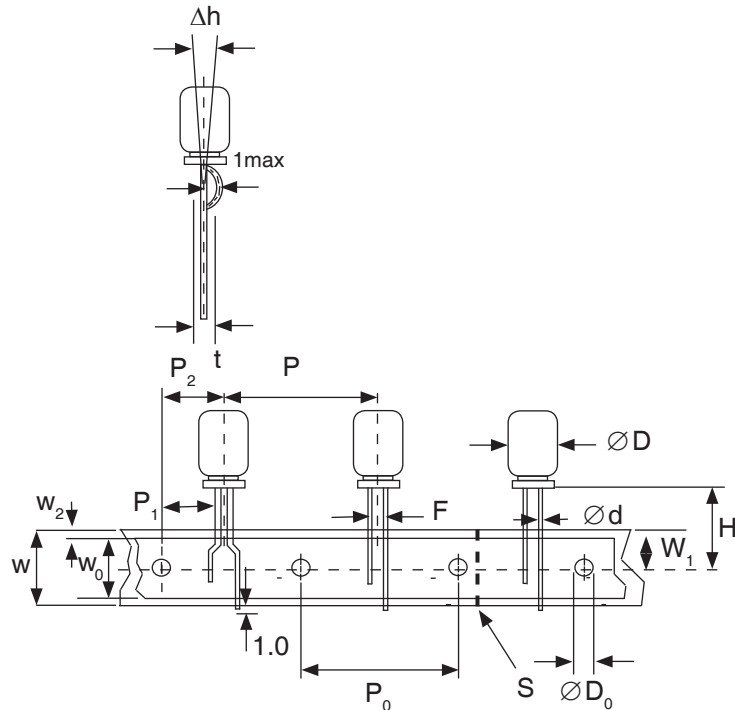
Case Dia. (D ϕ)	6.3	8
Case Size Dim.	6.3x11	8x11.5
d ϕ ± 0.05	0.5	0.6
H ± 0.75	18.5	20.0
F +0.8 ~ -0.2	5.0 -0.2 ~ +0.8	
P	12.7 ± 1.0	
P ₀	12.7 ± 0.2	
P ₁	3.85 ± 0.5 (at end of tape)	
P ₂	6.35 ± 1.0	
W	18.0 ± 0.5	
W ₀	11.5 min.	
W ₁	9.0 ± 0.5	
W ₂	0 ~ 2.5	
H ₀	16.0 ± 0.5	
l	1.0 max.	
D ₀ ϕ	4.0 ± 0.2	
Δh	0 ± 1.0 (at top of can)	
t	0.7 ± 0.2 (not including lead)	



SPECIAL STRAIGHT LEAD TAPING TBST*

Taping Dimensions (mm)

Case Dia. (D ϕ)	6.3	8
Case Size Dim.	6.3x11	8x11.5
d ϕ ± 0.05	0.5	0.6
H ± 0.75	18.5	20.0
F +0.8 ~ -0.2	2.5	3.5
P ± 1.0	12.7 ± 0.2	
P ₀	12.7 ± 0.2	
P ₁	5.1	4.6
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	
l	1.0 max.	
D ₀ ϕ	4.0 ± 0.2	
Δh	0 ± 1.0 (at top of can)	
t	0.7 ± 0.2 (not including lead)	



*Straight leads will extend from the base of the component to the edge of the carrier. The section of lead below the adhesive tape may be straight or formed.

RADIAL TAPING (5mm LEAD SPACING) TB

Taping Dimensions (mm)

Case Dia. ($D\phi$)	10
Case Size	All
Dim.	
$d\phi$	0.6 ± 0.05
H	$18.5 +0.75/-0.5$
F	$5.0 +0.8/-0.2$
P	12.7 ± 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)

NOTE: ANODE (+) LEAD FEEDS OFF FIRST.
FOR OPTION OF NEGATIVE (-) LEAD FIRST,
SPECIFY "TBN".

