Miniature Aluminum Electrolytic Capacitors

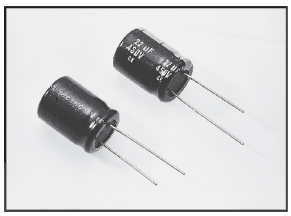
NRE-WB Series

NRE-WB SERIES HIGH VOLTAGE, RADIAL LEADS, EXTENDED TEMPERATURE

FEATURES

- HIGH VOLTAGE (UP THROUGH 450VDC)
- NEW REDUCED SIZES
- +105°C EXTENDED TEMPERATURE AND LOAD LIFE

RoHS Compliant
includes all homogeneous materials
*See Part Number System for Details



CHARACTERISTICS

Rated Voltage Range	200 ~ 450VDC						
Capacitance Range	10 ~ 220µF						
Operating Temperature Range	-25°C ~ +105°C						
Capacitance Tolerance	±20% (M)						
Maximum Leakage Current @ 20°C	0.03CV +10µA after 2 minutes						
Max. Tan δ @ 120Hz/20°C	W.V.	200	250	350	400	450	
	S.V.	250	300	400	450	500	
	Tan δ	0.15	0.15	0.20	0.24	0.24	
Low Temperature Stability Impedance Ratio @ 120Hz	Z-25°C/Z+20°C	3	3	4	6	6	
Load Life Test at Rated W.V. +105°C 8,000 Hours: 10ϕ +105°C 10,000 Hours: 12.5ϕ & up	Capacitance Change	Within ±20% of initial measured value					
	Tan δ	Less than 200% of specified maximum value					
	Leakage Current	Less than specified maximum value					
Shelf Life Test +105°C 1,000 Hours with no load	Shall meet same requirements as in load life test						

MAXIMUM PERMISSIBLE RIPPLE CURRENT (mA rms AT 100KHz AND 105°C)

Cap. (µF)	Working Voltage (Vdc)				
	200	250	350	400	450
10	-	-	-	300	350
22	600	560	-	-	680
33	650	710	-	900	850
68	-	1000	-	-	-
82	-	-	1100	-	-
220	2000	-	-	-	-

MAXIMUM ESR (Ω AT 100KHz AND 20°C)

Cap. (µF)	Working Voltage (Vdc)				
	200	250	350	400	450
10	-	-	-	39.81	39.81
22	11.31	11.31	-	-	18.09
33	7.54	7.54	-	12.06	12.06
68	-	3.66	-	-	-
82	-	-	4.05	-	-
220	1.13	-	-	-	-

RIPPLE CURRENT FREQUECY CORRECTION FACTOR

Cap. Value	Frequency (Hz)				
	50	120	1K	10K	100K
<100µF	0.30	0.40	0.70	0.90	1.0
≥100µF	0.35	0.45	0.75	0.90	1.0

STANDARD PRODUCT AND CASE SIZE D ϕ x L (mm)

Cap. (µF)	Code	Working Voltage (Vdc)				
		200	250	350	400	450
10	100	-	-	-	10x20	12.5x20
22	220	10x20	10x20	-	-	16x20
33	330	10x20	12.5x20	-	16x20	18x25
68	680	-	16x20	-	-	-
82	820	-	-	18x25	-	-
220	221	18x31.5	-	-	-	-

PART NUMBERING SYSTEM

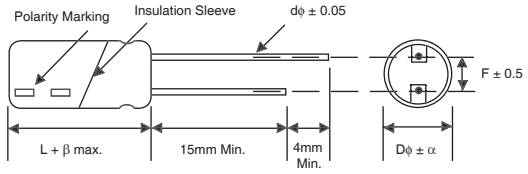
NREWB 100 M 400V 10X20 F

- F — RoHS Compliant
- 10X20 — Case Size (Dϕ x L)
- 400V — Working Voltage (Vdc)
- M — Tolerance Code (M=20%)
- 100 — Capacitance Code: First 2 characters significant, third character is multiplier
- NREWB — Series

LEAD SPACING AND DIAMETER (mm)

Case Dia. (Dϕ)	10	12.5	16	18
Lead Dia. (dϕ)	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

β = L < 20mm = 1.5mm, L > 20mm = 2.0mm



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**