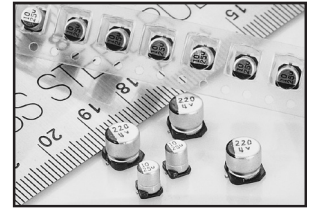


Surface Mount Aluminum Electrolytic Capacitors NAUJ Series

FEATURES

- -40°C TO +150°C OPERATING RANGE
- **AUTOMOTIVE GRADE AEC-Q200**
- EXTENDED LIFETIME; 1000 HRS @ +150°C
- 24,000 HRS @ +105°C, 96,000 HRS @ +85°C
- 10X10.8mm & 12.5X14mm SIZES
- 'W' WIDE TERMINAL OPTION FOR HIGH VIBRATION APPLICATIONS

*Contact NIC for supporting test data

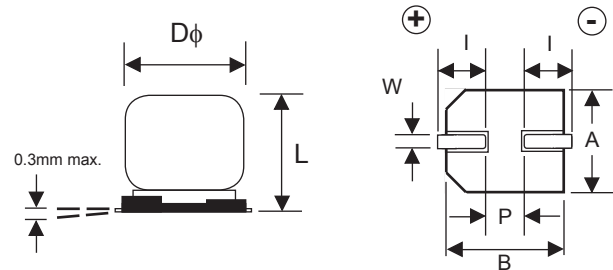


CHARACTERISTICS

Rated Voltage Range	25 ~ 35VDC		
Rated Capacitance Range	100 ~ 470μF		
Operating Temp. Range	-40 ~ +150°C		
Capacitance Tolerance	±20% (M)		
Max. Leakage Current After 2 Minutes @ 20°C	0.01CV		
Working Voltage & Surge Voltage Ratings	W.V. (Vdc)	25	35
	S.V. (Vdc)	32	44
Tan δ @ 120Hz/20°C	Tan δ @ 120Hz/20°C	0.16	0.14
Low Temperature Stability Impedance Ratio @ 120Hz	W.V. (Vdc)	25	35
	Z -25°C/Z +20°C	2	2
	Z -40°C/Z +20°C	3	3
Load Life Test at W.V. @ 150°C All Case Sizes: 1,000 Hours	Capacitance Change	Within ±30% of initial measured value	
	Tan δ	Less than 300% of specified max. value	
	Leakage Current	Less than specified max. value	

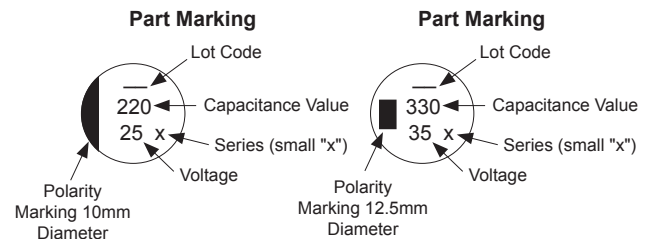
STANDARD PRODUCT AND CASE SIZE Dφ x L (mm)

Cap.(μF)	Code	Working Voltage (Vdc)	
		25	35
100	101	-	10x10.8
150	151	-	10x10.8
220	221	10x10.8	12.5x14
330	331	12.5x14	12.5x14
470	471	12.5x14	-



DIMENSIONS (mm)

Case Size	Dφ ±0.5	L max.	A, B ±0.2	I ±0.3	P ±0.3	W
10 x 10.8	10.0	10.8	10.3	3.2	4.6	1.0 ~ 1.4
12.5 x 14	12.5	14.0	12.8	4.5	4.6	1.0 ~ 1.4



PART NUMBER SYSTEM

NAUJ 221 M 25V 10x10.8 L LB W Y F

RoHS Compliant

W = Wide Termination (Opt. 10mm ~ 12.5mm dia.)

Termination/Packaging Code: LB = Sn-Bi, 15" Reel

Reflow Temperature Code

Size in mm

Working Voltage

Tolerance Code M=20%

Capacitance Code in μF, first 2 digits are significant

Third digit is no. of zeros, "R" indicates decimal for values under 10μF

Series

Termination / Packaging Code
LB = Sn-Bi / 15" reel

Reflow Code
K = +245°C
L = +250°C

Suitable for automotive equipment, sourced to special production and inspection at TS-16949 certified production site

PRECAUTIONS

Please review the notes on correct use, safety and precautions found on our website 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



Surface Mount Aluminum Electrolytic Capacitors NAUJ Series

STANDARD VALUES, CASE SIZES & SPECIFICATIONS

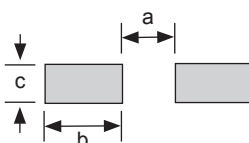
Part Number	Cap. (μF)	Working Voltage	Dissipation Factor @120Hz/20°C	Max. ESR (Ω) AT 100KHz/20°C	Max. Ripple Current (mA rms) AT 100KHz/150°C	Load Life Hours @ +150°C
NAUJ221M25V10X10.8LLBYF	220	25V	0.16	0.20	150	1000
NAUJ331M25V12.5X14KLBYP	330		0.16	0.15	650	1000
NAUJ471M25V12.5X14KLBYP	470		0.16	0.15	700	1000
NAUJ101M35V10X10.8LLBYF	100	35V	0.14	0.20	120	1000
NAUJ151M35V10X10.8LLBYF	150		0.14	0.20	120	1000
NAUJ221M35V12.5X14KLBYP	220		0.14	0.15	550	1000
NAUJ331M35V12.5X14KLBYP	330		0.14	0.15	650	1000

RIPPLE CURRENT FREQUENCY CORRECTION FACTOR

Frequency (Hz)	100 ≤ f < 1K	1K ≤ f < 10K	10K ≤ f < 100K	100K ≤ f
100μF ~ 470μF	0.6	0.85	0.93	1.00

LAND PATTERN DIMENSIONS (mm)

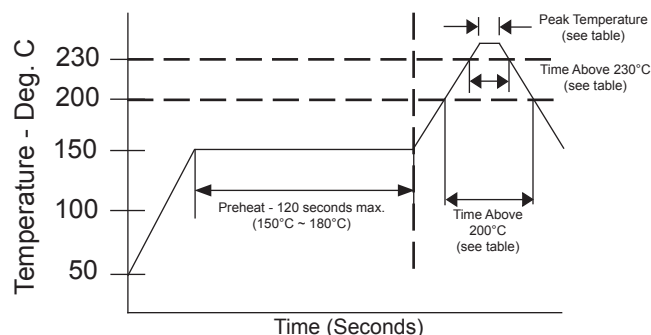
Case Size	a	b	c
10x10.8	4.3	4.4	2.5
12.5x14	4.3	5.8	2.5



PEAK REFLOW TEMPERATURES AND DURATION

Diameter	Time above 200°C	Time above 230°C	Peak Temperature 5 seconds
φ10mm	Within 70 sec.	Within 40 sec.	+250°C
φ12.5mm	Within 60 sec.	Within 30 sec.	+245°C

Capacitors can withstand two reflow passes under the specified conditions. Capacitors must be allowed to cool to room temperature before the second reflow pass.

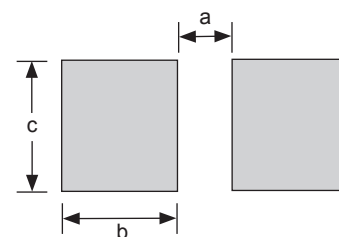
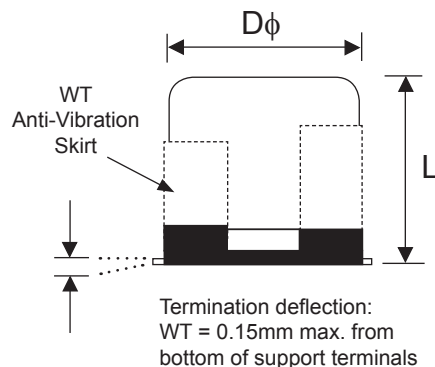
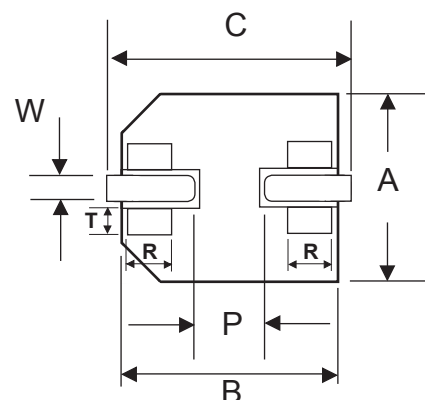


W (WIDE TERMINATIONS) COMPONENT DIM. (mm)

Case Size	Dφ ±0.5	L max.	A, B ±0.2	C ±0.2	P	W	R	T
10x10.8	10.0	11.2	10.3	11.0	(4.6)	1.0 ~ 1.4	(0.7)	(1.3)
12.5x14	12.5	14.5	13.5	14.2	(4.6)	1.0 ~ 1.4	(2.2)	(2.4)

W (WIDE TERMINATIONS) LAND PATTERN DIM. (mm)

Case Size	a	b	c
10x10.8	3.8	4.8	4.7
12.5x14	3.8	6.1	6.9



Surface Mount Aluminum Electrolytic Capacitors NAUJ Series

W (Wide Terminations) Anti-Vibration Test	
Test Method	Direction: X, Y, Z axis Frequency & Duration: 5 to 2000Hz reciprocation, 2 hours each direction Peak to Peak Amplitude: 5mm Peak Acceleration: 30G Sweep Type: Log
Δ Capacitance	Within ± 10% of initial value
Tangent of Loss	≤ Specified value
Leakage Current	≤ Specified value

CARRIER TAPE

Case Size	A	B	C	D	P	T	t	S
	±0.2	±0.2	±0.3	±0.1	±0.1	±0.2	max.	±0.1
10x10.8	10.7	10.7	24.0	11.5	16.0	11.2	0.6	-
12.5x14	13.2	13.2	32.0	14.2	24.0	14.3	0.6	28.4

TR15 380mm (15") REEL

Case Size	W	Qty per Reel
	±1.0	15" (380mm)
10x10.8	26	500
12.5x14	34	250

TAPING SPECIFICATIONS (mm)

- Both Leader and Trailer tape: Minimum 10 empty carrier tape pockets.
- Leader tape: Approximately 20cm of cover tape at leader.
- Connection: Maximum 3 connections (slices) per reel.

