

NAZP Series

Surface Mount Aluminum Electrolytic Capacitors



FEATURES

- CYLINDRICAL V-CHIP CONSTRUCTION FOR SURFACE MOUNTING
- DESIGNED FOR AUTOMATIC MOUNTING AND REFLOW SOLDERING
- **LONG LIFE: 7,000 HOURS @ +105°C**
- LOW IMPEDANCE & HIGH RIPPLE CURRENT AT 100KHz
- SUITABLE FOR DC-DC CONVERTER AND REGULATOR APPLICATIONS
- AVAILABLE WITH WIDE ANTI-VIBRATION TERMINATIONS



CHARACTERISTICS

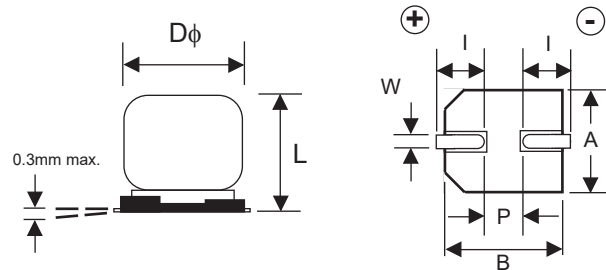
Rated Voltage Range	16 ~ 50VDC	
Rated Capacitance Range	100 ~ 470 μ F	
Operating Temp. Range	-40 ~ +105°C	
Capacitance Tolerance	\pm 20% (M)	
Max. Leakage Current After 2 Minutes @ 20°C	0.01CV	
Working Voltage & Surge Voltage Ratings	W.V. (Vdc)	
	S.V. (Vdc)	
Tan δ @ 120Hz/20°C	Tan δ @ 120Hz/20°C	
Low Temperature Stability Impedance Ratio @ 120Hz	W.V. (Vdc)	
	Z -25°C/Z +20°C	
Load Life Test at W.V. @ 105°C All Sizes: 7,000 hours	Capacitance Change	Within \pm 30% of initial measured value
	Tan δ	Less than 300% of specified max. value
	Leakage Current	Less than specified max. value



	16	25	35	50
	20	32	44	63
	0.26	0.16	0.14	0.14
	16	25	35	50
	2	2	2	2

STANDARD PRODUCT AND CASE SIZE D ϕ xL (mm)

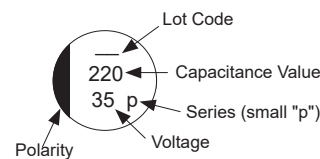
Cap. (μ F)	Code	Working Voltage (Vdc)			
		16	25	35	50
100	101	-	-	-	8x10.8
220	221	-	-	8x10.8	10x10.8
330	331	-	8x10.8	10x10.8	-
470	471	8x10.8	10x10.8	-	-



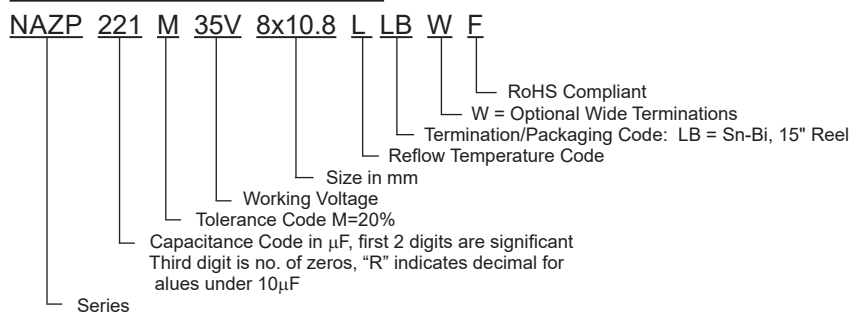
DIMENSIONS (mm)

Case Size	D ϕ \pm 0.5	L max.	A, B \pm 0.2	I \pm 0.3	(P)	W
8x10.8	8.0	10.8	8.3	2.9	3.2	0.7 ~ 1.0
10x10.8	10.0	10.8	10.3	3.2	4.6	1.0 ~ 1.4

Part Marking



PART NUMBER SYSTEM



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

STANDARD VALUES, CASE SIZES & SPECIFICATIONS

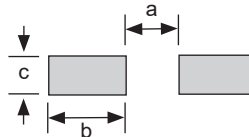
Part Number	Cap. (μF)	Working Voltage	Dissipation Factor @120Hz/20°C	Max. Z (Ω) AT 100KHz/20°C	Max. Ripple Current (mA rms) AT 100KHz/105°C	Load Life Hours @ +105°C
NAZP471M16V8X10.8LLBF	470	16	0.26	0.22	600	7000
NAZP331M25V8X10.8LLBF	330	25	0.16	0.22	600	7000
NAZP471M25V10X10.8LLBF	470		0.16	0.16	850	7000
NAZP221M35V8X10.8LLBF	220	35	0.14	0.22	600	7000
NAZP331M35V10X10.8LLBF	330		0.14	0.16	850	7000
NAZP101M50V8X10.8LLBF	100	50	0.14	0.53	350	7000
NAZP221M50V10X10.8LLBF	220		0.14	0.35	670	7000

RIPPLE CURRENT FREQUENCY CORRECTION FACTOR

Frequency (Hz)	100 ≤ f < 1K	1K ≤ f < 10K	10K ≤ f < 100K	100K ≤ f
<220μF	0.65	0.85	0.92	1.00
≥220μF	0.70	0.85	0.95	1.00

LAND PATTERN DIMENSIONS (mm)

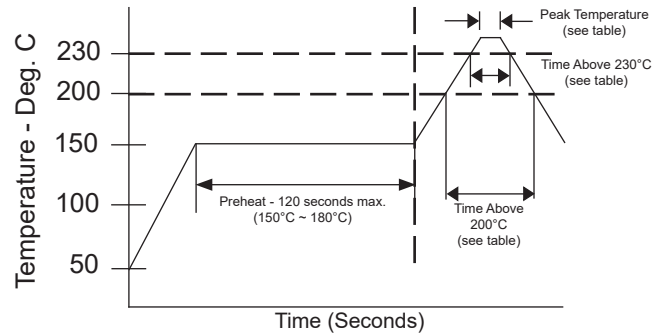
Case Size	a	b	c
8x10.8	2.8	4.1	2.1
10x10.8	4.3	4.4	2.5



PEAK REFLOW TEMPERATURES AND DURATION

Diameter	Time above 200°C	Time above 230°C	Peak Temperature 5 seconds
φ8mm & φ10mm	Within 60 sec.	Within 20 sec.	+250°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.



NAZP Series

Surface Mount Aluminum Electrolytic Capacitors

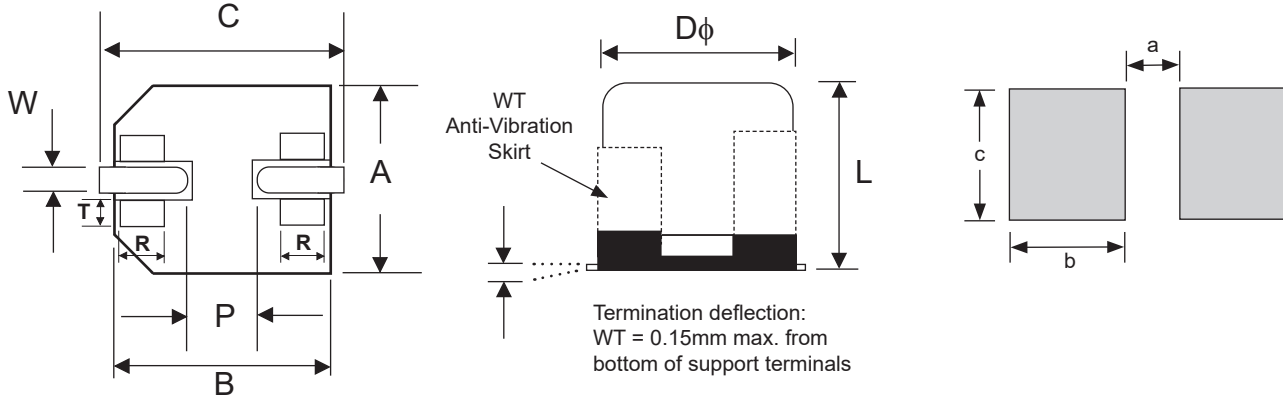


W (WIDE TERMINATIONS) COMPONENT DIM. (mm)

Case Size	Dφ ±0.5	L max.	A, B ±0.2	C ±0.2	P	W	R	T
8x10.8	8.0	11.2	8.3	9.0	(3.2)	0.7 ~ 1.0	(0.7)	(1.3)
10x10.8	10.0	11.2	10.3	11.0	(4.6)	1.0 ~ 1.4	(0.7)	(1.3)

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

Case Size	a	b	c
8x10.8	2.5	4.5	4.7
10x10.8	3.8	4.8	4.7



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

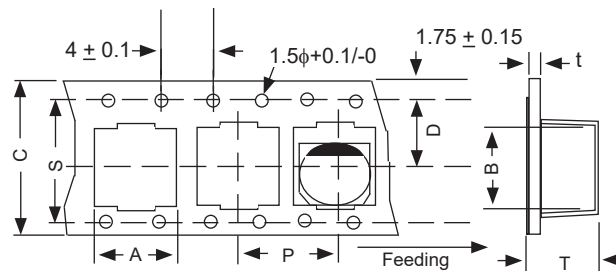
CARRIER TAPE

Case Size	A ±0.2	B ±0.2	C ±0.3	D ±0.1	P ±0.1	T ±0.2	t max.
8x10.8	8.7	8.7	24.0	11.5	16.0	11.1	0.6
10x10.8	10.7	10.7	24.0	11.5	16.0	11.2	0.6

TAPING SPECIFICATIONS (mm)

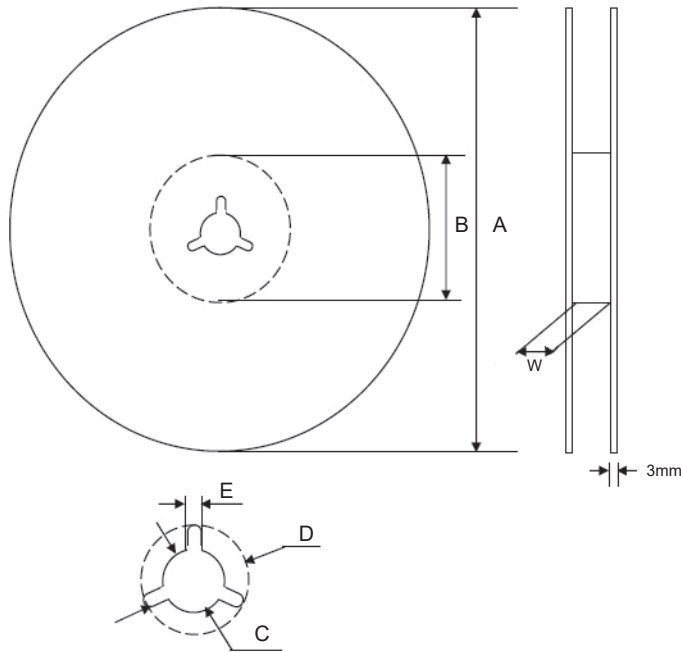
- Both Leader and Trailer tape: Minimum 10 empty carrier tape pockets.
- Leader tape: Approximately 20cm of cover tape at leader.
- Connection: Maximum 3 connections (slices) per reel.

CARRIER



Review & Compare Reflow Soldering Heat Limits
V-chip SMT Aluminum Electrolytic Capacitors
www.niccomp.com/RSL

V-Chip 15" (380mm) Reels (LB suffix)



Dimensions (mm)

Case Size	A	B	C	D	E	W
8x10.8	$\phi 380 \pm 2.0$	$\phi 50 \text{ min.}$	$\phi 13 \pm 0.5$	$\phi 21 \pm 0.8$	2.0 ± 0.5	$26+3/-1$
10x10.8						

Case Size	Qty per Reel
	15" (380mm)
8x10.8	500
10x10.8	500