

Surface Mount Aluminum Electrolytic Capacitors NAZJ Series

FEATURES

- CYLINDRICAL V-CHIP CONSTRUCTION FOR SURFACE MOUNTING
- REDUCED CASE SIZE (SMALLER THEN NAZT)
- LOW ESR & HIGH RIPPLE CURRENT AT 100KHz
- LOAD LIFE (2,000 HOURS @ +105°C)
- DESIGNED FOR AUTOMATIC MOUNTING AND REFLOW SOLDERING
- **MEETS THE REQUIREMENTS OF AEC-Q200***

*Contact NIC for supporting test data

CHARACTERISTICS

Rated Voltage Rating	6.3 ~ 50Vdc	LOW ESR C LIQUID EL For Perfor see www.L					
Rated Capacitance Range	10 ~ 1,800μF						
Operating Temp. Range	-55 ~ +105°C						
Capacitance Tolerance	±20% (M)						
Max. Leakage Current After 2 Miuntes @ 20°C	0.01CV or 3μA whichever is greater						
Dissipation Factor	W.V. (Vdc)	6.3	10	16	25	35	50
	S.V. (Vdc)	8.0	13	20	32	44	63
	Tan δ @ 120Hz/20°C	0.26	0.19	0.16	0.14	0.12	0.10
Low Temperature Stability Impedance Ratio @ 120Hz	W.V. (Vdc)	6.3	10	16	25	35	50
	Z-25°C/Z+20°C	2	2	2	2	2	2
	Z-40°C/Z+20°C	3	3	3	3	3	3
	Z-55°C/Z+20°C	4	4	4	3	3	3
Load Life Test @ 105°C 2,000 hours	Capacitance Change	Within ±30% of initial measured value					
	Tan δ	Less than ±200% of the specified maximum value					
	Leakage Current	Less than the specified maximum value					

SAC Alloy Compatible
235°C ~ 260°C

RoHS
Compliant

includes all homogeneous materials



LOW ESR COMPONENT
LIQUID ELECTROLYTE
For Performance Data
see www.LowESR.com

*See Part Number System for Details

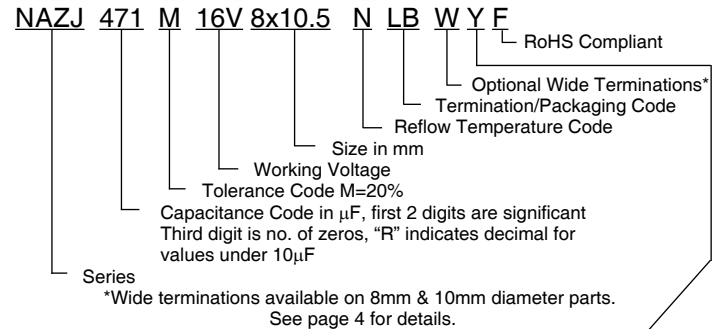
STANDARD VALUES AND CASE SIZES (mm)

Cap. (μ F)	Code	Working Voltage (Vdc)					
		6.3	10	16	25	35	50
10	100	-	-	4x6.1	4x6.1	4x6.1	-
22	220	4x6.1	4x6.1	4x6.1 5x6.1	5x6.1	5x6.1	-
33	330	-	4x6.1 5x6.1	-	5x6.1 6.3x6.1	6.3x6.1	-
47	470	4x6.1 5x6.1	-	5x6.1 6.3x6.1	6.3x6.1	6.3x6.1	-
68	680	-	-	6.3x6.1	6.3x6.1	6.3x8	-
100	101	5x6.1 6.3x6.1	-	6.3x6.1 6.3x8	6.3x8 8x6.5	6.3x8 8x10.5	8x10.5
150	151	-	6.3x6.1	6.3x8	8x10.5	8x10.5	-
220	221	6.3x6.1	6.3x8 8x6.5	6.3x8 8x6.5	8x10.5	8x10.5	10x10.5
330	331	6.3x8 8x6.5	8x10.5	8x10.5	8x10.5	10x10.5	10x14
390	391	-	-	-	-	10x10.5	-
470	471	8x10.5	8x10.5	8x10.5	10x10.5	10x14	-
560	561	-	-	-	10x10.5	-	-
680	681	-	8x10.5	10x10.5	10x14	-	-
820	821	-	-	10x10.5	-	-	-
1000	102	8x10.5	10x10.5	10x14	-	-	-
1200	122	-	10x10.5	-	-	-	-
1500	152	10x10.5	10x14	-	-	-	-
1800	182	10x10.5	-	-	-	-	-

DIMENSIONS (mm)

Case Size	$\phi D \pm 0.5$	L max.	A ± 0.2	B ± 0.2	I ± 0.3	W	P ± 0.3
4x6.1	4.0	6.1	4.3	4.3	1.8	0.50~0.80	1.0
5x6.1	5.0	6.1	5.3	5.3	2.2	0.50~0.80	1.5
6.3x6.1	6.3	6.1	6.6	6.6	2.6	0.50~0.80	1.8
6.3x8	6.3	8.0	6.6	6.6	2.6	0.50~0.80	1.8
8x6.5	8.0	6.5	8.3	8.3	3.4	0.50~0.80	2.2
8x10.5	8.0	10.5	8.3	8.3	3.1	0.7~1.1	3.1
10x10.5	10.0	10.5	10.3	10.3	3.2	0.7~1.4	4.6
10x14	10.0	14.0	10.3	10.3	3.2	0.7~1.4	4.6

PART NUMBER SYSTEM



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

PEAK REFLOW TEMPERATURE CODES

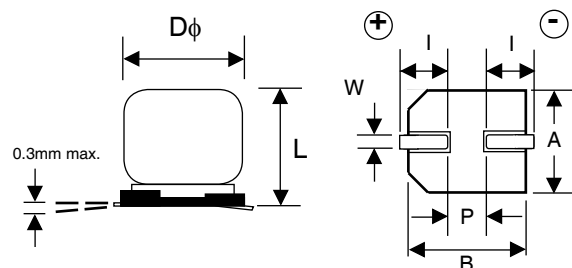
Code	Peak Reflow Temperature
N	260°C*

*Special conditions on page 3.

TERMINATION FINISH & PACKAGING OPTIONS CODES

Code	Finish & Reel Size
B	Sn-Bi Finish & 13" Reel
LB	Sn-Bi Finish & 15" Reel

*See part number standard values table for appropriate code



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STANDARD VALUES, CASE SIZES AND SPECIFICATIONS

NIC Part Number	Cap. (μF)	W.V. (Vdc)	Dissipation Factor (Tan δ)	Max. ESR (Ω) 100KHz, +20°C	Max. Ripple Current (mA) +105°C, 100KHz	Load Life Hours @ +105°C
NAZJ220M6.3V4X6.1NBF	22	6.3	0.26	0.85	160	2,000
NAZJ470M6.3V4X6.1NBF	47		0.26	0.85	160	2,000
NAZJ470M6.3V5X6.1NBF	47		0.26	0.36	240	2,000
NAZJ101M6.3V5X6.1NBF	100		0.26	0.36	240	2,000
NAZJ101M6.3V6.3X6.1N L BF	100		0.26	0.26	300	2,000
NAZJ221M6.3V6.3X6.1N L BF	220		0.26	0.26	300	2,000
NAZJ331M6.3V6.3X8N L BF	330		0.26	0.16	600	2,000
NAZJ331M6.3V8X6.5NBF	330		0.26	0.18	500	2,000
NAZJ471M6.3V8X10.5N L BF	470		0.26	0.08	850	2,000
NAZJ102M6.3V8X10.5N L BF	1000		0.26	0.08	850	2,000
NAZJ152M6.3V10X10.5N L BF	1500		0.26	0.06	1190	2,000
NAZJ182M6.3V10X10.5N L BF	1800		0.26	0.08	850	2,000
NAZJ220M10V4X6.1NBF	22	10	0.19	0.85	160	2,000
NAZJ330M10V4X6.1NBF	33		0.19	0.85	160	2,000
NAZJ330M10V5X6.1NBF	33		0.19	0.36	240	2,000
NAZJ151M10V6.3X6.1N L BF	150		0.19	0.26	300	2,000
NAZJ221M10V6.3X8N L BF	220		0.19	0.16	600	2,000
NAZJ221M10V8X6.5NBF	220		0.19	0.18	500	2,000
NAZJ331M10V8X10.5N L BF	330		0.19	0.08	850	2,000
NAZJ471M10V8X10.5N L BF	470		0.19	0.08	850	2,000
NAZJ681M10V8X10.5N L BF	680		0.19	0.08	850	2,000
NAZJ102M10V10X10.5N L BF	1000		0.19	0.06	1190	2,000
NAZJ122M10V10X10.5N L BF	1200		0.19	0.08	850	2,000
NAZJ152M10V10X14N L BF	1500		0.19	0.06	1190	2,000
NAZJ100M16V4X6.1NBF	10	16	0.16	0.85	160	2,000
NAZJ220M16V4X6.1NBF	22		0.16	0.85	160	2,000
NAZJ220M16V5X6.1NBF	22		0.16	0.36	240	2,000
NAZJ470M16V5X6.1NBF	47		0.16	0.36	240	2,000
NAZJ470M16V6.3X6.1N L BF	47		0.16	0.26	300	2,000
NAZJ680M16V6.3X6.1N L BF	68		0.16	0.26	300	2,000
NAZJ101M16V6.3X6.1N L BF	100		0.16	0.26	300	2,000
NAZJ101M16V6.3X8N L BF	100		0.16	0.16	600	2,000
NAZJ151M16V6.3X8N L BF	150		0.16	0.16	600	2,000
NAZJ221M16V6.3X8N L BF	220		0.16	0.16	600	2,000
NAZJ221M16V8X6.5NBF	220		0.16	0.18	500	2,000
NAZJ331M16V8X10.5N L BF	330		0.16	0.08	850	2,000
NAZJ471M16V8X10.5N L BF	470		0.16	0.08	850	2,000
NAZJ681M16V10X10.5N L BF	680		0.16	0.06	1190	2,000
NAZJ821M16V10X10.5N L BF	820		0.16	0.08	850	2,000
NAZJ102M16V10X14N L BF	1000		0.16	0.06	1190	2,000
NAZJ100M25V4X6.1NBF	10	25	0.14	0.85	160	2,000
NAZJ220M25V5X6.1NBF	22		0.14	0.36	240	2,000
NAZJ330M25V5X6.1NBF	33		0.14	0.36	240	2,000
NAZJ330M25V6.3X6.1N L BF	33		0.14	0.26	300	2,000
NAZJ470M25V6.3X6.1N L BF	47		0.14	0.26	300	2,000
NAZJ680M25V6.3X6.1N L BF	68		0.14	0.26	300	2,000
NAZJ101M25V6.3X8N L BF	100		0.14	0.16	600	2,000
NAZJ101M25V8X6.5NBF	100		0.14	0.18	500	2,000
NAZJ151M25V8X10.5N L BF	150		0.14	0.08	850	2,000
NAZJ221M25V8X10.5N L BF	220		0.14	0.08	850	2,000
NAZJ331M25V8X10.5N L BF	330		0.14	0.08	850	2,000
NAZJ471M25V10X10.5N L BF	470		0.14	0.06	1190	2,000
NAZJ561M25V10X10.5N L BF	560		0.14	0.08	850	2,000
NAZJ681M25V10X14N L BF	680		0.14	0.06	1190	2,000
NAZJ100M35V4X6.1NBF	10	35	0.12	0.85	160	2,000
NAZJ220M35V5X6.1NBF	22		0.12	0.36	240	2,000
NAZJ330M35V6.3X6.1N L BF	33		0.12	0.26	300	2,000
NAZJ470M35V6.3X6.1N L BF	47		0.12	0.26	300	2,000
NAZJ680M35V6.3X8N L BF	68		0.12	0.16	600	2,000

*Denotes Lower Reflow Temperature Rated, Lower Cost Alternative



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STANDARD VALUES, CASE SIZES AND SPECIFICATIONS

NIC Part Number	Cap. (μF)	W.V. (Vdc)	Dissipation Factor (Tan δ)	Max. ESR (Ω) 100KHz, +20°C	Max. Ripple Current (mA) +105°C, 100KHz	Load Life Hours @ +105°C
NAZJ101M35V6.3X8NLBF	100	35	0.12	0.16	600	2,000
NAZJ101M35V8X10.5NLBF	100		0.12	0.08	850	2,000
NAZJ151M35V8X10.5NLBF	150		0.12	0.08	850	2,000
NAZJ221M35V8X10.5NLBF	220		0.12	0.08	850	2,000
NAZJ331M35V10X10.5NLBF	330		0.12	0.06	1190	2,000
NAZJ391M35V10X10.5NLBF	390		0.12	0.08	850	2,000
NAZJ471M35V10X14NLBF	470		0.12	0.06	1190	2,000
NAZJ101M50V8X10.5NLBF	100	50	0.10	0.18	670	2,000
NAZJ221M50V10X10.5NLBF	220		0.10	0.12	900	2,000
NAZJ331M50V10X14NLBF	330		0.10	0.10	900	2,000

*Denotes Lower Reflow Temperature Rated, Lower Cost Alternative

RIPPLE CURRENT FREQUENCY CORRECTION FACTOR (STANDARD)

Frequency	120Hz	1KHz	10KHz	100KHz ~
10 ~ 470μF	0.65	0.85	0.95	1.00
560 ~ 1800μF	0.75	0.90	0.95	1.00

RIPPLE CURRENT FREQUENCY CORRECTION FACTOR (ALTERNATIVE PART)

Frequency	120Hz	1KHz	10KHz	100KHz ~
100 ~ 150μF	0.50	0.80	0.95	1.00
220 ~ 1800μF	0.60	0.85	0.95	1.00

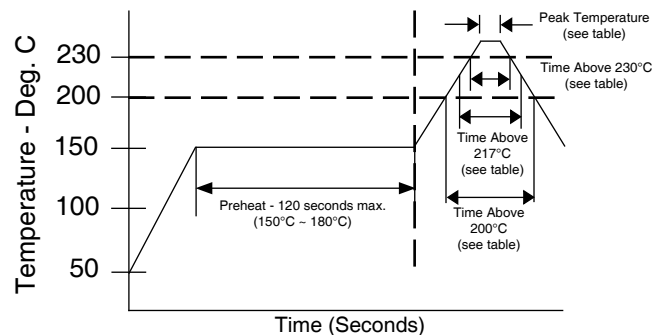
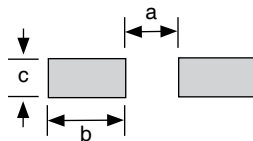
PEAK REFLOW TEMPERATURE, DURATION AND NUMBER OF REFLOW PASSES ALLOWED

Diameter	Reflow Code	Peak Temperature	Duration	Time above 200°C	Time above 217°C	Time above 230°C	Number of Reflow Passes
4 ~ 6.3mm φ	N	+260°C	Time ≥ 250°C 5 sec.	70 sec.	40 sec.	30 sec.	2
	N	+255°C	Time ≥ 250°C 10 sec.	70 sec.	40 sec.	30 sec.	2
8 ~ 10mm φ (see note 1)	N	+260°C	Time ≥ 250°C 5 sec.	70 sec.	40 sec.	30 sec.	1 only
	N	+245°C	Time ≥ 240°C 10 sec.	70 sec.	40 sec.	30 sec.	2

- Only one (1) reflow pass is allowed for 8mm and 10mm diameter parts if the peak reflow temperature is +260°C.
- In situations where two reflow passes is allowed the second reflow shall be at least one hour after natural cool to room temperature has occurred.

RECOMMENDED LAND PATTERN DIMENSIONS (mm)

Case Size	a	b	c
4x6.1	1.0	2.6	1.6
5x6.1	1.5	3.0	1.6
6x3x6.1 6.3x8	1.8	3.5	1.8
8x6.5	2.2	4.5	2.2
8x10.5	2.8	4.1	2.2
10x10.5	4.3	4.4	2.5
10x14			



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

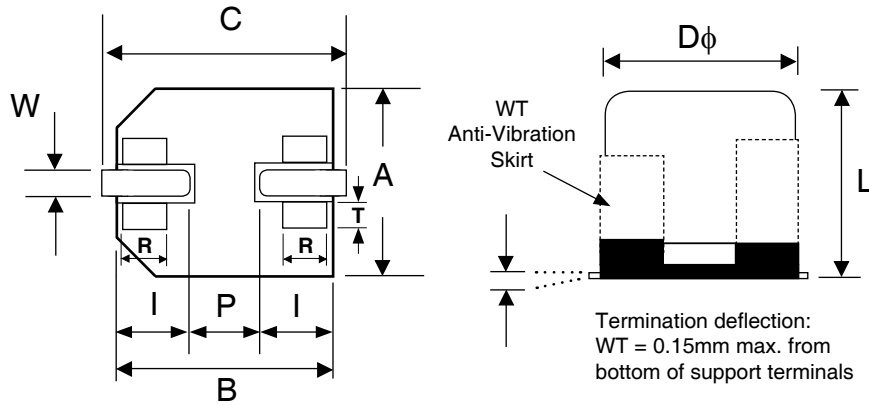
PRECAUTIONS

Please review the notes on correct use, safety and precautions found at www.nicomp.com/precautions
If in doubt or uncertainty, please review your specific application - process details with NIC's technical support personnel: tpmg@nicomp.com



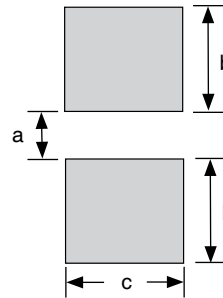
WIDE TERMINATION (WT) DIM. (mm)

Case Size	$D\phi \pm 0.5$	L max.	A, B ± 0.2	C max.	P ref.	I ref.	W	R ± 0.2	T ± 0.2
8x6.5	8.0	6.8	8.3	9.5	(2.2)	3.4	0.6 ~ 0.8	0.7	1.7
8x10.5	8.0	11.2	8.3	10.0	(3.1)	3.4	0.7 ~ 1.4	0.7	1.3
10x10.5	10.0	11.2	10.3	12.0	(4.6)	3.5	1.0 ~ 1.4	0.7	1.3
10x14	10.0	14.5	10.3	12.0	(4.6)	3.5	1.0 ~ 1.4	0.7	1.3



WT LAND PATTERN DIM. (mm)

Case Size	a	b	c
8x6.5	1.8	4.2	5.0
8x10.5	2.5	4.5	4.7
10x10.5	3.8	4.8	4.7
10x14	3.8	4.8	4.7



CARRIER TAPE

Case Size	A ±0.3	B ±0.3	C ±0.3	D ±0.1	P ±0.1	T ±0.2
4 x 6.1	4.7	4.7	12.0	5.5	8.0	6.2
5 x 6.1	5.7	5.7	12.0	5.5	12.0	6.4
6.3 x 6.1	7.0	7.0	16.0	7.5	12.0	6.4
6.3 x 8	7.0	7.0	16.0	7.5	12.0	8.4
8 x 6.5	8.7	8.7	16.0	7.5	12.0	6.8
8 X 10.5	8.7	8.7	24.0	11.5	16.0	11.1
10 x 10.5	10.7	10.7	24.0	11.5	16.0	11.2
10 x 14	10.7	10.7	24.0	11.5	16.0	14.6

TR13 330mm (13") REEL

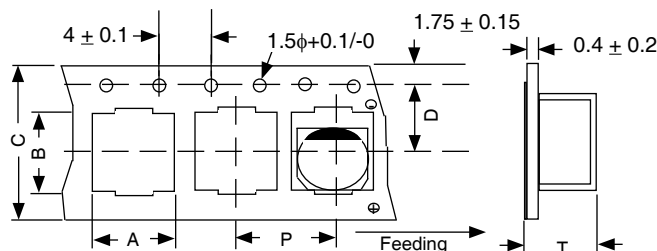
TR15 380mm (15") REEL

Case Size	W ±1.0	Quantity Per Reel	
		13" Reel	15" Reel
4 x 6.1	14.0	1,200 pcs	-
5 x 6.1	14.0	800 pcs	-
6.3 x 6.1	18.0	-	1,000 pcs
6.3 x 8	18.0	-	900 pcs
8 x 6.5	18.0	800 pcs	-
8 X 10.5	26.0	-	500 pcs
10 x 10.5	26.0	-	500 pcs
10 x 14	26.0	-	400 pcs

TAPING SPECIFICATIONS (mm)

- Both Leader and Trailer tape: Minimum 40mm (1.57") empty carrier tape pockets.
- Leader tape: Approximately 20cm of cover tape at leader.
- Connection: Maximum 3 connections (slices) per reel.

CARRIER



REEL

