Surface Mount Aluminum Electrolytic Capacitors NAZT Series

FEATURES

- CYLINDRICAL V-CHIP CONSTRUCTION FOR SURFACE MOUNTING
- VERY LOW IMPEDANCE & HIGH RIPPLE CURRENT AT 100KHz
- EXTENDED LOAD LIFE (2,000 ~ 5,000 HOURS @ +105°C)
- SUITABLE FOR DC-DC CONVERTER, DC-AC INVERTER, ETC.
- DESIGNED FOR AUTOMATIC MOUNTING AND REFLOW SOLDERING

SAC Alloy Compatible
230°C ~ 260°C

RoHS Compliant
includes all homogeneous materials

*See Part Number System for Details

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

CHARACTERISTICS

Rated Voltage Rating	6.3 ~ 50Vdc						
Rated Capacitance Range	4.7 ~ 6,800µF						
Operating Temp. Range	-40 ~ +105°C						
Capacitance Tolerance	±20% (M)						
Max. Leakage Current After 2 Miuntes @ 20°C	0.01CV or 3µA whichever is greater						
Tan δ @ 120Hz/20°C	W.V. (Vdc)	6.3	10	16	25	35	50
	S.V. (Vdc)	8.0	13	20	32	44	63
	4 ~ 8mm diameter	0.26	0.20	0.16	0.14	0.12	0.12
	8 ~ 16mm diameter	0.28	0.24	0.22	0.16	0.14	0.14
Low Temperature Stability Impedance Ratio @ 120Hz	W.V. (Vdc)	6.3	10	16	25	35	50
	Z-25°C/Z+20°C	3	2	2	2	2	2
	Z-40°C/Z+20°C	5	4	4	3	3	3
Load Life Test @ 105°C 4 ~ 6mm Dia. 2,000 hours 8 ~ 16mm Dia. 5,000 hours	Capacitance Change	Within ±30% of initial measured value					
	Tan δ	Less than ±300% of the specified maximum value					
	Leakage Current	Less than the specified maximum value					

STANDARD VALUES AND CASE SIZES (mm)

Cap. (µF)	Code	Working Voltage (Vdc)					
		6.3	10	16	25	35	50
4.7	4R7	-	-	-	-	4x6.3	4x6.3
10	100	-	-	-	4x6.3	5x6.3	6.3x6.3
15	150	-	-	4x6.3	5x6.3	5x6.3	6.3x6.3
22	220	-	4x6.3	5x6.3	5x6.3	5x6.3	6.3x6.3
27	270	4x6.3	5x6.3	5x6.3	6.3x6.3	6.3x6.3	6.3x8
33	330	5x6.3	5x6.3	6.3x6.3	6.3x6.3	6.3x6.3	6.3x8
47	470	5x6.3	6.3x6.3	6.3x6.3	6.3x6.3	6.3x6.3	6.3x8
56	560	5x6.3	6.3x6.3	6.3x6.3	6.3x6.3	6.3x8	8x10.5
68	680	6.3x6.3	6.3x6.3	6.3x6.3	6.3x6.3	6.3x8	8x10.5
100	101	6.3x6.3	6.3x6.3	6.3x6.3	6.3x8	8x10.5	8x10.5
150	151	6.3x6.3	6.3x6.3	6.3x8	8x10.5	8x10.5	10x10.5
220	221	6.3x6.3	6.3x8	6.3x8	8x10.5	8x10.5	10x10.5
330	331	6.3x8	8x10.5	8x10.5	8x10.5	10x10.5	12.5x14
470	471	8x10.5	8x10.5	8x10.5	10x10.5	12.5x14	16x17
680	681	8x10.5	10x10.5	10x10.5	12.5x14	12.5x14	16x17
1000	102	8x10.5	10x10.5	12.5x14	-	16x17	16x17
1500	152	10x10.5	12.5x14	-	16x17	16x17	-
2200	222	12.5x14	-	-	16x17	-	-
3300	332	-	-	16x17	-	-	-
4700	472	-	16x17	-	-	-	-
6800	682	16x17	-	-	-	-	-

PART NUMBER SYSTEM

NAZT 101 M 16V 6.3x6.3 N B F

- F — RoHS Compliant
- B — Termination/Packaging Code
- N — Reflow Temperature Code
- 6.3x6.3 — Size in mm
- 16V — Working Voltage
- M — Tolerance Code M=20%, K=10%
- 101 — Capacitance Code in µF, first 2 digits are significant Third digit is no. of zeros, "R" indicates decimal for values under 10µF
- NAZT — Series

PEAK REFLOW TEMPERATURE CODES

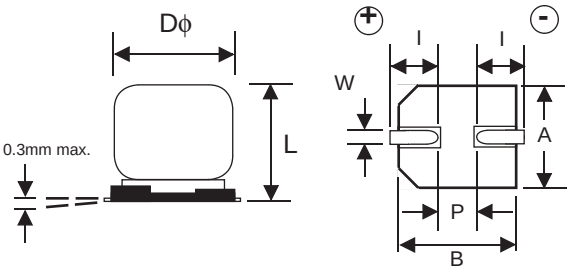
Code	Peak Reflow Temperature
N	260°C
L	250°C
J	240°C
H	235°C

TERMINATION FINISH & PACKAGING OPTIONS CODES

Code	Finish & Reel Size
B	Sn-Bi Finish & 13" Reel
LB	Sn-Bi Finish & 15" Reel
S	100% Sn Finish & 13" Reel
LS	100% Sn Finish & 15" Reel

DIMENSIONS (mm) AND REEL QUANTITIES

Case Size	ϕD±0.5	L max.	A±0.2	B±0.2	I±0.3	W	P±0.3	Qty/Reel
4x6.3	4.0	6.3	4.3	4.3	1.8	0.5~0.8	1.0	1,200
5x6.3	5.0	6.3	5.3	5.3	2.2	0.5~0.8	1.4	800
6.3x6.3	6.3	6.3	6.6	6.6	2.5	0.5~0.8	2.2	800
6.3X8	6.3	8.0	6.6	6.6	2.5	0.5~0.8	2.2	500
8x10.5	8.0	10.5	8.3	8.3	2.9	0.7~1.0	3.2	300
10x10.5	10.0	10.5	10.3	10.3	3.2	1.1~1.4	4.6	300
12.5x14	12.5	14.0	12.8	12.8	4.5	1.1~1.4	4.6	200
16x17	16.0	17.0	16.3	16.3	5.5	1.8~2.1	7.0	125



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

Surface Mount Aluminum Electrolytic Capacitors NAZT Series

STANDARD VALUES, CASE SIZES AND SPECIFICATIONS

NIC Part Number	Cap. (µF)	W.V. (Vdc)	Dissipaton Factor (Tan δ)	Max. Impedance (Ω) 100KHz, +20°C	Max. Ripple Current (mA) +105°C, 100KHz	Load Life Hours @ +105°C
NAZT270M6.3V4X6.3NBF	27	6.3	0.26	1.45	90	2,000
NAZT330M6.3V5X6.3NBF	33		0.26	0.70	150	2,000
NAZT470M6.3V5X6.3NBF	47		0.26	0.70	150	2,000
NAZT560M6.3V5X6.3NBF	56		0.26	0.70	150	2,000
NAZT680M6.3V6.3X6.3NBF	68		0.26	0.39	230	2,000
NAZT101M6.3V6.3X6.3NBF	100		0.26	0.39	230	2,000
NAZT151M6.3V6.3X6.3NBF	150		0.26	0.39	230	2,000
NAZT221M6.3V6.3X6.3NBF	220		0.26	0.39	230	2,000
NAZT331M6.3V6.3X8NBF	330		0.26	0.30	280	2,000
NAZT471M6.3V8X10.5NBF	470		0.28	0.17	450	5,000
NAZT681M6.3V8X10.5NBF	680		0.28	0.17	450	5,000
NAZT102M6.3V8X10.5NBF	1000		0.28	0.17	450	5,000
NAZT152M6.3V10X10.5LBF	1500		0.28	0.09	670	5,000
NAZT222M6.3V12.5X14JBF	2200		0.30	0.066	900	5,000
NAZT682M6.3V16X17HSF	6800		0.38	0.035	1800	5,000
NAZT220M10V4X6.3NBF	22	10	0.20	1.45	90	2,000
NAZT270M10V5X6.3NBF	27		0.20	0.70	170	2,000
NAZT330M10V5X6.3NBF	33		0.20	0.70	170	2,000
NAZT470M10V6.3X6.3NBF	47		0.20	0.39	250	2,000
NAZT560M10V6.3X6.3NBF	56		0.20	0.39	250	2,000
NAZT680M10V6.3X6.3NBF	68		0.20	0.39	250	2,000
NAZT101M10V6.3X6.3NBF	100		0.20	0.39	250	2,000
NAZT151M10V6.3X6.3NBF	150		0.20	0.39	250	2,000
NAZT221M10V6.3X8NBF	220		0.20	0.30	300	2,000
NAZT331M10V8X10.5NBF	330		0.24	0.17	450	5,000
NAZT471M10V8X10.5NBF	470		0.24	0.17	450	5,000
NAZT681M10V10X10.5LBF	680		0.24	0.09	670	5,000
NAZT102M10V10X10.5LBF	1000		0.24	0.09	670	5,000
NAZT152M10V12.5X14JBF	1500		0.24	0.066	900	5,000
NAZT472M10V16X17HSF	4700		0.30	0.035	1800	5,000
NAZT150M16V4X6.3NBF	15	16	0.16	1.45	90	2,000
NAZT220M16V5X6.3NBF	22		0.16	0.70	170	2,000
NAZT270M16V5X6.3NBF	27		0.16	0.70	170	2,000
NAZT330M16V6.3X6.3NBF	33		0.16	0.39	250	2,000
NAZT470M16V6.3X6.3NBF	47		0.16	0.39	250	2,000
NAZT560M16V6.3X6.3NBF	56		0.16	0.39	250	2,000
NAZT680M16V6.3X6.3NBF	68		0.16	0.39	250	2,000
NAZT101M16V6.3X6.3NBF	100		0.16	0.39	250	2,000
NAZT151M16V6.3X8NBF	150		0.16	0.30	300	2,000
NAZT221M16V6.3X8NBF	220		0.16	0.30	300	2,000
NAZT331M16V8X10.5NBF	330		0.22	0.17	450	5,000
NAZT471M16V8X10.5NBF	470		0.22	0.17	450	5,000
NAZT681M16V10X10.5LBF	680		0.22	0.09	670	5,000
NAZT102M16V12.5X14JBF	1000		0.22	0.066	900	5,000
NAZT332M16V16X17HSF	3300		0.26	0.035	1800	5,000
NAZT100M25V4X6.3NBF	10	25	0.14	1.45	90	2,000
NAZT150M25V5X6.3NBF	15		0.14	0.70	150	2,000
NAZT220M25V5X6.3NBF	22		0.14	0.70	150	2,000
NAZT270M25V6.3X6.3NBF	27		0.14	0.39	250	2,000
NAZT330M25V6.3X6.3NBF	33		0.14	0.39	250	2,000
NAZT470M25V6.3X6.3NBF	47		0.14	0.39	230	2,000
NAZT560M25V6.3X6.3NBF	56		0.14	0.39	250	2,000
NAZT680M25V6.3X6.3NBF	68		0.14	0.39	250	2,000
NAZT101M25V6.3X8NBF	100		0.14	0.30	300	2,000
NAZT151M25V8X10.5NBF	150		0.16	0.17	450	5,000
NAZT221M25V8X10.5NBF	220		0.16	0.17	450	5,000
NAZT331M25V8X10.5NBF	330		0.16	0.17	450	5,000
NAZT471M25V10X10.5LBF	470		0.16	0.09	670	5,000
NAZT681M25V12.5X14JBF	680		0.16	0.066	900	5,000
NAZT152M25V16X17HSF	1500		0.16	0.035	1800	5,000
NAZT222M25V16X17HSF	2200		0.18	0.035	1800	5,000

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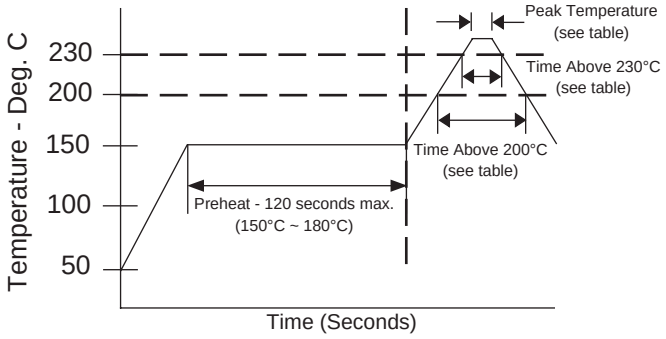
STANDARD VALUES, CASE SIZES AND SPECIFICATIONS

NIC Part Number	Cap. (µF)	W.V. (Vdc)	Dissipaton Factor (Tan δ)	Max. Impedance (Ω) 100KHz, +20°C	Max. Ripple Current (mA) +105°C, 100KHz	Load Life Hours @ +105°C
NAZT4R7M35V4X6.3NBF	4.7	35	0.12	1.45	90	2,000
NAZT100M35V5X6.3NBF	10		0.12	0.70	170	2,000
NAZT150M35V5X6.3NBF	15		0.12	0.70	170	2,000
NAZT220M35V5X6.3NBF	22		0.12	0.70	170	2,000
NAZT270M35V6.3X6.3NBF	27		0.12	0.39	250	2,000
NAZT330M35V6.3X6.3NBF	33		0.12	0.39	250	2,000
NAZT470M35V6.3X6.3NBF	47		0.12	0.39	250	2,000
NAZT560M35V6.3X8NBF	56		0.12	0.30	300	2,000
NAZT680M35V6.3X8NBF	68		0.12	0.30	300	2,000
NAZT101M35V8X10.5NBF	100		0.14	0.17	450	5,000
NAZT151M35V8X10.5NBF	150		0.14	0.17	450	5,000
NAZT221M35V8X10.5NBF	220		0.14	0.17	450	5,000
NAZT331M35V10X10.5LBF	330		0.14	0.09	670	5,000
NAZT471M35V12.5X14JBF	470		0.14	0.066	900	5,000
NAZT681M35V12.5X14JBF	680		0.14	0.066	900	5,000
NAZT102M35V16X17HSF	1000		0.14	0.035	1800	5,000
NAZT152M35V16X17HSF	1500		0.16	0.035	1800	5,000
NAZT4R7M50V4X6.3NBF	4.7	50	0.12	2.90	60	2,000
NAZT100M50V6.3X6.3NBF	10		0.12	0.88	165	2,000
NAZT150M50V6.3X6.3NBF	15		0.12	0.88	165	2,000
NAZT220M50V6.3X6.3NBF	22		0.12	0.88	165	2,000
NAZT270M50V6.3X8NBF	27		0.12	0.68	195	2,000
NAZT330M50V6.3X8NBF	33		0.12	0.68	195	2,000
NAZT470M50V6.3X8NBF	47		0.12	0.68	195	2,000
NAZT560M50V8X10.5NBF	56		0.14	0.34	300	5,000
NAZT680M50V8X10.5NBF	68		0.14	0.34	300	5,000
NAZT101M50V8X10.5NBF	100		0.14	0.34	300	5,000
NAZT151M50V10X10.5LBF	150		0.14	0.21	490	5,000
NAZT221M50V10X10.5LBF	220		0.14	0.21	490	5,000
NAZT331M50V12.5X14JBF	330		0.14	0.14	620	5,000
NAZT471M50V16X17HSF	470		0.14	0.073	1610	5,000
NAZT681M50V16X17HSF	680		0.14	0.073	1610	5,000
NAZT102M50V16X17HSF	1000		0.14	0.073	1610	5,000

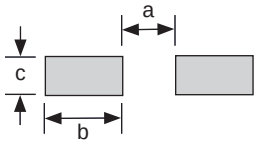
PEAK REFLOW TEMPERATURE AND DURATION

Diameter	Time above 200°C	Time above 230°C	Peak Temperature 5 seconds
4 ~ 8mm ϕ	80 sec. max.	40 sec. max.	260°C
10mm ϕ	70 sec. max.	40 sec. max.	250°C
12.5mm ϕ	50 sec. max.	20 sec. max.	240°C
16mm ϕ	50 sec. max.	15 sec. max.	235°C



RECOMMENDED LAND PATTERN DIMENSIONS (mm)

Case Size	a	b	c
4x6.3	1.0	2.6	1.8
5x6.3	1.4	3.0	1.8
6x3x6.3 6.3x8	2.1	3.5	1.8
8x10.5	2.8	4.1	2.1
10x10.5	4.3	4.4	2.5
12.5x14	4.3	5.8	2.5
16x17	6.6	6.5	5.0



Review & Compare Reflow Soldering Heat Limits
V-chip SMT Aluminum Electrolytic Capacitors
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