

FEATURES

- CYLINDRICAL V-CHIP CONSTRUCTION FOR SURFACE MOUNT
- HIGH VOLTAGE (160VDC AND 400VDC)
- 8 x10.8mm ~ 16 x17mm CASE SIZES
- LONG LIFE (2000 HOURS AT +105°C)
- DESIGNED FOR REFLOW SOLDERING

**RoHS
Compliant**
includes all homogeneous materials

*See Part Number System for Details

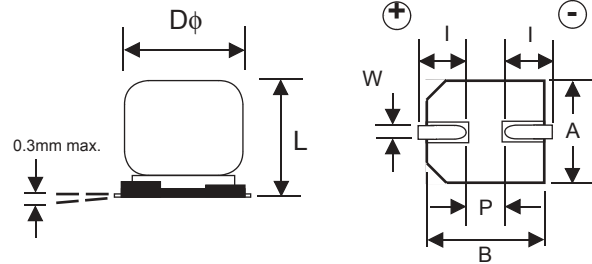


CHARACTERISTICS

Rated Voltage Range	160	200	250	400
Rated Capacitance Range	10 ~ 82	10 ~ 68	3.3 ~ 47	2.2 ~ 22
Operating Temperature Range	-40 ~ +105°C			
Capacitance Tolerance	±20% (M)			
Max. Leakage Current After 2 Minutes	0.03CV + 15μA			
	0.02CV + 25μA			
Max. Tanδ @ 120Hz	0.20	0.20	0.20	0.25
Low Temperature Stability (Impedance Ratio @ 120Hz)	Z-25°C/Z+20°C	3	3	3
	Z-40°C/Z+20°C	6	6	6
High Temperature Load Life at 105°C 2,000 hrs φD > 10mm 1,000 hrs φD = 8mm	Capacitance Change	Within ±25% of initial measured value		
	Tan δ	Less than 200% of specified value		
	Leakage Current	Less than the specified value		

STANDARD PRODUCTS AND CASE SIZES (mm)

Cap. (μF)	Code	Working Voltage			
		160	200	250	400
2.2	2R2	-	-	-	8x10.8
3.3	3R3	-	-	8x10.8	10x10.8
4.7	4R7	-	-	8x10.8	10x10.8
6.8	6R8	-	-	8x10.8	12.5x14
10	100	8x10.8	10x10.8	10x10.8	12.5x14
22	220	12.5x14	12.5x14	12.5x14	16x17
33	330	12.5x14	12.5x14	16x17	-
47	470	16x17	16x17	16x17	-
68	680	16x17	16x17	-	-
82	820	16x17	-	-	-



DIMENSIONS (mm)

Case Size	Dφ±0.5	L max.	A±0.2	B±0.2	I±0.2	W	P±0.2
8x10.8	8.0	10.8	8.3	8.3	2.9	0.7~1.0	3.2
10x10.8	10.0	10.8	10.3	10.3	3.2	1.1~1.4	4.6
12.5x14	12.5	14.0	12.8	12.8	4.5	1.1~1.4	4.6
16x17	16.0	17.0	16.3	16.3	5.0	1.8~2.1	7.0

PART NUMBER SYSTEM

NACV 100 M 200V 10x10.8 TR 13 F

- NACV: Series
- 100: Capacitance Code in μF, first 2 digits are significant
- M: Tolerance Code M=20%, K=10%
- 200V: Working Voltage
- 10x10.8: Size in mm
- TR: 330mm (13") Reel Tape & Reel
- 13: 330mm (13") Reel
- F: RoHS Compliant 97% Sn (min.), 3% Bi (max.)

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 NAZV Series

STANDARD VALUES, CASE SIZES AND SPECIFICATIONS

NIC Part Number	Cap. (μF)	W.V. (Vdc)	Dissipation Factor (Tan δ)	Max. Ripple Current (mA) +105°C/100KHz	Max. Z (Ω) +20°C/100KHz	Load Life Hours @ +105°C
NAZV470M6.3V5X7.3LBF	47	6.3	0.32	95	2.2	7,000
NAZV101M6.3V6.3X7.3LBF	100		0.32	140	1.1	7,000
NAZV221M6.3V6.3X8.7LBF	220		0.32	230	1.0	7,000
NAZV331M6.3V6.3X8.7LBF	330		0.32	230	1.0	7,000
NAZV471M6.3V8X10.5LBF	470		0.32	600	0.22	10,000
NAZV102M6.3V10X10.5LBF	1000		0.32	850	0.16	10,000
NAZV330M10V5X7.3LBF	33	10	0.28	95	2.2	7,000
NAZV151M10V6.3X7.3LBF	150		0.28	140	1.1	7,000
NAZV220M16V5X7.3LBF	22	16	0.26	95	2.2	7,000
NAZV470M16V6.3X7.3LBF	47		0.26	140	1.1	7,000
NAZV101M16V6.3X7.3LBF	100		0.26	140	1.1	7,000
NAZV151M16V6.3X8.7LBF	150		0.26	230	1.0	7,000
NAZV221M16V6.3X8.7LBF	220		0.26	230	1.0	7,000
NAZV331M16V8X10.5LBF	330		0.26	600	0.22	10,000
NAZV471M16V10X10.5LBF	470		0.26	850	0.16	10,000
NAZV220M25V5X7.3LBF	22	25	0.16	95	2.2	7,000
NAZV330M25V6.3X7.3LBF	33		0.16	140	1.1	7,000
NAZV470M25V6.3X7.3LBF	47		0.16	140	1.1	7,000
NAZV101M25V6.3X8.7LBF	100		0.16	230	1.0	7,000
NAZV221M25V8X10.5LBF	220		0.16	600	0.22	10,000
NAZV331M25V10X10.5LBF	330		0.16	850	0.16	10,000
NAZV100M35V5X7.3LBF	10	35	0.14	95	2.2	7,000
NAZV220M35V5X7.3LBF	22		0.14	95	2.2	7,000
NAZV330M35V6.3X8.7LBF	33		0.14	230	1.0	7,000
NAZV470M35V6.3X8.7LBF	47		0.14	230	1.0	7,000
NAZV101M35V8X10.5LBF	100		0.14	600	0.22	10,000
NAZV221M35V10X10.5LBF	220		0.14	850	0.16	10,000
NAZV470M50V8X10.5LBF	47	50	0.14	350	0.53	10,000
NAZV101M50V10X10.5LBF	100		0.14	850	0.35	10,000

RIPPLE CURRENT FREQUENCY CORRECTION FACTORS

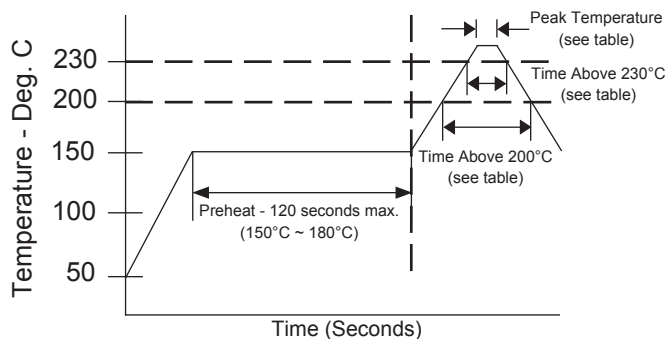
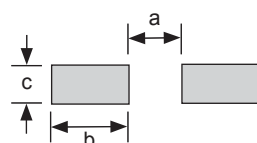
Cap. (μF)	Frequency			
	120Hz	1KHz	10KHz	100KHz
10 ~ 22	0.50	0.80	0.90	1.00
33 ~ 150	0.65	0.85	0.95	1.00
220 ~ 1000	0.70	0.85	0.95	1.00

PEAK REFLOW TEMPERATURE AND DURATION

Diameter	Time above 200°C	Time above 230°C	Peak Temperature 5 seconds
5 ~ 6.3mm φ	70 sec. max.	40 sec. max.	250°C
8 ~ 10mm φ	60 sec. max.	20 sec. max.	250°C

RECOMMENDED LAND PATTERN DIMENSIONS (mm)

Case Size	a	b	c
5x7.3	1.4	3.0	1.8
6.3x7.3 6.3x8.7	2.1	3.5	1.8
8x10.5	2.8	4.1	2.1
10x10.5	4.3	4.4	2.5



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