

Surface Mount Aluminum Electrolytic Capacitors NACEW Series

FEATURES

- CYLINDRICAL V-CHIP CONSTRUCTION
- WIDE TEMPERATURE -55 ~ +105°C
- ANTI-SOLVENT (2 MINUTES)
- DESIGNED FOR REFLOW SOLDERING

**RoHS
Compliant**

includes all homogeneous materials

*See Part Number System for Details



CHARACTERISTICS

Rated Voltage Range	6.3 ~ 100Vdc**									
Rate Capacitance Range	0.1 ~ 6,800µF									
Operating Temp. Range	-55°C ~ +105°C (100V -40°C ~ +105 °C)									
Capacitance Tolerance	±20% (M), ±10% (K)*									
Max. Leakage Current After 2 Minutes @ 20°C	0.01CV or 3µA whichever is greater									
Max. Tan δ @ 120Hz/20°C	W.V. (Vdc)	6.3	10	16	25	35	50	63	100	
	S.V. (Vdc)	8	13	20	32	44	63	79	125	
	4 ~ 6.3mm Dia.	0.24	0.20	0.16	0.14	0.12	0.10	0.12	0.10	
	8 & larger	0.28	0.24	0.20	0.16	0.14	0.12	0.12	0.10	
Low Temperature Stability Impedance Ratio @ 120Hz	W.V. (Vdc)	6.3	10	16	25	35	50	63	100	
	Z-40°C/Z+20°C	3	3	2	2	2	2	2	2	
	Z-55°C/Z+20°C	8	6	4	4	3	3	3	-	
Load Life Test	4 ~ 6.3mm Dia. & 10x8mm +105°C 1,000 hours +95°C 2,000 hours +85°C 4,000 hours	Capacitance Change			Within ± 25% of initial measured value					
		Tan δ			Less than 200% of specified max. value					
	8 ~ 16mm Dia. +105°C 2,000 hours +95°C 4,000 hours +85°C 8,000 hours	Leakage Current			Less than specified max. value					

* Optional ± 10% (K) Tolerance - see case size chart.** For higher voltages, 200V and 400V, see NACV series.

MAXIMUM PERMISSIBLE RIPPLE CURRENT (mA rms AT 120Hz AND 105°C)

Cap. (µF)	Working Voltage (Vdc)							
	6.3	10	16	25	35	50	63	100
0.1	-	-	-	-	-	0.7	0.7	-
0.22	-	-	-	-	-	1.6	1.6	-
0.33	-	-	-	-	-	2.5	2.5	-
0.47	-	-	-	-	-	3.5	3.5	-
1.0	-	-	-	-	-	7.0	7.0	7.0
2.2	-	-	-	-	-	11	11	14
3.3	-	-	-	-	-	13	14	20
4.7	-	-	-	13	14	16	16	25
10	-	-	18	20	21	24	24	35
22	22	25	27	36	38	32	49	84
33	27	30	40	44	42	60	112	133
47	33	41	48	48	49	63	119	240
100	50	-	60	91	84	140	196	-
150	55	62	95	140	155	-	-	500
220	67	105	105	175	190	220	287	-
330	105	195	195	220	300	-	-	-
470	210	210	230	300	410	-	630	-
1000	280	310	-	460	-	655	-	-
1500	310	-	500	-	740	-	-	-
2200	-	510	-	805	-	-	-	-
3300	520	-	840	-	-	-	-	-
4700	-	880	-	-	-	-	-	-
6800	930	-	-	-	-	-	-	-

MAXIMUM ESR (Ω AT 120Hz AND 20°C)

Cap. (µF)	Working Voltage (Vdc)								
	6.3	10	16	25	35	50	63	100	
0.1	-	-	-	-	-	1660	1990	-	
0.22	-	-	-	-	-	754	905	-	
0.33	-	-	-	-	-	503	604	-	
0.47	-	-	-	-	-	353	424	-	
1.0	-	-	-	-	-	166	199	166	
2.2	-	-	-	-	-	75.4	90.5	75.4	
3.3	-	-	-	-	-	50.3	60.3	50.3	
4.7	-	-	-	49.4	42.3	35.3	42.3	35.3	
10	-	-	26.5	23.2	19.9	16.6	19.9	16.6	
22	18.1	15.1	12.1	10.6	9.05	7.64	9.04	7.64	
33	12.1	10.1	8.04	7.04	6.04	5.03	6.03	5.03	
47	8.47	7.06	5.65	4.95	4.24	3.53	4.24	3.53	
100	3.98	-	2.66	2.32	2.32	1.99	1.99	-	
150	2.66	2.21	1.77	1.77	1.55	-	-	1.10	
220	1.81	1.51	1.21	1.21	1.06	0.91	0.91	-	
330	1.21	1.21	1.00	0.80	0.70	-	-	-	
470	0.99	0.85	0.71	0.57	0.49	-	0.42	-	
1000	0.46	0.40	-	0.27	-	0.20	-	-	
1500	0.31	-	0.23	-	0.15	-	-	-	
2200	-	0.18	-	0.14	-	-	-	-	
3300	0.14	-	0.12	-	-	-	-	-	
4700	-	0.11	-	-	-	-	-	-	
6800	0.093	-	-	-	-	-	-	-	

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

RIPPLE CURRENT FREQUENCY CORRECTION FACTOR

Frequency (Hz)	f ≤ 100	100 > f ≤ 1K	1K > f ≤ 10K	f ≥ 100K
Correction Factor	0.8	1.0	1.3	1.5



Surface Mount Aluminum Electrolytic Capacitors NACEW Series

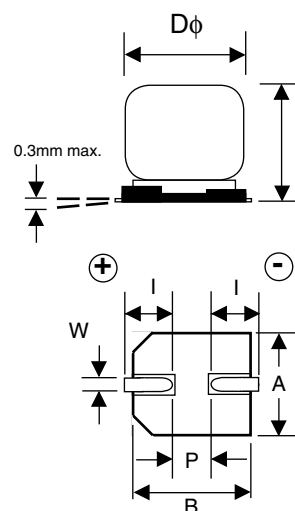
STANDARD PRODUCT AND CASE SIZE TABLE DφxL (mm)

Cap. (μF)	Code	Working Voltage (Vdc)							
		6.3	10	16	25	35	50	63	100
0.1	R10	-	-	-	-	-	4x5.5*	4x5.5*	-
0.22	R22	-	-	-	-	-	4x5.5*	4x5.5*	-
0.33	R33	-	-	-	-	-	4x5.5*	4x5.5*	-
0.47	R47	-	-	-	-	-	4x5.5*	4x5.5*	-
1.0	1R0	-	-	-	-	-	4x5.5*	4x5.5*	4x6.3*
2.2	2R2	-	-	-	-	-	4x5.5*	4x5.5*	6.3x6.3*
3.3	3R3	-	-	-	-	-	4x5.5*	5x5.5*	6.3x6.3*
4.7	4R7	-	-	-	4x5.5*	4x5.5*	5x5.5*	5x5.5*	6.3x6.3*
10	100	-	-	4x5.5*	5x5.5*	5x5.5*	6.3x5.5*	6.3x5.5*	6.3x8*
22	220	4x5.5*	5x5.5*	5x5.5*	6.3x5.5*	6.3x5.5*	6.3x6.3*	6.3x8*	8x10.5*
33	330	5x5.5*	5x5.5*	6.3x5.5*	6.3x5.5*	6.3x6.3*	6.3x8*	8x10.5*	10x10.5*
47	470	5x5.5*	6.3x5.5*	6.3x5.5*	6.3x6.3*	6.3x6.3*	6.3x8*	8x10.5*	12.5x14
100	101	6.3x5.5*	-	6.3x5.5*	6.3x8*	6.3x8*	8x10.5*	10x10.5*	-
150	151	6.3x5.5*	6.3x6.3*	6.3x8*	8x10.5*	8x10.5*	10x8*	-	16x17
220	221	6.3x6.3*	6.3x8*	6.3x8*	8x10.5*	8x10.5*	10x10.5	12.5x14	-
330	331	6.3x8*	8x10.5*	8x10.5*	8x10.5*	10x10.5	-	-	-
470	471	8x10.5	8x10.5	8x10.5	10x10.5*	12.5x14	-	16x17	-
1000	102	8x10.5*	10x10.5*	-	12.5x14	-	16x17	-	-
1500	152	10x10.5*	-	12.5x14	-	16x17	-	-	-
2200	222	-	12.5x14	-	16x17	-	-	-	-
3300	332	12.5x14	-	16x17	-	-	-	-	-
4700	472	-	16x17	-	-	-	-	-	-
6800	682	16x17	-	-	-	-	-	-	-

*Denotes values available in 10% tolerance

DIMENSIONS (mm)

Case Size	Dφ ±0.5	L max.	A ±0.2	B ±0.2	I ±0.2	W	P ±0.2
4 x 5.5	4.0	5.5	4.3	4.3	1.8	0.5 ~ 0.8	1.0
5 x 5.5	5.0	5.5	5.3	5.3	2.1	0.5 ~ 0.8	1.4
6.3 x 5.5	6.3	5.5	6.6	6.6	2.5	0.5 ~ 0.8	2.2
6.3 x 6.3	6.3	6.3	6.6	6.6	2.5	0.5 ~ 0.8	2.2
6.3 x 8	6.3	8.0	6.6	6.6	2.5	0.5 ~ 0.8	2.2
8 x 6.5	8.0	6.5	8.3	8.3	3.4	0.5 ~ 0.8	2.2
8 X 10.5	8.0	10.5	8.3	8.3	2.9	0.7 ~ 1.0	3.2
10 x 8	10.0	8.0	10.3	10.3	3.2	0.7 ~ 1.4	4.6
10 x 10.5	10.0	10.5	10.3	10.3	3.2	0.7 ~ 1.4	4.6
12.5 x 14	12.5	14.0	12.8	12.8	4.5	0.6 ~ 1.4	4.6
16 x 17	16.0	17.5	17.0	17.0	5.5	0.9 ~ 1.5	6.7



PART NUMBER SYSTEM

