

Surface Mount Aluminum Electrolytic Capacitors NACY Series

FEATURES

- CYLINDRICAL V-CHIP CONSTRUCTION FOR SURFACE MOUNTING
- LOW IMPEDANCE AT 100KHz (Up to 20% lower than NACZ)
- WIDE TEMPERATURE RANGE (-55 +105°C)
- DESIGNED FOR AUTOMATIC MOUNTING AND REFLOW SOLDERING

**RoHS
Compliant**
includes all homogeneous materials



CHARACTERISTICS

*See Part Number System for Details

Rated Capacitance Range		4.7 ~ 6800 μ F										
Operating Temperature Range		- 55°C + 105°C										
Capacitance Tolerance		\pm 20% (120Hz/+20°C)										
Max. Leakage Current after 2 minutes at 20°C		0.01CV or 3 μ A										
Max. Tan δ at 120Hz & 20°C	W.V.(Vdc)	6.3	10	16	25	35	50	63	80	100		
	S.V.(Vdc)	8	13	20	32	44	63	80	100	125		
	Tan δ	ϕ 4 to ϕ 6.3	0.24	0.20	0.16	0.14	0.12	0.12	0.10	0.08	0.07	
			$C \leq 1500\mu$ F	0.28	0.24	0.20	0.16	0.14	0.14	0.12	0.10	0.08
		ϕ 8 ~ ϕ 16	$C=2200\mu$ F	-	0.26	-	0.18	-	-	-	-	-
			$C=3300\mu$ F	0.32	-	0.24	-	-	-	-	-	-
$C=4700\mu$ F	-	0.30	-	-	-	-	-	-	-			
$C=6800\mu$ F	0.36	-	-	-	-	-	-	-	-			
Low Temperature Stability (Impedance Ratio at 120 Hz)	Z -40°C/Z +20°C	3	2	2	2	2	2	2	2	2		
	Z -55°C/Z +20°C	5	4	4	3	3	3	3	3	3		
Load Life Test AT 105°C 4 ~ 6.3mm Dia 1,000 Hours 8 ~ 12.5mm Dia 2,000 Hours	Capacitance Change	Within \pm 25% of initial measured value										
	Tan δ	Less than 200% of the specified value										
	Leakage Current	Less than the specified maximum value										

MAXIMUM PERMISSIBLE RIPPLE CURRENT (mA rms AT 100KHz AND 105°C)

Cap. (μ F)	Working Voltage (Vdc)									
	6.3	10	16	25	35	50	63	80	100	
4.7	-	-	-	-	90	64	55	45	-	
10	-	-	-	90	170	215	90	65	-	
15	-	-	90	170	170	-	-	-	-	
22	-	90	170	170	170	215	135	140	140	
27	90	-	-	-	-	-	-	-	-	
33	-	170	-	250	250	243	280	140	220	
47	170	-	250	250	250	243	280	220	500	
56	170	-	-	250	-	-	-	-	-	
68	-	250	250	250	300	-	-	-	-	
100	250	-	250	300	600	400	480	500	800	
150	250	250	300	600	600	-	-	500	800	
220	250	300	300	600	600	585	800	-	-	
330	300	600	600	600	850	800	-	800	-	
470	600	600	600	850	1150	-	1410	-	-	
680	600	-	850	-	1150	-	-	-	-	
1000	600	850	-	1150	-	1610	-	-	-	
1500	850	-	1150	-	1800	-	-	-	-	
2200	-	1150	-	1800	-	-	-	-	-	
3300	1150	-	1800	-	-	-	-	-	-	
4700	-	1800	-	-	-	-	-	-	-	
6800	1800	-	-	-	-	-	-	-	-	

MAXIMUM IMPEDANCE (Ω AT 100KHz AND 20°C)

Cap. (μ F)	Working Voltage (Vdc)									
	6.3	10	16	25	35	50	63	80	100	
4.7	-	-	-	-	1.45	2.55	2.00	2.40	-	
10	-	-	-	1.45	0.7	0.52	1.00	2.00	-	
15	-	-	1.45	0.7	0.7	-	-	-	-	
22	-	1.45	0.7	0.7	0.7	0.52	0.80	0.90	0.90	
27	1.45	-	-	-	-	-	-	-	-	
33	-	0.7	-	0.39	0.39	0.44	0.35	0.90	0.50	
47	0.7	-	0.39	0.39	0.39	0.44	0.35	0.50	0.24	
56	0.7	-	-	0.39	-	-	-	-	-	
68	-	0.39	0.39	0.39	0.30	-	-	-	-	
100	0.39	-	0.39	0.3	0.15	0.22	0.20	0.24	0.14	
150	0.39	0.39	0.3	0.15	0.15	-	-	0.24	0.14	
220	0.39	0.3	0.3	0.15	0.15	0.13	0.14	-	-	
330	0.3	0.15	0.15	0.15	0.08	0.10	-	0.14	-	
470	0.15	0.15	0.15	0.08	0.058	-	0.065	-	-	
680	0.15	-	0.08	-	0.058	-	-	-	-	
1000	0.15	0.08	-	0.058	-	0.065	-	-	-	
1500	0.08	-	0.058	-	0.035	-	-	-	-	
2200	-	0.058	-	0.035	-	-	-	-	-	
3300	0.058	-	0.035	-	-	-	-	-	-	
4700	-	0.035	-	-	-	-	-	-	-	
6800	0.035	-	-	-	-	-	-	-	-	

Denotes New Values

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

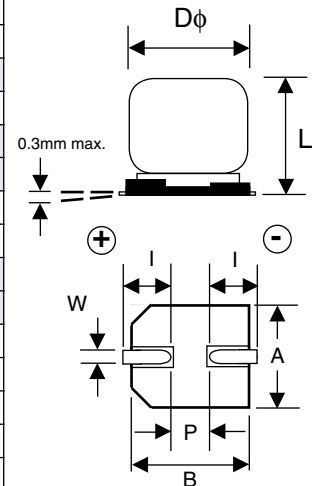
Frequency	\leq 120Hz	\leq 1KHz	\leq 10KHz	\leq 100KHz
Correction Factor	0.75	0.85	0.95	1.00



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STANDARD PRODUCT AND CASE SIZE D ϕ xL (mm)

Cap (μ F)	Code	Working Voltage (Vdc)								
		6.3	10	16	25	35	50	63	80	100
4.7	4R7	-	-	-	-	4x6.3	4x6.3	5x6.3	6.3x6.3	-
10	100	-	-	-	4x6.3	5x6.3	6.3x6.3	6.3x6.3	6.3x8	-
15	150	-	-	4x6.3	5x6.3	5x6.3	-	-	-	-
22	220	-	4x6.3	5x6.3	5x6.3	5x6.3	6.3x6.3	6.3x8	8x10.5	8x10.5
27	270	4x6.3	-	-	-	-	-	-	-	-
33	330	-	5x6.3	-	6.3x6.3	6.3x6.3	6.3x8	8x10.5	8x10.5	10x10.5
47	470	5x6.3	-	6.3x6.3	6.3x6.3	6.3x6.3	6.3x8	8x10.5	10x10.5	12.5x14
56	560	5x6.3	-	-	6.3x6.3	-	-	-	-	-
68	680	-	6.3x6.3	6.3x6.3	6.3x6.3	6.3x8	-	-	-	-
100	101	6.3x6.3	-	6.3x6.3	6.3x8	8x10.5	8x10.5	10x10.5	12.5x14	16x17
150	151	6.3x6.3	6.3x6.3	6.3x8	8x10.5	8x10.5	-	-	12.5x14	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	12.5x14	-	16x17	-
470	471	8x10.5	8x10.5	8x10.5	10x10.5	12.5x14	-	16x17	-	-
680	681	8x10.5	-	10x10.5	-	12.5x14	-	-	-	-
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	-	-	-	-	-	-	-	-



DIMENSIONS (mm)

Case Size	D ϕ \pm 0.5	L max.	A \pm 0.2	B \pm 0.2	I \pm 0.2	W	P \pm 0.2
4 x 6.3	4.0	6.3	4.3	4.3	1.8	0.5 ~ 0.8	1.0
5 x 6.3	5.0	6.3	5.3	5.3	2.2	0.5 ~ 0.8	1.5
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 10.5	8.0	10.5	8.3	8.3	2.9	0.7 ~ 1.0	3.2
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
16x17	16.0	17	16.3	16.3	5.0	1.8 ~ 2.1	7.0

PART NUMBER SYSTEM

