

Surface Mount Aluminum Electrolytic Capacitors NACHL Series

FEATURES

- CYLINDRICAL V-CHIP CONSTRUCTION FOR SURFACE MOUNTING
- HIGH TEMPERATURE, EXTEND LIFE (5000 HOURS @ 105°C)
- LOW IMPEDANCE AND HIGH RIPPLE CURRENT
- 4X6.1mm ~ 10X10.5mm CASE SIZES
- DESIGNED FOR REFLOW SOLDERING

**RoHS
Compliant**
includes all homogeneous materials



CHARACTERISTICS

*See Part Number System for Details

Rated Voltage Range		10 ~ 100 Vdc						
Rated Capacitance Range		0.47 ~ 330 μ F						
Operating Temperature Range		- 40°C ~ + 105°C						
Capacitance Tolerance		\pm 20% (M)						
Max. Leakage Current After 2 Minutes		0.01CV or 3 μ A whichever is greater						
Working Voltage		10Vdc	16Vdc	25Vdc	35Vdc	50Vdc	63Vdc	100Vdc
Surge Voltage		13Vdc	20Vdc	32Vdc	44Vdc	63Vdc	79Vdc	125Vdc
Max. Tan δ @ 120Hz & 20°C		0.1	0.15	0.14	0.12	0.10	0.08	0.07
Low Temperature Stability (Impedance Ratio @ 120Hz)	Z -25°C/Z +20°C	6	2	2	2	2	2	2
	Z -40°C/Z +20°C	12	5	3	3	3	3	3
High Temperature Load Life 5000 Hours at +105°C Rated WVDC	Capacitance Change	Within \pm 30% of initial measured value						
	Tan δ	Less than 300% of specified value						
	Leakage Current	Less than the specified maximum value						
Shelf Life Test 1,000 Hours at +105°C Rated WVDC	Capacitance Change	Within \pm 20% of initial measured value						
	Tan δ	Less than 200% of specified maximum value						
	Leakage Current	Less than the specified maximum value						

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

Cap (μ F)	Working Voltage (Vdc)						
	10	16	25	35	50	63	100
0.47	-	-	-	-	5	-	-
1.0	-	-	-	-	7	-	-
2.2	-	-	-	-	12	-	-
3.3	-	-	-	-	16	-	30
4.7	-	-	15	17	21	-	50
10	-	20	26	28	33	45	55
22	-	33	42	47	50	65	70
33	-	-	52	53	74	80	-
47	-	55	56	79	94	-	-
100	62	89	84	101	-	-	-
220	93	113	-	-	-	-	-
330	118	-	-	-	-	-	-

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

Cap (μ F)	Working Voltage (Vdc)						
	10	16	25	35	50	63	100
0.47	-	-	-	-	12.0	-	-
1.0	-	-	-	-	12.0	-	-
2.2	-	-	-	-	12.0	-	-
3.3	-	-	-	-	12.0	-	2.0
4.7	-	-	12.0	12.0	7.2	-	1.5
10	-	12.0	7.2	7.2	4.0	2.0	1.5
22	-	7.2	4.0	4.0	2.0	1.5	0.8
33	-	-	4.0	2.0	1.5	0.8	-
47	-	4.0	2.0	1.5	0.8	-	-
100	2.0	1.5	1.2	0.8	-	-	-
220	1.5	0.8	-	-	-	-	-
330	0.8	-	-	-	-	-	-

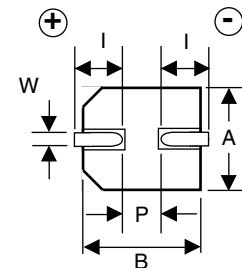
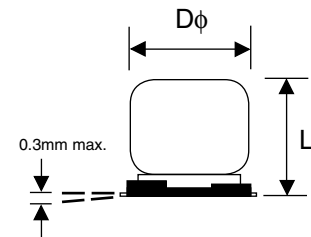
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STANDARD PRODUCT AND CASE SIZE TABLE DφxL (mm)

Cap (μF)	Code	Working Voltage (Vdc)						
		10	16	25	35	50	63	100
0.47	R47	-	-	-	-	4x6.1	-	-
1.0	1R0	-	-	-	-	4x6.1	-	-
2.2	2R2	-	-	-	-	4x6.1	-	-
3.3	3R3	-	-	-	-	4x6.1	-	8x6.5
4.7	4R7	-	-	4x6.1	4x6.1	5x6.1	-	8x10.5
10	100	-	4x6.1	5x6.1	5x6.1	6.3x6.1	8x6.5	8x10.5
22	220	-	5x6.1	6.3x6.1	6.3x6.1	8x6.5	8x10.5	10x10.5
33	330	-	-	6.3x6.1	8x6.5	8x10.5	10x10.5	-
47	470	-	6.3x6.1	8x6.5	8x10.5	10x10.5	-	-
100	101	8x6.5	8x10.5	8x10.5	10x10.5	-	-	-
220	221	8x10.5	10x10.5	-	-	-	-	-
330	331	10x10.5	-	-	-	-	-	-

DIMENSIONS (mm)

Case Size	Dφ ±0.5	L max.	A ±0.2	B ±0.2	l ±0.2	W	P ±0.2
4 x 6.1	4.0	6.1	4.3	4.3	1.8	0.5 ~ 0.8	1.0
5 x 6.1	5.0	6.1	5.3	5.3	2.2	0.5 ~ 0.8	1.5
5 x 6.3	5.0	6.3	5.3	5.3	2.2	0.5 ~ 0.8	1.5
6.3 x 6.1	6.1	6.6	6.6	6.6	2.6	0.5 ~ 0.8	1.8
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 10.5	10.0	10.5	10.3	10.3	3.2	0.7 ~ 1.4	4.6



PART NUMBER SYSTEM

