

# NCN

## +105°C Non-polarized Surface Mount Aluminum Electrolytic Capacitors



### FEATURES

- Capacitance Range .1 to 47  $\mu\text{F}$
- Standard Case Sizes
- 5.5 mm height
- Automatic insertion applicable

### SPECIFICATIONS

<b>Capacitance Tolerance</b>		<b><math>\pm 20\%</math> at 120Hz, 20°C</b>									
<b>Operating Temperature Range</b>		<b>-40°C to +105°C</b>									
<b>Dissipation Factor 120Hz, 20°C (Max)</b>	<b>WVDC</b>	6.3	10	16	25	35	50				
	<b>tan <math>\delta</math></b>	.24	.20	.17	.14	.14	.18				
<b>Leakage current</b>	<b>Time</b>	2 minutes									
		.005 CV or 10 $\mu\text{A}$ , whichever is greater									
<b>Impedance Ratio at Low Temperature (120Hz)</b>	<b>WVDC</b>	6.3	10	16	25	35	50				
	<b>-25°C/20°C</b>	4	3	2	2	2	2				
	<b>-40°C/20°C</b>	8	6	4	4	3	3				
<b>Load Life</b>	<b>1,000 hours at 105°C with rated voltage</b>										
	Capacitance change Dissipation factor Leakage current					$\leq 20\%$ of initial measured values $\leq 200\%$ initial specified value $\leq 100\%$ Initial specified value					
<b>Shelf Life</b>	<b>1000 hours at 105°C with no voltage applied.</b>										
	Capacitance change Dissipation factor Leakage current					$\leq 20\%$ of initial measured values $\leq 200\%$ initial specified value $\leq 100\%$ Initial specified value					
<b>Resistance to Soldering Heat</b>	Capacitors placed on a 250°C hot plate for 30 seconds with their electrode terminals facing downward will fulfill the following conditions after being cooled to room temperature.										
	Capacitance change Dissipation factor Leakage current					$\leq 10\%$ of the initial measured value $\leq 100\%$ of specified value $\leq 100\%$ of specified value					
<b>Ripple Current Multipliers</b>	<b>Frequency (Hz)</b>					<b>Temperature (°C)</b>					
	50	120	300	1K	10K	105°C	85°C	70°C	60°C	40°C	
	.75	1.0	1.35	1.55	2.0	1.0	1.65	1.78	2.1	2.4	

## STANDARD PART LISTING

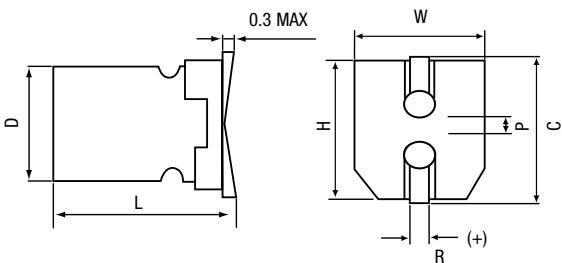
Capacitance (μF)	WVDC	IC PART NUMBER	Maximum E.S.R. Ω 120Hz, +20°C	Maximum RMS Ripple Current (mA) at 120 Hz, +105°C	Dimensions DxL (mm)
0.1	50	104NCN050M	2984.155	1.3	4x5.3
0.22	50	224NCN050M	1356.434	2.3	4x5.3
0.33	50	334NCN050M	904.289	2.8	4x5.3
0.47	50	474NCN050M	634.927	4	4x5.3
1	50	105NCN050M	298.416	8.4	4x5.3
2.2	35	225NCN035M	113.036	8.4	4x5.3
2.2	50	225NCN050M	135.643	13	5x5.3
3.3	50	335NCN050M	90.429	17	5x5.3
4.7	16	475NCN016M	59.965	12	4x5.3

Capacitance (μF)	WVDC	IC PART NUMBER	Maximum E.S.R. Ω 120Hz, +20°C	Maximum RMS Ripple Current (mA) at 120 Hz, +105°C	Dimensions DxL (mm)
4.7	35	475NCN035N	52.911	18	5x5.3
4.7	50	475NCN050M	63.493	20	6.3x5.3
10	16	106NCN016M	28.184	23	5x5.3
10	35	106NCN035M	24.87	29	6.3x5.3
22	6.3	226NCN6R3M	18.086	28	5x5.3
22	16	226NCN016M	12.81	37	6.3x5.3
33	16	336NCN016M	8.541	49	6.3x5.3
47	6.3	476NCN6R3M	8.466	45	6.3x5.3

## PHYSICAL DIMENSIONS

WVDC (V) / (μF)	6.3 (7.9)	16 (20)	25 (32)	35 (44)	50 (63)
0.1					4x5.3
0.22					4x5.3
0.33					4x5.3
0.47					4x5.3
1					4x5.3
2.2				4x5.3	5x5.3
3.3					5x5.3
4.7		4x5.3		5x5.3	6.3x5.3
10		5x5.3		6.3x5.3	
22	5x5.3	6.3x5.3			
33		6.3x5.3			
47	6.3x5.3				

D x L (mm)



D±0.5 MAX	L±0.2	C±0.2	H±0.2	W±0.2	P±0.2	R
4	5.3	4.8	4.3	4.3	1.0	0.5~0.8
5	5.3	6	5.3	5.3	1.4	0.5~0.8
6.3	5.3	7.1	6.6	6.6	2.2	0.5~0.8

(mm)