

Type NLW, 105 °C, Miniature Computer Grade, Axial Leaded

105 °C, Miniature Computer Grade



Designed for industrial applications requiring resistance to vibration and extended operating temperatures, Type NLW combines low DCL and ESR to provide superior performance.

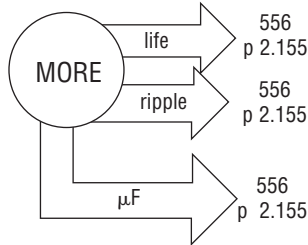
Highlights

- w Rugged Construction
- w Extended Life
- w Low DCL and ESR
- w Extended Temperature
- w Subminiature, high capacitance, low cost

Specifications

- Operating Temperature:** -40 °C to +105 °C
Rated Voltage: 6.3 to 150 Vdc
Capacitance: 1 μF to 400 μF
Capacitance Tolerance: -10 +75%
Leakage Current: <25 Vdc $0.1\sqrt{CV} + 2 \mu A$
 ≥ 25 Vdc $0.2\sqrt{CV} + 2 \mu A$
Ripple Current Multipliers: **Ambient Temperature**

45 °C	55 °C	65 °C	75 °C	85 °C	95 °C	105 °C
1.61	1.48	1.34	1.18	1.00	0.77	0.45



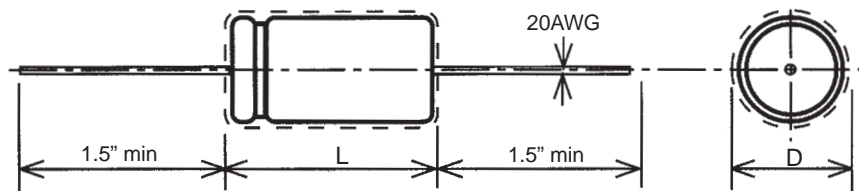
Frequency

	50 Hz	60 Hz	120 Hz	360 Hz	1 kHz	5 kHz	10 kHz & up
0-60 Vdc	0.85	1.00	1.10	1.15	1.15	1.15	1.15
61-150 Vdc	0.83	1.00	1.15	1.20	1.20	1.20	1.20

Aluminum Axial Leaded Capacitors

- Load Life:** 1,000 h @ +105 °C
 Δ Capacitance $\pm 20\%$
 ESR 200% of limit
 DCL 200% of limit
- Shelf Life:** 1,000 h at 105 °C
 Δ Capacitance $\pm 20\%$, ESR 200% of limit, DCL 200% of limit
- Vibration:** 10 to 55 Hz; 0.06" and 10 g max, 2 h in each plane

Outline Drawings



Type NLW, 105 °C, Miniature Computer Grade, Axial Leaded

Part Numbering System



PVC sleeve and $-10 + 75\%$ tolerance

For epoxy add the following to length
 can { 0.197 - 0.315 \leftrightarrow 0.0512 } L
 dia. { 0.394 - 0.512 \leftrightarrow 0.0630 } (in)
 (in) { 0.630 - 0.709 \leftrightarrow 0.0709 }

Ratings

Cap. μ F	Catalog Number	ESR Max. Ω 120 Hz	Ripple A @ 85 °C 120 Hz	Nominal Size (in) D x L
6.3 Vdc (8 Vdc Surge)				
200	NLW200-6	2.0	0.25	0.40 x 0.88
12 Vdc (14 Vdc Surge)				
15	NLW15-12	17.7	0.056	0.28 x 0.57
100	NLW100-12	3.3	0.150	0.32 x 0.81
200	NLW200-12	1.7	0.270	0.40 x 0.94
250	NLW250-12	1.3	0.290	0.40 x 0.94
16 Vdc (20 Vdc Surge)				
10	NLW10-16	26.5	0.047	0.28 x 0.57
15	NLW15-16	17.7	0.056	0.28 x 0.57
20	NLW20-16	16.6	0.062	0.28 x 0.57
25	NLW25-16	13.3	0.072	0.28 x 0.69
30	NLW30-16	11.1	0.078	0.28 x 0.69
50	NLW50-16	6.7	0.108	0.32 x 0.76
75	NLW75-16	4.5	0.136	0.34 x 0.81
100	NLW100-16	3.3	0.150	0.34 x 0.81
150	NLW150-16	2.2	0.225	0.40 x 0.88
200	NLW200-16	1.7	0.270	0.40 x 0.94
250	NLW250-16	1.3	0.310	0.40 x 1.06
300	NLW300-16	1.1	0.370	0.40 x 1.32
400	NLW400-16	0.83	0.470	0.40 x 1.57
25 Vdc (30 Vdc Surge)				
1	NLW1-25	200.0	0.020	0.28 x 0.57
2	NLW2-25	100.0	0.026	0.28 x 0.57
3	NLW3-25	67.0	0.030	0.28 x 0.57
4	NLW4-25	50.0	0.034	0.28 x 0.57
5	NLW5-25	40.0	0.037	0.28 x 0.57
10	NLW10-25	26.5	0.047	0.28 x 0.57
15	NLW15-25	17.7	0.056	0.28 x 0.57
20	NLW20-25	13.3	0.063	0.28 x 0.57
25	NLW25-25	10.6	0.082	0.32 x 0.69
35	NLW35-25	7.6	0.094	0.34 x 0.76
40	NLW40-25	6.7	0.098	0.34 x 0.76
50	NLW50-25	5.3	0.115	0.34 x 0.81
75	NLW75-25	3.6	0.175	0.40 x 0.88
100	NLW100-25	2.7	0.195	0.40 x 0.88
150	NLW150-25	1.8	0.260	0.40 x 1.06
200	NLW200-25	1.3	0.320	0.40 x 1.06
250	NLW250-25	1.06	0.400	0.40 x 1.57
300	NLW300-25	0.88	0.420	0.40 x 1.57

Cap. μ F	Catalog Number	ESR Max. Ω 120 Hz	Ripple A @ 85 °C 120 Hz	Nominal Size (in) D x L
50 Vdc (65 Vdc Surge)				
1	NLW1-50	200.0	0.020	0.28 x 0.57
2	NLW2-50	100.0	0.026	0.28 x 0.57
3	NLW3-50	67.0	0.030	0.28 x 0.57
4	NLW4-50	50.0	0.034	0.28 x 0.57
5	NLW5-50	40.0	0.037	0.28 x 0.57
6	NLW6-50	33.0	0.039	0.28 x 0.57
8	NLW8-50	25.0	0.046	0.28 x 0.69
10	NLW10-50	20.0	0.052	0.28 x 0.69
15	NLW15-50	13.5	0.068	0.32 x 0.69
20	NLW20-50	10.0	0.076	0.32 x 0.76
25	NLW25-50	8.0	0.090	0.34 x 0.81
30	NLW30-50	6.6	0.115	0.40 x 0.76
35	NLW35-50	5.7	0.130	0.40 x 0.88
40	NLW40-50	5.0	0.138	0.40 x 0.88
50	NLW50-50	4.0	0.160	0.40 x 0.94
75	NLW75-50	2.7	0.200	0.40 x 1.06
100	NLW100-50	2.0	0.250	0.40 x 1.32
125	NLW125-50	1.6	0.310	0.40 x 1.57
100 Vdc (125 Vdc Surge)				
2	NLW2-100	100.0	0.020	0.28 x 0.57
10	NLW10-100	20.0	0.082	0.40 x 0.88
15	NLW15-100	13.5	0.104	0.40 x 0.94
20	NLW20-100	10.0	0.122	0.40 x 1.06
25	NLW25-100	8.0	0.133	0.40 x 1.06
150 Vdc (180 Vdc Surge)				
1	NLW1-150	200.0	0.020	0.28 x 0.57
2	NLW2-150	100.0	0.028	0.28 x 0.57
3	NLW3-150	67.0	0.038	0.32 x 0.76
5	NLW5-150	40.0	0.049	0.34 x 0.88
10	NLW10-150	20.0	0.088	0.40 x 0.94
12	NLW12-150	17.0	0.100	0.40 x 1.06

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