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

105 °C Computer Grade



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

Highlights

- Low DCL and ESR
- Extended temperature
- Subminiature, high capacitance, low cost
- Extended Life

Specifications

Temperature Range	–40 °C to +105 °C
Rated Voltage Range	6.3 to 150 Vdc
Capacitance Range	1.0 to 400 µF
Capacitance Tolerance	–10 +75%
Leakage Current	<25 Vdc 0.1 √CV +2 µA ≥25 Vdc 0.2 √CV +2 µA
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

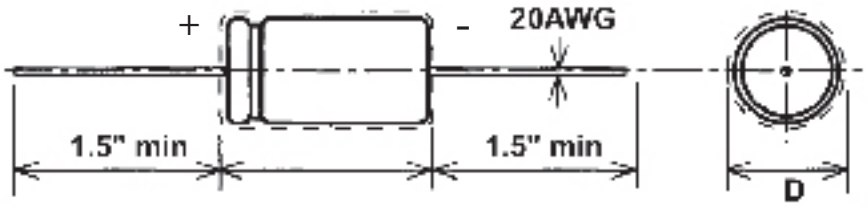
Frequency	50 Hz	60 Hz	120 Hz	360 Hz	1 kHz	5 kHz	10 kHz+
0 - 60 Vdc	0.85	1.00	1.10	1.15	1.15	1.15	1.15
61 - 150 Vdc	0.83	1.00	1.15	1.20	1.20	1.20	1.20

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

Regulatory Information

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Outline Drawing



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Part Numbering System

NLW	200	6	E
Type	Capacitance	Voltage	Options
NLW	**1** = 1 µF **10** = 10 µF **200** = 200 µF	**6** = 6.3 Vdc **16** = 16 Vdc **100** = 100 Vdc	**E** = Epoxy end seal **Blank** = No epoxy For epoxy add the following to length

Can Dia Inches	+ Length Inches
0.197 - 0.315	+ 0.0512
0.394 - 0.512	+ 0.0630
0.630 - 0.709	+ 0.0709

Ratings

Cap (µF)	Catalog Part Number	ESR Max 120 Hz (Ω)	Ripple Current @ 85 °C 120 Hz (A)	Nominal Size D x L (Inches)
6.3 Vdc (8 Vdc Surge)				
200	NLW200-6	2	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	26.50	0.047	0.28 x 0.57
15	NLW15-16	17.70	0.056	0.28 x 0.57
20	NLW20-16	16.60	0.062	0.28 x 0.57
25	NLW25-16	13.30	0.072	0.28 x 0.69
30	NLW30-16	11.10	0.078	0.28 x 0.69
50	NLW50-16	6.70	0.108	0.32 x 0.76
75	NLW75-16	4.50	0.136	0.34 x 0.81
100	NLW100-16	3.30	0.150	0.34 x 0.81
150	NLW150-16	2.20	0.225	0.40 x 0.88
200	NLW200-16	1.70	0.270	0.40 x 0.94
250	NLW250-16	1.30	0.310	0.40 x 1.06
300	NLW300-16	1.10	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	200.00	0.020	0.28 x 0.57
2	NLW2-25	100.00	0.026	0.28 x 0.57
3	NLW3-25	67.00	0.030	0.28 x 0.57
4	NLW4-25	50.00	0.034	0.28 x 0.57
5	NLW5-25	40.00	0.037	0.28 x 0.57
10	NLW10-25	26.50	0.047	0.28 x 0.57
15	NLW15-25	17.70	0.056	0.28 x 0.57
20	NLW20-25	13.30	0.063	0.28 x 0.57
25	NLW25-25	10.60	0.082	0.32 x 0.69
35	NLW35-25	7.60	0.094	0.34 x 0.76
40	NLW40-25	6.70	0.098	0.34 x 0.76
50	NLW50-25	5.30	0.115	0.34 x 0.81
75	NLW75-25	3.60	0.175	0.40 x 0.88

Cap (µF)	Catalog Part Number	ESR Max 120 Hz (Ω)	Ripple Current @ 85 °C 120 Hz (A)	Nominal Size D x L (Inches)
25 Vdc (30 Vdc Surge)				
100	NLW100-25	2.70	0.195	0.40 x 0.88
150	NLW150-25	1.80	0.260	0.40 x 1.06
200	NLW200-25	1.30	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
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	0.020	0.28 x 0.57
2	NLW2-150	100	0.028	0.28 x 0.57
3	NLW3-150	67	0.038	0.32 x 0.76
5	NLW5-150	40	0.049	0.34 x 0.88
10	NLW10-150	20	0.088	0.40 x 0.94
12	NLW12-150	17	0.100	0.40 x 1.06

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