Type NLW 105 ºC, Miniature Computer Grade, Axial Leaded

105 ºComputer 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

Capacitance Range: 1.0 to 400 µF
Voltage Range: 6.3 to 150 Vdc
Capacitance Tolerance: –10 +75%
Operating Temperature Range: –40 ºC to +105 ºC
Leakage Current: <25 Vdc 0.1 $\sqrt{CV}$ +2 µA
≥25 Vdc 0.2 $\sqrt{CV}$ +2 µA

Ripple Current Multipliers:

Ambient Temperature

45 ºC	55 ºC	65 ºC	75 ºC	85 ºC	95 ºC	105 ºC
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

RoHS Compliant

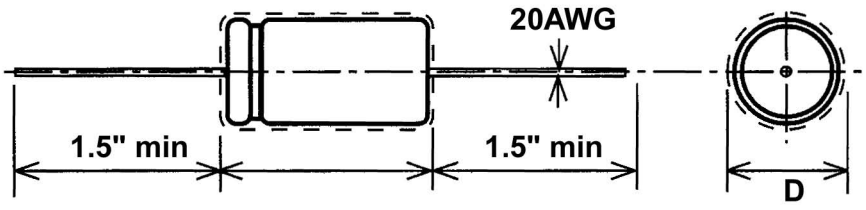
Complies with the EU Directive 2002/95/EC requirement restricting the use of Lead (Pb), Mercury (Hg), Cadmium (Cd), Hexavalent chromium (Cr(VI)), PolyBrominated Biphenyls (PBB) and PolyBrominated Diphenyl Ethers (PBDE).

Load Life: 1,000 h @ +105 ºC
Δ Capacitance ±20%
Δ ESR 200% of limit
Δ DCL 200% of limit

Shelf Life: 1,000 h @ +105 ºC
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

Outline Drawing



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

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