

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

105 °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

RoHS Compliant

Specifications

Capacitance Range:	1.0 to 400 μ F
Voltage Range:	6.3 to 150 Vdc
Capacitance Tolerance:	-10 +75%
Operating Temperature Range:	-40 °C to +105 °C
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

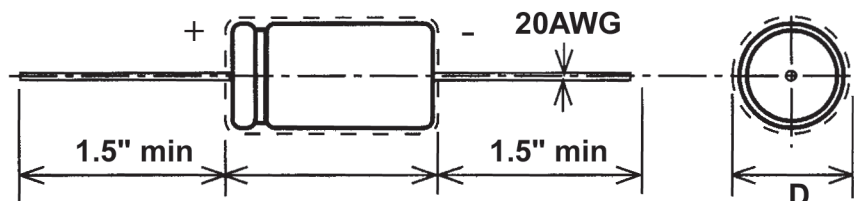
Frequency	50 Hz	60 Hz	120 Hz	360 Hz	1 kHz	5 kHz	10 kHz+
0 - 60 Vdc	0.85	1.00	1.10	1.15	1.15	1.15	1.15
61 - 150 Vdc	0.83	1.00	1.15	1.20	1.20	1.20	1.20

Load Life: 1,000 h @ +105 °C
 Δ Capacitance $\pm 20\%$
 Δ ESR 200% of limit
 Δ DCL 200% of limit

Shelf Life: 1,000 h @ +105 °C
 Δ Capacitance $\pm 20\%$
 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
|
Type
|
NLW

200
|
Capacitance
|
1 = 1 µF
10 = 10 µF
200 = 200 µF

6
|
Voltage
|
6 = 6.3 Vdc
16 = 16 Vdc
100 = 100 Vdc

E
|
Options
|
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

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

Notice and Disclaimer: All product drawings, descriptions, specifications, statements, information and data (collectively, the "Information") in this datasheet or other publication are subject to change. The customer is responsible for checking, confirming and verifying the extent to which the Information contained in this datasheet or other publication is applicable to an order at the time the order is placed. All Information given herein is believed to be accurate and reliable, but it is presented without any guarantee, warranty, representation or responsibility of any kind, expressed or implied. Statements of suitability for certain applications are based on the knowledge that the Cornell Dubilier company providing such statements ("Cornell Dubilier") has of operating conditions that such Cornell Dubilier company regards as typical for such applications, but are not intended to constitute any guarantee, warranty or representation regarding any such matter – and Cornell Dubilier specifically and expressly disclaims any guarantee, warranty or representation concerning the suitability for a specific customer application, use, storage, transportation, or operating environment. The Information is intended for use only by customers who have the requisite experience and capability to determine the correct products for their application. Any technical advice inferred from this Information or otherwise provided by Cornell Dubilier with reference to the use of any Cornell Dubilier products is given gratis (unless otherwise specified by Cornell Dubilier), and Cornell Dubilier assumes no obligation or liability for the advice given or results obtained. Although Cornell Dubilier strives to apply the most stringent quality and safety standards regarding the design and manufacturing of its products, in light of the current state of the art, isolated component failures may still occur. Accordingly, customer applications which require a high degree of reliability or safety should employ suitable designs or other safeguards (such as installation of protective circuitry or redundancies or other appropriate protective measures) in order to ensure that the failure of an electrical component does not result in a risk of personal injury or property damage. Although all product-related warnings, cautions and notes must be observed, the customer should not assume that all safety measures are indicated in such warnings, cautions and notes, or that other safety measures may not be required.