Type LPW 85 ºC Snap-In Aluminum Electrolytic Capacitors

Low Voltage, High Value Capacitors





Type LPW radial leaded snap-in aluminum electrolytic capacitors are a compact design for high density packaging and is ideal for low voltage, general purpose input filtering applications.

Highlights

- Low voltage
- High Capacitance
- 85 ºC
- Good for input filtering in consumer applications
- 22 to 35 mm diameter with 10 mm lead spacing

Specifications

Capacitance Range: 820 to 22,000 µF

Voltage Range: 10 to 100 Vdc

Capacitance tolerance: ±20%

Operating Temperature Range: –40 ºC to +85 ºC

Dissipation Factor

DF at 120 Hz, +25 ºC				
Vdc	10 -16	25 - 35	50 - 63	100
DF %	30	25	20	15

For values that are >1000 µF, the DF (%) increases 2% for every additional 1000 µF

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).

DC Leakage Test: I ≤.03CV ir 3 mA

C = capacitance in µF

V = rated voltage

I = leakage current in µA

Frequency Ripple Multipliers:

Rated Vdc	Ripple Multipliers				
	60 Hz	120 Hz	1 kHz	10 kHz	100 kHz
10 to 35	0.90	1.00	1.05	1.10	1.10
50 to 100	0.90	1.00	1.15	1.20	1.20

Temperature Ripple Multipliers:

Temperature	Ripple Multiplier
+70 ºC	1.20
+60 ºC	1.30
+45 ºC	1.55

Part Numbering System

LPW	332	M	1J	Q	25	V-W
Type	Cap	Tolerance	Voltage	Case Diameter Code	Case Length	Case Type & Terminals
LPW	821 = 820 µF 332 = 3300 µF 103 = 10,000 µF	±20%	1A = 10 Vdc, 1C = 16 Vdc, 1E = 25 Vdc, 1V = 35 Vdc, 1H = 50 Vdc, 1J = 63 Vdc, 2A = 100 Vdc	N = 22 mm O = 25 mm P = 30 mm Q = 35 mm	25 = 25 mm	V = Vented Case — = Dash W = Snap-In

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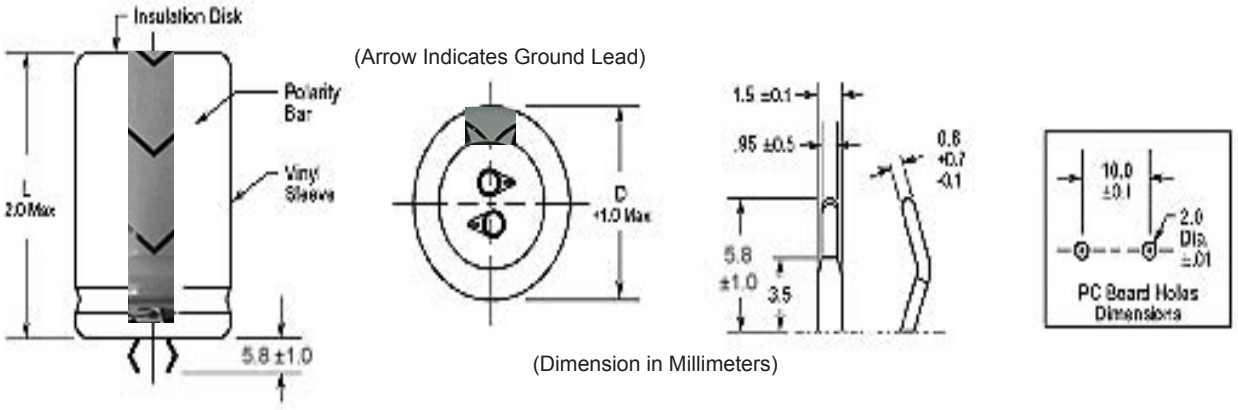
Outline Drawing



(Dimension in Millimeters)

Ratings

Cap (µF)	Catalog Part Number	Max ESR @ 120 Hz +25 ºC (Ω)	Max Ripple @ 120 Hz +85 ºC (A)	Size (Inches) D	Size (Inches) L	Size (mm) D	Size (mm) L
10 Vdc; 13 Vdc Surge							
8,200	LPW822M1AN25V-W	0.101	2.39	0.866	0.984	22	25
8,200	LPW822M1AO25V-W	0.101	2.46	0.984	0.984	25	25
10,000	LPW103M1AN30V-W	0.083	2.69	0.866	1.181	22	30
10,000	LPW103M1AO25V-W	0.083	2.57	0.984	0.984	25	25
12,000	LPW123M1AN30V-W	0.083	2.81	0.866	1.181	22	30
12,000	LPW123M1AP25V-W	0.083	2.84	1.181	0.984	30	25
15,000	LPW153M1AN35V-W	0.066	3.14	0.866	1.378	22	35
15,000	LPW153M1AP25V-W	0.066	2.97	1.181	0.984	30	25
22,000	LPW223M1AN45V-W	0.045	3.79	0.866	1.772	22	45
22,000	LPW223M1AP30V-W	0.045	3.45	1.181	1.181	30	30
16 Vdc; 20 Vdc Surge							
4,700	LPW472M1CN25V-W	0.141	1.81	0.866	0.984	22	25
4,700	LPW472M1CO25V-W	0.141	2.21	0.984	0.984	25	25
6,800	LPW682M1CN25V-W	0.122	2.40	0.866	0.984	22	25
6,800	LPW682M1CO25V-W	0.122	2.47	0.984	0.984	25	25
8,200	LPW822M1CN30V-W	0.101	2.70	0.866	1.181	22	30
8,200	LPW822M1CP25V-W	0.101	2.73	1.181	0.984	30	25
10,000	LPW103M1CN35V-W	0.083	3.00	0.866	1.378	22	35
10,000	LPW103M1CP25V-W	0.083	2.84	1.181	0.984	30	25
12,000	LPW123M1CN40V-W	0.069	3.30	0.866	1.575	22	40
12,000	LPW123M1CP30V-W	0.069	3.16	1.181	1.181	30	30
15,000	LPW153M1CN45V-W	0.055	3.62	0.866	1.772	22	45
15,000	LPW153M1CQ25V-W	0.055	3.55	1.378	0.984	35	25
22,000	LPW223M1CO45V-W	0.038	4.25	0.984	1.772	25	45
22,000	LPW223M1CQ30V-W	0.038	4.37	1.378	1.181	35	30
25 Vdc; 32 Vdc Surge							
3,300	LPW332M1EN25V-W	0.176	2.03	0.866	0.984	22	25
3,300	LPW332M1EO25V-W	0.176	2.09	0.984	0.984	25	25
4,700	LPW472M1EN30V-W	0.159	2.49	0.866	1.181	22	30
4,700	LPW472M1EO25V-W	0.159	2.31	0.984	0.984	25	25
6,800	LPW682M1EN35V-W	0.110	2.87	0.866	1.378	22	35

Cap (µF)	Catalog Part Number	Max ESR @ 120 Hz +25 ºC (Ω)	Max Ripple @ 120 Hz +85 ºC (A)	Size (Inches) D	Size (Inches) L	Size (mm) D	Size (mm) L
25 Vdc; 32 Vdc Surge							
6,800	LPW682M1EP25V-W	0.110	2.72	1.181	0.984	30	25
8,200	LPW822M1EN40V-W	0.091	3.16	0.866	1.575	22	40
8,200	LPW822M1EP30V-W	0.091	3.03	1.181	1.181	30	30
10,000	LPW103M1EN45V-W	0.075	3.45	0.866	1.772	22	45
10,000	LPW103M1EP30V-W	0.075	3.14	1.181	1.181	30	30
12,000	LPW123M1EN50V-W	0.062	3.74	0.866	1.969	22	50
12,000	LPW123M1EQ30V-W	0.062	3.75	1.378	1.181	35	30
15,000	LPW153M1EO45V-W	0.050	3.78	0.984	1.772	25	45
15,000	LPW153M1EQ30V-W	0.050	3.89	1.378	1.181	35	30
22,000	LPW223M1EP50V-W	0.034	4.94	1.181	1.969	30	50
35 Vdc; 44 Vdc Surge							
3,300	LPW332M1VN25V-W	0.176	2.04	0.866	0.984	22	25
3,300	LPW332M1VO25V-W	0.176	2.10	0.984	0.984	25	25
4,700	LPW472M1VN30V-W	0.123	2.41	0.866	1.181	22	30
4,700	LPW472M1VP25V-W	0.123	2.44	1.181	0.984	30	25
6,800	LPW682M1VN40V-W	0.085	2.98	0.866	1.575	22	40
6,800	LPW682M1VP30V-W	0.085	2.86	1.181	1.181	30	30
8,200	LPW822M1VN45V-W	0.071	3.25	0.866	1.772	22	45
8,200	LPW822M1VQ30V-W	0.071	3.42	1.378	1.181	35	30
10,000	LPW103M1VO45V-W	0.058	3.41	0.984	1.772	25	45
10,000	LPW103M1VQ30V-W	0.058	3.51	1.378	1.181	35	30
12,000	LPW123M1VO50V-W	0.048	3.68	0.984	1.969	25	50
12,000	LPW123M1VQ35V-W	0.048	3.84	1.378	1.378	35	35
15,000	LPW153M1VP45V-W	0.039	4.08	1.181	1.772	30	45
50 Vdc; 63 Vdc Surge							
2,200	LPW222M1HN25V-W	0.226	1.92	0.866	0.984	22	25
2,200	LPW222M1HO25V-W	0.226	1.98	0.984	0.984	25	25
3,300	LPW332M1HN35V-W	0.151	2.51	0.866	1.378	22	35
3,300	LPW332M1HP25V-W	0.151	2.38	1.181	0.984	30	25
4,700	LPW472M1HN40V-W	0.106	2.89	0.866	1.575	22	40
4,700	LPW472M1HQ25V-W	0.106	2.99	1.378	0.984	35	25

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Cap (µF)	Catalog Part Number	Max ESR @ 120 Hz +25 ºC (Ω)	Max Ripple @ 120 Hz +85 ºC (A)	Size (Inches)		Size (mm)	
				D	L	D	L
50 Vdc; 63 Vdc Surge							
6,800	LPW682M1HO45V-W	.073	3.37	0.984	1.772	25	45
6,800	LPW682M1HQ30V-W	0.073	3.46	1.378	1.181	35	30
8,200	LPW822M1HO50V-W	0.061	3.62	0.984	1.969	25	50
8,200	LPW822M1HQ35V-W	0.061	3.79	1.378	1.378	35	35
10,000	LPW103M1HP45V-W	0.050	3.72	1.181	1.772	30	45
63 Vdc; 79 Vdc Surge							
1,000	LPW102M1JN25V-W	0.414	1.42	0.866	0.984	22	25
1,000	LPW102M1JO25V-W	0.414	1.46	0.984	0.984	25	25
1,500	LPW152M1JN25V-W	0.276	1.74	0.866	0.984	22	25
1,500	LPW152M1JP25V-W	0.276	1.81	1.181	0.984	30	25
2,200	LPW222M1JN30V-W	0.226	2.08	0.866	1.181	22	30
2,200	LPW222M1JP25V-W	0.226	2.10	1.181	0.984	30	25
3,300	LPW332M1JN45V-W	0.151	2.81	0.866	1.772	22	45
3,300	LPW332M1JQ25V-W	0.151	2.76	1.378	0.984	35	25
4,700	LPW472M1JO45V-W	0.106	3.11	0.984	1.772	25	45
4,700	LPW472M1JQ30V-W	0.106	3.20	1.378	1.181	35	30
6,800	LPW682M1JP45V-W	0.073	3.54	1.181	1.772	30	45

Cap (µF)	Catalog Part Number	Max ESR @ 120 Hz +25 ºC (Ω)	Max Ripple @ 120 Hz +85 ºC (A)	Size (Inches)		Size (mm)	
				D	L	D	L
100 Vdc; 125 Vdc Surge							
820	LPW821M2AN30V-W	0.404	1.55	0.866	1.181	22	30
820	LPW821M2AO25V-W	0.404	1.54	0.984	0.984	25	25
1,000	LPW102M2AN30V-W	0.332	1.71	0.866	1.181	22	30
1,000	LPW102M2AP25V-W	0.332	2.20	1.181	0.984	30	25
1,500	LPW152M2AN40V-W	0.276	2.38	0.866	1.575	22	40
1,500	LPW152M2AQ30V-W	0.276	2.54	1.378	1.181	35	30
2,200	LPW222M2AO45V-W	0.188	2.77	0.984	1.772	25	45
2,200	LPW222M2AQ30V-W	0.188	3.07	1.378	1.181	35	30
3,300	LPW332M2AP45V-W	0.126	3.27	1.181	1.772	30	45