Type LPX 85 °C Radial Snap-In Aluminum Electrolytic Capacitors

High Voltage, High Value Radial Leaded Snap-In

Type LPX radial leaded snap-in aluminum electrolytic capacitors are a compact design for high density packaging and are ideal for high voltage, switch mode power supply input filtering applications.

Highlights

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

Specifications

Capacitance Range	56 to 2,700 µF
Capacitance Tolerance	±20%
Rated Voltage	160 to 450 Vdc
Operating Temperature Range	–40 °C to +85 °C
DC Leakage Test	I = 3√CV C = capacitance in µF V = rated voltage I = leakage current in µA
Dissipation Factor	**DF at 120 Hz, +25 °C** **Vdc**: 160 -250 | 400 - 450 **DF (%)**: 30 | 25 For values that are >1000 µF, the DF (%) increases 2% for every additional 1000 µF
Temperature Ripple Multipliers	**Temperature** / **Ripple Multiplier** +75 °C: 1.60 +65 °C: 2.20 +55 °C: 2.60 +55 °C: 3.00
Frequency Ripple Multipliers	**Rated Vdc** / **Ripple Multipliers**: 120 Hz | 1 kHz | 10 to 50 kHz 160 to 250: 1.00 | 1.05 | 1.10 315 to 450: 1.00 | 1.15 | 1.20
	RoHS Compliant

Part Numbering System

LPX	471	M	160	C1	P	3
Type	Cap	Tolerance	Voltage	Case Code	Polarity	Insulating Sleeve
LPX	471 = 470 µF 272 = 2,700 µF	±20%	160 = 160		P	3 = PVC or PET (PET for all date codes after October 2017)

Diameter	Length					
mm	25	30	35	40	45	50
(in.)	(1.00)	(1.18)	(1.38)	(1.57)	(1.77)	(2.00)
22 (.87)	A1	A3	A5	A7	A4	A9
25 (1.00)	C1	C3	C5	C7	C4	C9
30 (1.18)	E1	E3	E5	E7	E4	E9
35 (1.38)	H1	H3	H5	H7	H4	H9

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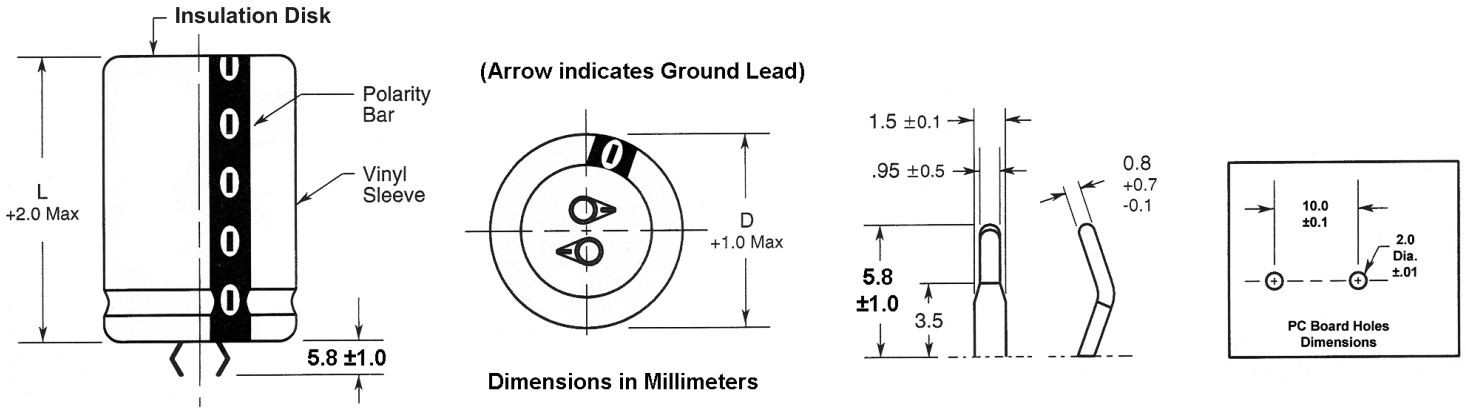
Outline Drawing



Ratings

Cap (µF)	Catalog Part Number	Max ESR @ 120 Hz +25 °C (Ω)	Max Ripple @ 120 Hz +85 °C (A)	Size (Inches) D	Size (Inches) L	Size (mm) D	Size (mm) L
160 Vdc; 200 Vdc Surge							
390	LPX391M160A1P3	0.51	1.3	0.866	0.984	22	25
470	LPX471M160C1P3	0.423	1.6	0.984	0.984	25	25
470	LPX471M160A3P3	0.423	1.6	0.866	1.181	22	30
560	LPX561M160C3P3	0.355	1.8	0.984	1.181	25	30
560	LPX561M160A5P3	0.355	1.8	0.866	1.378	22	35
680	LPX681M160E1P3	0.293	2.0	1.181	0.984	30	25
680	LPX681M160A7P3	0.293	2.1	0.866	1.575	22	40
680	LPX681M160C3P3	0.293	2.0	0.984	1.181	25	30
820	LPX821M160C5P3	0.243	2.0	0.984	1.378	25	35
820	LPX821M160E3P3	0.243	2.3	1.181	1.181	30	30
820	LPX821M160A4P3	0.243	2.4	0.866	1.772	22	45
1,000	LPX102M160C7P3	0.199	2.6	0.984	1.575	25	40
1,000	LPX102M160H1P3	0.199	2.3	1.378	0.984	35	25
1,000	LPX102M160E3P3	0.199	2.5	1.181	1.181	30	30
1,200	LPX122M160C4P3	0.166	3.0	0.984	1.772	25	45
1,200	LPX122M160H3P3	0.166	2.6	1.378	1.181	35	30
1,200	LPX122M160E5P3	0.166	2.9	1.181	1.378	30	35
1,500	LPX152M160H5P3	0.133	3.3	1.378	1.378	35	35
1,500	LPX152M160E7P3	0.133	3.3	1.181	1.575	30	40
1,800	LPX182M160E9P3	0.111	4.0	1.181	1.969	30	50
1,800	LPX182M160H7P3	0.111	3.7	1.378	1.575	35	40
2,200	LPX222M160H4P3	0.090	4.2	1.378	1.772	35	45
2,700	LPX272M160H9P3	0.074	4.6	1.378	1.969	35	50
200 Vdc; 250 Vdc Surge							
270	LPX271M200A1P3	0.737	1.2	0.866	0.984	22	25
390	LPX391M200C1P3	0.510	1.6	0.984	0.984	25	25
390	LPX391M200A3P3	0.510	1.6	0.866	1.181	22	30
470	LPX471M200C3P3	0.423	1.8	0.984	1.181	25	30
470	LPX471M200A5P3	0.423	1.8	0.866	1.378	22	35
560	LPX561M200A7P3	0.355	2.1	0.866	1.575	22	40
560	LPX561M200C5P3	0.355	2.1	0.984	1.378	25	35
560	LPX561M200E1P3	0.355	1.9	1.181	0.984	30	25

Cap (µF)	Catalog Part Number	Max ESR @ 120 Hz +25 °C (Ω)	Max Ripple @ 120 Hz +85 °C (A)	Size (Inches) D	Size (Inches) L	Size (mm) D	Size (mm) L
200 Vdc; 250 Vdc Surge							
680	LPX681M200C7P3	0.293	2.5	0.984	1.575	25	40
680	LPX681M200A4P3	0.293	2.4	0.866	1.772	22	45
680	LPX681M200E3P3	0.293	2.3	1.181	1.181	30	30
820	LPX821M200E5P3	0.243	2.7	1.181	1.378	30	35
820	LPX821M200H3P3	0.243	2.7	1.378	1.181	35	30
820	LPX821M200C4P3	0.243	2.8	0.984	1.772	25	45
1,000	LPX102M200H3P3	0.199	2.7	1.378	1.181	35	30
1,000	LPX102M200E7P3	0.199	3.1	1.181	1.575	30	40
1,200	LPX122M200H5P3	0.166	3.1	1.378	1.378	35	35
1,200	LPX122M200E4P3	0.166	3.5	1.181	1.772	30	45
1,500	LPX152M200E9P3	0.133	4	1.181	1.969	30	50
1,500	LPX152M200H7P3	0.133	3.6	1.378	1.575	35	40
1,800	LPX182M200H4P3	0.111	4	1.378	1.772	35	45
2,200	LPX222M200H9P3	0.09	4.5	1.378	1.969	35	50
250 Vdc; 300 Vdc Surge							
270	LPX271M250A3P3	0.737	1.4	0.866	1.181	22	30
270	LPX271M250C1P3	0.737	1.4	0.984	0.984	25	25
330	LPX331M250C3P3	0.603	1.7	0.984	1.181	25	30
330	LPX331M250A5P3	0.603	1.7	0.866	1.378	22	35
390	LPX391M250E1P3	0.51	1.8	1.181	0.984	30	25
390	LPX391M250A7P3	0.51	1.9	0.866	1.575	22	40
390	LPX391M250C3P3	0.51	1.8	0.984	1.181	25	30
470	LPX471M250A4P3	0.423	2.2	0.866	1.772	22	45
470	LPX471M250C5P3	0.423	2.1	0.984	1.378	25	35
470	LPX471M250E3P3	0.423	2.1	1.181	1.181	30	30
560	LPX561M250A9P3	0.355	2.5	0.866	1.969	22	50
560	LPX561M250H1P3	0.355	2.1	1.378	0.984	35	25
560	LPX561M250E3P3	0.355	2.2	1.181	1.181	30	30
560	LPX561M250C7P3	0.355	2.4	0.984	1.575	25	40
680	LPX681M250H3P3	0.293	2.5	1.378	1.181	35	30
680	LPX681M250C4P3	0.293	2.7	0.984	1.772	25	45
680	LPX681M250E5P3	0.293	2.6	1.181	1.378	30	35

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Cap (µF)	Catalog Part Number	Max ESR @ 120 Hz +25 °C (Ω)	Max Ripple @ 120 Hz +85 °C (A)	Size (Inches) D	Size (Inches) L	Size (mm) D	Size (mm) L
250 Vdc; 300 Vdc Surge							
820	LPX821M250H5P3	0.243	3.0	1.378	1.378	35	35
820	LPX821M250E7P3	0.243	3.0	1.181	1.575	30	40
1,000	LPX102M250H7P3	0.199	3.4	1.378	1.575	35	40
1,000	LPX102M250E4P3	0.199	3.4	1.181	1.772	30	45
1,200	LPX122M250H4P3	0.166	3.8	1.378	1.772	35	45
1,500	LPX152M250H9P3	0.133	4.2	1.378	1.969	35	50
350 Vdc; 400 Vdc Surge							
100	LPX101M350A1P3	1.989	0.6	0.866	0.984	22	25
120	LPX121M350C1P3	1.658	0.7	0.984	0.984	25	25
120	LPX121M350A3P3	1.658	0.7	0.866	1.181	22	30
150	LPX151M350C3P3	1.326	0.8	0.984	1.181	25	30
150	LPX151M350A5P3	1.326	0.8	0.866	1.378	22	35
180	LPX181M350A7P3	1.105	0.9	0.866	1.575	22	40
180	LPX181M350C3P3	1.105	0.9	0.984	1.181	25	30
180	LPX181M350E1P3	1.105	1.0	1.181	0.984	30	25
220	LPX221M350A4P3	0.904	1.1	0.866	1.772	22	45
220	LPX221M350E3P3	0.904	1.1	1.181	1.181	30	30
220	LPX221M350C5P3	0.904	1.1	0.984	1.378	25	35
270	LPX271M350E3P3	0.737	1.2	1.181	1.181	30	30
270	LPX271M350C7P3	0.737	1.2	0.984	1.575	25	40
270	LPX271M350A9P3	0.737	1.3	0.866	1.969	22	50
270	LPX271M350H1P3	0.737	1.3	1.378	0.984	35	25
330	LPX331M350C4P3	0.603	1.4	0.984	1.772	25	45
330	LPX331M350H3P3	0.603	1.4	1.378	1.181	35	30
330	LPX331M350E5P3	0.603	1.4	1.181	1.378	30	35
390	LPX391M350H3P3	0.51	1.6	1.378	1.181	35	30
390	LPX391M350E7P3	0.51	1.8	1.181	1.575	30	40
470	LPX471M350H5P3	0.423	1.8	1.378	1.378	35	35
470	LPX471M350E4P3	0.423	1.9	1.181	1.772	30	45
560	LPX561M350H7P3	0.355	2.1	1.378	1.575	35	40
680	LPX681M350H4P3	0.293	2.4	1.378	1.772	35	45
400 Vdc; 450 Vdc Surge							
82	LPX820M400A1P3	2.426	0.6	0.866	0.984	22	25
100	LPX101M400A3P3	1.989	0.7	0.866	1.181	22	30
120	LPX121M400A3P3	1.658	0.7	0.866	1.181	22	30
120	LPX121M400C1P3	1.658	0.7	0.984	0.984	25	25
150	LPX151M400C3P3	1.326	0.9	0.984	1.181	25	30
180	LPX181M400A7P3	1.105	1.0	0.866	1.575	22	40

Cap (µF)	Catalog Part Number	Max ESR @ 120 Hz +25 °C (Ω)	Max Ripple @ 120 Hz +85 °C (A)	Size (Inches) D	Size (Inches) L	Size (mm) D	Size (mm) L
400 Vdc; 450 Vdc Surge							
180	LPX181M400C5P3	1.105	1.0	0.984	1.378	25	35
220	LPX221M400E3P3	0.904	1.2	1.181	1.181	30	30
220	LPX221M400H1P3	0.904	1.2	1.378	0.984	35	25
220	LPX221M400C7P3	0.904	1.2	0.984	1.575	25	40
270	LPX271M400C4P3	0.737	1.4	0.984	1.772	25	45
270	LPX271M400E5P3	0.737	1.4	1.181	1.378	30	35
270	LPX271M400H3P3	0.737	1.4	1.378	1.181	35	30
330	LPX331M400E7P3	0.603	1.6	1.181	1.575	30	40
330	LPX331M400H3P3	0.603	1.5	1.378	1.181	35	30
390	LPX391M400H5P3	0.510	1.8	1.378	1.378	35	35
390	LPX391M400E4P3	0.510	1.8	1.181	1.772	30	45
470	LPX471M400H7P3	0.423	2.0	1.378	1.575	35	40
470	LPX471M400E9P3	0.423	2.0	1.181	1.969	30	50
560	LPX561M400H4P3	0.355	2.3	1.378	1.772	35	45
680	LPX681M400H9P3	0.293	2.6	1.378	1.969	35	50
450 Vdc; 500 Vdc Surge							
56	LPX560M450A1P3	3.553	0.5	0.866	0.984	22	25
68	LPX680M450A3P3	2.926	0.6	0.866	1.181	22	30
82	LPX820M450C1P3	2.426	0.7	0.984	0.984	25	25
82	LPX820M450A3P3	2.426	0.7	0.866	1.181	22	30
100	LPX101M450C3P3	1.989	0.8	0.984	1.181	25	30
100	LPX101M450A5P3	1.989	0.8	0.866	1.378	22	35
120	LPX121M450E1P3	1.658	0.9	1.181	0.984	30	25
120	LPX121M450C5P3	1.658	1.0	0.984	1.378	25	35
120	LPX121M450A7P3	1.658	0.9	0.866	1.575	22	40
150	LPX151M450A9P3	1.326	1.1	0.866	1.969	22	50
150	LPX151M450E3P3	1.326	1.1	1.181	1.181	30	30
150	LPX151M450C7P3	1.326	1.1	0.984	1.575	25	40
180	LPX181M450C4P3	1.105	1.3	0.984	1.772	25	45
180	LPX181M450H1P3	1.105	1.2	1.378	0.984	35	25
180	LPX181M450E7P3	1.105	1.4	1.181	1.575	30	40
220	LPX221M450H3P3	0.904	1.5	1.378	1.181	35	30
220	LPX221M450C9P3	0.904	1.5	0.984	1.969	25	50
220	LPX221M450E7P3	0.904	1.6	1.181	1.575	30	40
270	LPX271M450E4P3	0.737	1.7	1.181	1.772	30	45
270	LPX271M450H5P3	0.737	1.7	1.378	1.378	35	35
330	LPX331M450H7P3	0.603	2.0	1.378	1.575	35	40
330	LPX331M450E9P3	0.603	2.0	1.181	1.969	30	50
390	LPX391M450H4P3	0.510	2.2	1.378	1.772	35	45
470	LPX471M450H9P3	0.423	2.5	1.378	1.969	35	50

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