Type LPX
Radial Snap-In Capacitors

- 85°C - High Voltage General Purpose
- High Capacitance
- 22 to 35 mm Diameters 10 mm Lead Spacing
- Ideal For Input Filter in SMPS

See Type LPW for 85ºC - Low Voltage (10 to 100WVDC) General Purpose Snap Mount Capacitors

GENERAL SPECIFICATIONS

Operating Temperature:
-40°C to +85°C

Voltage Range:
160 WVDC to 450 WVDC

Capacitance Range:
56 μF to 2,700 μF

Capacitance Tolerance:
± 20%

DC Leakage Current:
$I = 3\sqrt{CV}$
C = Capacitance in µF
V = Rated Voltage
I = Leakage Current in μA

QA Stability Test:
Load Life: Apply WVDC for 1,000 hrs at 85°C
- Capacitance change ±20% from initial limits
- DC leakage current meets initial limits
- ESR ≤ 200% of initial measured value

Shelf Life: 500 hrs, No Voltage Applied @ 85°C
- Capacitance change ±20% from initial limits
- DC leakage current ≤ 200% of initial measured value
- ESR ≤ 200% of initial measured value

The maximum ripple current at 85°C and 120 Hz for LPX capacitors is shown in the Standard Rating Table. Maximum ripple current may be adjusted by the multipliers in the following tables.

Rated WVDC	Ripple Multipliers		
	120 Hz	1000 Hz	10 to 50 KHz
160 to 250	1.0	1.15	1.20
315 to 450	1.0	1.10	1.15

Ambient Temperature	Ripple Multiplier
+75°C	1.6
+65°C	2.2
+55°C	2.6
+45°C	3.0

Dissipation Factor @ 120Hz, 25°C		
WV	160 - 250	400 -450
DF(%)	15	20

For capacitors whose capacitance value exceeds 1000μF, the value of DF(%) is increased 2% for every additional 1000μF.

Cap µF	Max ESR Ohms @120Hz 25ºC	Max Ripple Amps @120Hz 85ºC	Size (inches) D	Size (inches) L	Size (millimeters) D	Size (millimeters) L	Catalog Number
160 WVDC; 200 VDC Surge							
390	.510	1.3	.866	.984	22	25	LPX391M160A1P3
470	.423	1.6	.984	.984	25	25	LPX471M160C1P3
470	.423	1.6	.866	1.181	22	30	LPX471M160A3P3
560	.355	1.8	.984	1.181	25	30	LPX561M160C3P3
560	.355	1.8	.866	1.378	22	35	LPX561M160A5P3
680	.293	2.0	1.181	.984	30	25	LPX681M160E1P3
680	.293	2.1	.866	1.575	22	40	LPX681M160A7P3
680	.293	2.0	.984	1.181	25	30	LPX681M160C3P3
820	.243	2.0	.984	1.378	25	35	LPX821M160C5P3
820	.243	2.3	1.181	1.181	30	30	LPX821M160E3P3
820	.243	2.4	.866	1.772	22	45	LPX821M160A4P3
1,000	.199	2.6	.984	1.575	25	40	LPX102M160C7P3
1,000	.199	2.3	1.378	.984	35	25	LPX102M160H1P3
1,000	.199	2.5	1.181	1.181	30	30	LPX102M160E3P3
1,200	.166	3.0	.984	1.772	25	45	LPX122M160C4P3
1,200	.166	2.6	1.378	1.181	35	30	LPX122M160H3P3
1,200	.166	2.9	1.181	1.378	30	35	LPX122M160E5P3
1,500	.133	3.3	1.378	1.378	35	35	LPX152M160H5P3
1,500	.133	3.3	1.181	1.575	30	40	LPX152M160E7P3
1,800	.111	4.0	1.181	1.969	30	50	LPX182M160E9P3
1,800	.111	3.7	1.378	1.575	35	40	LPX182M160H7P3
2,200	.090	4.2	1.378	1.772	35	45	LPX222M160H4P3
2,700	.074	4.6	1.378	1.969	35	50	LPX272M160H9P3
200 WVDC; 250 VDC Surge							
270	.737	1.2	.866	.984	22	25	LPX271M200A1P3
390	.510	1.6	.984	.984	25	25	LPX391M200C1P3
390	.510	1.6	.866	1.181	22	30	LPX391M200A3P3
470	.423	1.8	.984	1.181	25	30	LPX471M200C3P3
470	.423	1.8	.866	1.378	22	35	LPX471M200A5P3
560	.355	2.1	.866	1.575	22	40	LPX561M200A7P3
560	.355	2.1	.984	1.378	25	35	LPX561M200C5P3
560	.355	1.9	1.181	.984	30	25	LPX561M200E1P3

Cap µF	Max ESR Ohms @120Hz 25ºC	Max Ripple Amps @120Hz 85ºC	Size (inches) D	Size (inches) L	Size (millimeters) D	Size (millimeters) L	Catalog Number
200 WVDC; 250 VDC Surge							
680	.293	2.5	.984	1.575	25	40	LPX681M200C7P3
680	.293	2.4	.866	1.772	22	45	LPX681M200A4P3
680	.293	2.3	1.181	1.181	30	30	LPX681M200E3P3
820	.243	2.7	1.181	1.378	30	35	LPX821M200E5P3
820	.243	2.7	1.378	1.181	35	30	LPX821M200H3P3
820	.243	2.8	.984	1.772	25	45	LPX821M200C4P3
1,000	.199	2.7	1.378	1.181	35	30	LPX102M200H3P3
1,000	.199	3.1	1.181	1.575	30	40	LPX102M200E7P3
1,200	.166	3.1	1.378	1.378	35	35	LPX122M200H5P3
1,200	.166	3.5	1.181	1.772	30	45	LPX122M200E4P3
1,500	.133	4.0	1.181	1.969	30	50	LPX152M200E9P3
1,500	.133	3.6	1.378	1.575	35	40	LPX152M200H7P3
1,800	.111	4.0	1.378	1.772	35	45	LPX182M200H4P3
2,200	.090	4.5	1.378	1.969	35	50	LPX222M200H9P3
250 WVDC; 300 VDC Surge							
270	.737	1.4	.866	1.181	22	30	LPX271M250A3P3
270	.737	1.4	.984	.984	25	25	LPX271M250C1P3
330	.603	1.7	.984	1.181	25	30	LPX331M250C3P3
330	.603	1.7	.866	1.378	22	35	LPX331M250A5P3
390	.510	1.8	1.181	.984	30	25	LPX391M250E1P3
390	.510	1.9	.866	1.575	22	40	LPX391M250A7P3
390	.510	1.8	.984	1.181	25	30	LPX391M250C3P3
470	.423	2.2	.866	1.772	22	45	LPX471M250A4P3
470	.423	2.1	.984	1.378	25	35	LPX471M250C5P3
470	.423	2.1	1.181	1.181	30	30	LPX471M250E3P3
560	.355	2.5	.866	1.969	22	50	LPX561M250A9P3
560	.355	2.1	1.378	.984	35	25	LPX561M250H1P3
560	.355	2.2	1.181	1.181	30	30	LPX561M250E3P3
560	.355	2.4	.984	1.575	25	40	LPX561M250C7P3
680	.293	2.5	1.378	1.181	35	30	LPX681M250H3P3
680	.293	2.7	.984	1.772	25	45	LPX681M250C4P3
680	.293	2.6	1.181	1.378	30	35	LPX681M250E5P3

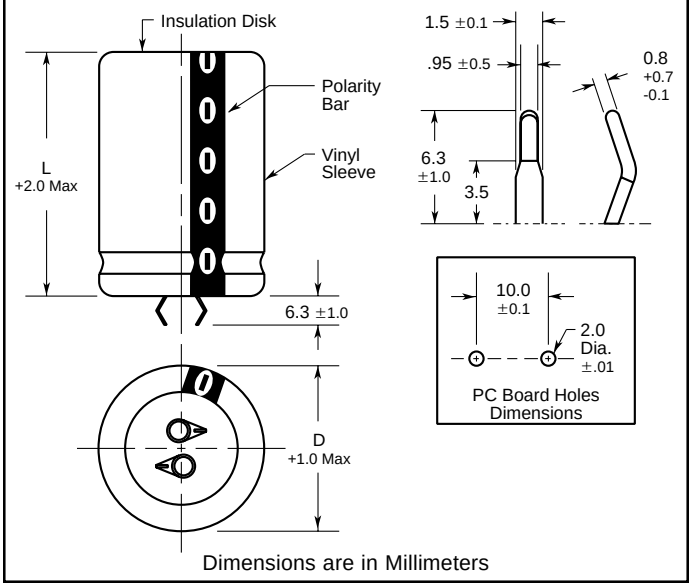
Type LPX
Radial Snap-In Capacitors

MALLORY

Cap µF	Max ESR Ohms @120Hz 25°C	Max Ripple Amps @120Hz 85°C	Size (inches) D	Size (inches) L	Size (millimeters) D	Size (millimeters) L	Catalog Number
250 WVDC; 300 VDC Surge							
820	.243	3.0	1.378	1.378	35	35	LPX821M250H5P3
820	.243	3.0	1.181	1.575	30	40	LPX821M250E7P3
1,000	.199	3.4	1.378	1.575	35	40	LPX102M250H7P3
1,000	.199	3.4	1.181	1.772	30	45	LPX102M250E4P3
1,200	.166	3.8	1.378	1.772	35	45	LPX122M250H4P3
1,500	.133	4.2	1.378	1.969	35	50	LPX152M250H9P3
350 WVDC; 400 VDC Surge							
100	1.989	.6	.866	.984	22	25	LPX101M350A1P3
120	1.658	.7	.984	.984	25	25	LPX121M350C1P3
120	1.658	.7	.866	1.181	22	30	LPX121M350A3P3
150	1.326	.8	.984	1.181	25	30	LPX151M350C3P3
150	1.326	.8	.866	1.378	22	35	LPX151M350A5P3
180	1.105	.9	.866	1.575	22	40	LPX181M350A7P3
180	1.105	.9	.984	1.181	25	30	LPX181M350C3P3
180	1.105	1.0	1.181	.984	30	25	LPX181M350E1P3
220	.904	1.1	.866	1.772	22	45	LPX221M350A4P3
220	.904	1.1	1.181	1.181	30	30	LPX221M350E3P3
220	.904	1.1	.984	1.378	25	35	LPX221M350C5P3
270	.737	1.2	1.181	1.181	30	30	LPX271M350E3P3
270	.737	1.2	.984	1.575	25	40	LPX271M350C7P3
270	.737	1.3	.866	1.969	22	50	LPX271M350A9P3
270	.737	1.3	1.378	.984	35	25	LPX271M350H1P3
330	.603	1.4	.984	1.772	25	45	LPX331M350C4P3
330	.603	1.4	1.378	1.181	35	30	LPX331M350H3P3
330	.603	1.4	1.181	1.378	30	35	LPX331M350E5P3
390	.510	1.6	1.378	1.181	35	30	LPX391M350H3P3
390	.510	1.8	1.181	1.575	30	40	LPX391M350E7P3
470	.423	1.8	1.378	1.378	35	35	LPX471M350H5P3
470	.423	1.9	1.181	1.772	30	45	LPX471M350E4P3
560	.355	2.1	1.378	1.575	35	40	LPX561M350H7P3
680	.293	2.4	1.378	1.772	35	45	LPX681M350H4P3
400 WVDC; 450 VDC Surge							
82	2.426	.6	.866	.984	22	25	LPX820M400A1P3
100	1.989	.7	.866	1.181	22	30	LPX101M400A3P3
120	1.658	.7	.866	1.181	22	30	LPX121M400A3P3
120	1.658	.7	.984	.984	25	25	LPX121M400C1P3
150	1.326	.9	.984	1.181	25	30	LPX151M400C3P3
180	1.105	1.0	.866	1.575	22	40	LPX181M400A7P3

Cap µF	Max ESR Ohms @120Hz 25°C	Max Ripple Amps @120Hz 85°C	Size (inches) D	Size (inches) L	Size (millimeters) D	Size (millimeters) L	Catalog Number
400 WVDC; 450 VDC Surge							
180	1.105	1.0	.984	1.378	25	35	LPX181M400C5P3
220	.904	1.2	1.181	1.181	30	30	LPX221M400E3P3
220	.904	1.2	1.378	.984	35	25	LPX221M400H1P3
220	.904	1.2	.984	1.575	25	40	LPX221M400C7P3
270	.737	1.4	.984	1.772	25	45	LPX271M400C4P3
270	.737	1.4	1.181	1.378	30	35	LPX271M400E5P3
270	.737	1.4	1.378	1.181	35	30	LPX271M400H3P3
330	.603	1.6	1.181	1.575	30	40	LPX331M400E7P3
330	.603	1.5	1.378	1.181	35	30	LPX331M400H3P3
390	.510	1.8	1.378	1.378	35	35	LPX391M400H5P3
390	.510	1.8	1.181	1.772	30	45	LPX391M400E4P3
470	.423	2.0	1.378	1.575	35	40	LPX471M400H7P3
470	.423	2.0	1.181	1.969	30	50	LPX471M400E9P3
560	.355	2.3	1.378	1.772	35	45	LPX561M400H4P3
680	.293	2.6	1.378	1.969	35	50	LPX681M400H9P3
450 WVDC; 500 VDC Surge							
56	3.553	.5	.866	.984	22	25	LPX560M450A1P3
68	2.926	.6	.866	1.181	22	30	LPX680M450A3P3
82	2.426	.7	.984	.984	25	25	LPX820M450C1P3
82	2.426	.7	.866	1.181	22	30	LPX820M450A3P3
100	1.989	.8	.984	1.181	25	30	LPX101M450C3P3
100	1.989	.8	.866	1.378	22	35	LPX101M450A5P3
120	1.658	.9	1.181	.984	30	25	LPX121M450E1P3
120	1.658	1.0	.984	1.378	25	35	LPX121M450C5P3
120	1.658	.9	.866	1.575	22	40	LPX121M450A7P3
150	1.326	1.1	.866	1.969	22	50	LPX151M450A9P3
150	1.326	1.1	1.181	1.181	30	30	LPX151M450E3P3
150	1.326	1.1	.984	1.575	25	40	LPX151M450C7P3
180	1.105	1.3	.984	1.772	25	45	LPX181M450C4P3
180	1.105	1.2	1.378	.984	35	25	LPX181M450H1P3
180	1.105	1.4	1.181	1.575	30	40	LPX181M450E7P3
220	.904	1.5	1.378	1.181	35	30	LPX221M450H3P3
220	.904	1.5	.984	1.969	25	50	LPX221M450C9P3
220	.904	1.6	1.181	1.575	30	40	LPX221M450E7P3
270	.737	1.7	1.181	1.772	30	45	LPX271M450E4P3
270	.737	1.7	1.378	1.378	35	35	LPX271M450H5P3
330	.603	2.0	1.378	1.575	35	40	LPX331M450H7P3
330	.603	2.0	1.181	1.969	30	50	LPX331M450E9P3
390	.510	2.2	1.378	1.772	35	45	LPX391M450H4P3
470	.423	2.5	1.378	1.969	35	50	LPX471M450H9P3

Outline Dimensions



Dimensions are in Millimeters

Part Number Format

NACC Catalog Number: LPX 471 M 160 C1 P 3

TYPE NUMBER:
Identifies the basic type

CAPACITANCE:
Expressed in microfarads
The first two digits are significant figures
The third digit is the number of zeros

CAPACITANCE TOLERANCE:
M = ± 20%

DC VOLTAGE RATING:
Zeros are used to precede the voltage rating where necessary to complete the three digit block
The letter 'R' indicates a decimal point

CASE CODE:
See chart

POLARITY:

INSULATING SLEEVE:
3 = PVC Sleeve

Case Code Chart

Millimeters (Inches)

Diameter mm	Diameter (Inches)	Length 25 (1.00)	30 (1.18)	35 (1.38)	40 (1.57)	45 (1.77)	50 (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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