

# Type 730P, Metallized Polypropylene Film Capacitors

## High Frequency, Wrap and Fill

The 730P series is designed and manufactured for use in many demanding power applications. They are non-inductively wound using the most reliable metallized polypropylene film available. A wide range of capacitance values, voltage ratings, lead terminations and sizes offer the designer an array of options to best meet the form, fit and function requirements specified.



### Highlights

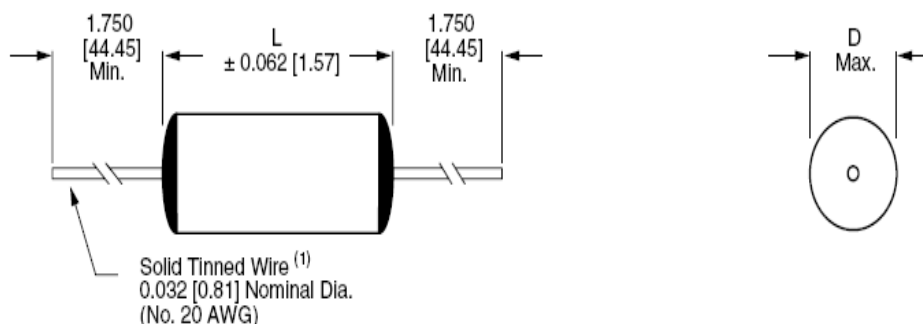
- Excellent AC performance
- Low power dissipation
- Low dielectric absorption
- Close tolerance
- High stability
- Compliant to RoHS directive 2002/95/EC

### Specifications

Capacitance Range	0.022 to 10.0 $\mu$ F
Capacitance Tolerance	$\pm$ 20% , $\pm$ 10%, $\pm$ 5%
Rated Voltage	100 to 630 Vdc (70 V <sub>RMS</sub> to 275 V <sub>RMS</sub> , 60 to 400 Hz)
Operating Temperature Range	-55 °C to 85 °C
Voltage Derating	At +105 °C, 50% of +85 °C rating
ESR	20 kHz to 100 kHz
Dissipation Factor	0.1% maximum - Measure all units at 1000 Hz, at +25 °C
Insulation Resistance	Measured at 100 WVDC after a 2 min charge: At +25 °C: 200 000 M $\Omega$ / $\mu$ F or 400 000 M $\Omega$ minimum At +85 °C: 10 000 M $\Omega$ / $\mu$ F or 20 000 M $\Omega$ minimum At +105 °C: 1000 M $\Omega$ / $\mu$ F or 2000 M $\Omega$ minimum
DC Voltage Test	200% of rated voltage for 2 minutes
AC Voltage Test	130% of rated RMS voltage at 60 Hz for 15 seconds
Vibration Test (Condition B)	No mechanical damage, short, open or intermittent circuits
DC Life Test	150% of rated voltage for 1000 h at +85 °C. No open or short circuits. No visible damage. Maximum $\Delta$ CAP $\pm$ 1.0% Minimum IR = 50% of initial limit Maximum DF = 0.12%
Humidity Test	95% relative humidity at +40 °C for 250 h. No visible damage. Maximum $\Delta$ CAP $\pm$ 1.0% Minimum IR = 20% of initial limit Maximum DF = 0.12%
AC Life Test	110% of rated RMS voltage at 60 Hz for 1000 h at +85 °C Maximum $\Delta$ CAP $\pm$ 5% Minimum IR = 50% of initial limit Maximum DF = 0.12%
Physical Characteristics	Lead Pull: 5 lb (2.3 g) for one min. No physical damage. Lead Bend: After three complete consecutive bend. No damage.

### Regulatory Information

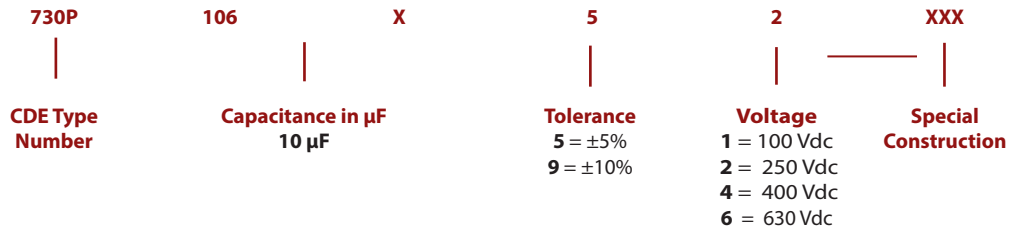
### Dimensions



# Type 730P, Metallized Polypropylene Film Capacitors

## High Frequency, Wrap and Fill

### Part Numbering System



### Ratings

CAPACITANCE ( $\mu\text{F}$ )	Catalog Part Number	Case Size		ESR (m $\Omega$ ) 20 KHz to 100 KHz	Maximum Ripple Current (Arms) at 20 KHz Case Temperature <sup>(2)</sup> at						
		D	L		+25°C	+35°C	+45°C	+55°C	+65°C	+75°C	+85°C
		Inches [MM]	Inches [MM]		100VDC						
0.22	730P224X9100	0.275 [7.0]	0.75 [19.0]	-	2.3	2.3	2.3	2.3	2.3	1.8	1.0
0.27	730P274X9100	0.298 [7.6]	0.75 [19.0]	-	2.6	2.6	2.6	2.6	2.4	1.9	1.1
0.33	730P334X9100	0.324 [8.2]	0.75 [19.0]	-	2.8	2.8	2.8	2.8	2.6	2.2	1.2
0.39	730P394X9100	0.347 [8.8]	0.75 [19.0]	-	3.1	3.1	3.1	3.1	2.9	2.3	1.3
0.47	730P474X9100	0.376 [9.6]	0.75 [19.0]	37	3.7	3.4	3.1	2.8	2.5	2.0	1.4
0.56	730P564X9100	0.321 [8.2]	1.00 [25.4]	35	3.9	3.6	3.3	2.9	2.6	2.1	1.5
0.68	730P684X9100	0.348 [8.8]	1.00 [25.4]	33	4.1	3.8	3.5	3.1	2.8	2.2	1.6
0.82	730P824X9100	0.377 [9.6]	1.00 [25.4]	31	4.3	4.0	3.6	3.2	2.9	2.3	1.7
1.0	730P105X9100	0.421 [10.7]	1.00 [25.4]	26	5.5	5.1	4.7	4.2	3.6	2.8	2.6
1.2	730P125X9100	0.454 [11.5]	1.00 [25.4]	24	5.7	5.3	4.9	4.4	3.8	3.0	2.8
1.5	730P155X9100	0.500 [12.7]	1.00 [25.4]	20	6.1	5.5	5.1	4.6	4.0	3.2	3.1
1.8	730P185X9100	0.541 [13.7]	1.00 [25.4]	19	6.3	5.7	5.3	4.8	4.1	3.4	3.0
2.0	730P205X9100	0.486 [12.3]	1.25 [31.8]	18	6.5	6.0	5.5	4.9	4.2	3.5	3.2
2.2	730P225X9100	0.507 [12.9]	1.25 [31.8]	18	6.8	6.3	5.7	5.1	4.4	3.6	3.3
2.7	730P275X9100	0.554 [14.1]	1.25 [31.8]	17	7.1	6.5	6.0	5.3	4.6	3.7	3.4
3.0	730P305X9100	0.581 [14.8]	1.25 [31.8]	16	7.3	6.7	6.2	5.5	4.8	3.9	3.5
3.3	730P335X9100	0.606 [15.4]	1.25 [31.8]	16	7.4	6.8	6.4	5.6	4.9	4.0	3.6
3.9	730P395X9100	0.654 [16.6]	1.25 [31.8]	15	7.6	6.9	6.6	5.8	5.1	4.1	3.7
4.0	730P405X9100	0.537 [13.6]	1.75 [44.5]	15	7.8	7.0	6.7	5.9	5.2	4.2	3.8
4.7	730P475X9100	0.577 [14.7]	1.75 [44.5]	15	8.1	7.4	6.8	6.0	5.3	4.3	3.9
5.0	730P505X9100	0.593 [15.1]	1.75 [44.5]	14	8.3	7.6	7.0	6.2	5.4	4.4	4.0
5.6	730P565X9100	0.624 [15.8]	1.75 [44.5]	14	8.4	7.7	7.1	6.4	5.5	4.5	4.1
6.0	730P605X9100	0.644 [16.4]	1.75 [44.5]	14	8.5	7.8	7.2	6.5	5.6	4.6	4.2
6.8	730P685X9100	0.682 [17.3]	1.75 [44.5]	13	8.5	8.0	7.4	6.7	5.7	4.7	4.3
8.0	730P805X9100	0.735 [18.7]	1.75 [44.5]	13	8.6	8.3	7.7	6.8	6.0	4.8	4.4
8.2	730P825X9100	0.743 [18.9]	1.75 [44.5]	13	8.8	8.6	8.0	7.0	6.1	4.9	4.5
10.0	730P106X9100	0.815 [20.7]	1.75 [44.5]	12	9.0	9.0	8.5	7.6	6.6	5.4	4.9

#### Notes

Other capacitance values and voltage ratings are available upon request

(1) Part Numbers listed are for a capacitance tolerance of  $\pm 10\%$ . To specify  $\pm 20\%$  tolerance, change the "X9" in the Part Number to "X0"; for  $\pm 5\%$ , from "X9" to "X5".

(2) The peak current pulse capability of these capacitors is 10 A/ $\mu\text{F}$ . The maximum rate voltage change is 10 V/ $\mu\text{s}$ .

# Type 730P, Metallized Polypropylene Film Capacitors

## High Frequency, Wrap and Fill

CAPACITANCE ( $\mu$ F)	Catalog Part Number	Case Size		ESR (m $\Omega$ ) 20 KHz to 100 KHz	Maximum Ripple Current (Arms ) at 20 KHz Case Temperature <sup>(2)</sup> at							
		D Inches [MM]	L Inches [MM]		+25°C	+35°C	+45°C	+55°C	+65°C	+75°C	+85°C	
<b>250VDC</b>												
0.1	730P104X9250	0.279 [7.1]	0.75 [19.0]	-	1.5	1.5	1.5	1.5	1.5	1.5	0.9	
0.12	730P124X9250	0.300 [7.6]	0.75 [19.0]	-	1.9	1.9	1.9	1.9	1.9	1.7	1.1	
0.15	730P154X9250	0.327 [8.3]	0.75 [19.0]	-	2.3	2.3	2.3	2.3	2.3	1.9	1.1	
0.18	730P184X9250	0.353 [9.0]	0.75 [19.0]	-	2.7	2.7	2.7	2.7	2.5	2.0	1.2	
0.22	730P224X9250	0.306 [7.8]	1.00 [25.4]	-	1.9	1.9	1.9	1.9	1.9	1.9	1.3	
0.27	730P274X9250	0.333 [8.5]	1.00 [25.4]	-	2.4	2.4	2.4	2.4	2.4	2.2	1.4	
0.33	730P334X9250	0.362 [9.2]	1.00 [25.4]	-	2.9	2.9	2.9	2.9	2.9	2.3	1.5	
0.39	730P394X9250	0.389 [9.9]	1.00 [25.4]	-	3.4	3.4	3.4	3.2	2.9	2.3	1.6	
0.47	730P474X9250	0.422 [10.7]	1.00 [25.4]	35	3.8	3.7	3.6	3.4	2.9	2.4	1.7	
0.56	730P564X9250	0.464 [11.8]	1.00 [25.4]	33	3.9	3.8	3.7	3.5	3.1	2.5	1.8	
0.68	730P684X9250	0.425 [10.8]	1.25 [31.8]	32	4.0	3.9	3.8	3.7	3.2	2.6	1.9	
0.82	730P824X9250	0.471 [12.0]	1.25 [31.8]	31	4.2	4.1	4.0	3.9	3.4	2.8	2.0	
1.0	730P105X9250	0.513 [13.0]	1.25 [31.8]	28	4.4	4.4	4.4	4.4	4.3	3.5	3.2	
1.2	730P125X9250	0.554 [14.1]	1.25 [31.8]	27	4.7	4.6	4.5	5.0	4.5	3.7	3.3	
1.5	730P155X9250	0.613 [15.6]	1.25 [31.8]	26	5.1	5.0	4.9	5.4	4.7	3.9	3.5	
1.8	730P185X9250	0.667 [17.0]	1.25 [31.8]	25	5.9	5.8	5.7	5.7	5.0	4.1	3.7	
2.0	730P205X9250	0.700 [17.8]	1.25 [31.8]	21	7.2	7.2	6.8	6.0	5.2	4.3	3.9	
2.2	730P225X9250	0.610 [15.5]	1.75 [44.5]	20	8.4	7.5	7.0	6.3	5.4	4.5	4.1	
2.7	730P275X9250	0.669 [17.0]	1.75 [44.5]	19	8.6	7.8	7.3	6.6	5.7	4.7	4.3	
3.0	730P305X9250	0.703 [17.9]	1.75 [44.5]	18	9.0	8.3	7.6	6.8	5.9	4.8	4.4	
3.3	730P335X9250	0.734 [18.6]	1.75 [44.5]	18	9.0	8.4	7.8	7.0	6.0	4.9	4.5	
3.9	730P395X9250	0.794 [20.2]	1.75 [44.5]	17	9.0	8.5	8.0	7.2	6.2	5.0	4.6	
4.0	730P405X9250	0.803 [20.4]	1.75 [44.5]	16	9.0	8.6	8.2	7.4	6.3	5.1	4.7	
4.7	730P475X9250	0.866 [22.0]	1.75 [44.5]	16	9.0	8.8	8.5	7.7	6.6	5.3	4.9	
5.0	730P505X9250	0.892 [22.7]	1.75 [44.5]	15	9.0	9.0	8.8	7.9	6.8	5.6	5.1	
5.6	730P565X9250	0.941 [23.9]	1.75 [44.5]	15	9.0	9.0	8.9	8.0	7.0	5.8	5.3	
6.0	730P605X9250	0.972 [24.7]	1.75 [44.5]	15	9.0	9.0	9.0	8.2	7.2	5.9	5.5	
6.8	730P685X9250	0.882 [22.4]	2.25 [57.2]	15	9.0	9.0	9.0	8.4	7.4	6.0	5.6	
8.0	730P805X9250	0.953 [24.2]	2.25 [57.2]	14	9.0	9.0	9.0	8.7	7.8	6.3	5.8	
8.2	730P825X9250	0.964 [24.5]	2.25 [57.2]	14	9.0	9.0	9.0	8.8	7.9	6.4	5.9	
10.0	730P106X9250	1.060 [26.9]	2.25 [57.2]	13	9.0	9.0	9.0	8.9	8.3	6.8	6.2	
<b>400VDC</b>												
0.047	730P473X9400	0.258 [6.6]	0.75 [19.0]	-	1.0	1.0	1.0	1.0	1.0	1.0	0.9	
0.056	730P563X9400	0.275 [7.0]	0.75 [19.0]	-	1.1	1.1	1.1	1.1	1.1	1.1	0.9	
0.068	730P683X9400	0.297 [7.5]	0.75 [19.0]	-	1.4	1.4	1.4	1.4	1.4	1.4	1.0	

### Notes

Other capacitance values and voltage ratings are available upon request

(1) Part Numbers listed are for a capacitance tolerance of  $\pm 10\%$ . To specify  $\pm 20\%$  tolerance, change the "X9" in the Part Number to "X0";

for  $\pm 5\%$ , from "X9" to "X5".

(2) The peak current pulse capability of these capacitors is 10 A/ $\mu$ F. The maximum rate voltage change is 10 V/ $\mu$ s.

# Type 730P, Metallized Polypropylene Film Capacitors

## High Frequency, Wrap and Fill

CAPACITANCE ( $\mu$ F)	Catalog Part Number	Case Size		ESR (m $\Omega$ ) 20 KHz to 100 KHz	Maximum Ripple Current (Arms) at 20 KHz Case Temperature <sup>(2)</sup> at							
		D Inches [MM]	L Inches [MM]		+25°C	+35°C	+45°C	+55°C	+65°C	+75°C	+85°C	
<b>400VDC</b>												
0.082	730P823X9400	0.320 [8.1]	0.75 [19.0]	-	1.7	1.7	1.7	1.7	1.7	1.6	1.1	
0.10	730P104X9400	0.348 [8.8]	0.75 [19.0]	-	2.0	2.0	2.0	2.0	2.0	1.9	1.3	
0.12	730P124X9400	0.299 [7.6]	1.00 [25.4]	-	1.4	1.4	1.4	1.4	1.4	1.4	1.4	
0.15	730P154X9400	0.328 [8.3]	1.00 [25.4]	-	1.7	1.7	1.7	1.7	1.7	1.7	1.6	
0.18	730P184X9400	0.353 [9.0]	1.00 [25.4]	-	2.1	2.1	2.1	2.1	2.1	2.1	1.7	
0.22	730P224X9400	0.385 [9.8]	1.00 [25.4]	-	2.6	2.6	2.6	2.6	2.6	2.5	1.8	
0.27	730P274X9400	0.421 [10.7]	1.00 [25.4]	-	3.1	3.1	3.1	3.1	3.1	2.7	1.9	
0.33	730P334X9400	0.469 [11.9]	1.00 [25.4]	-	3.8	3.8	3.8	3.8	3.5	2.9	2.0	
0.39	730P394X9400	0.503 [12.8]	1.00 [25.4]	-	4.1	4.1	4.1	4.1	3.7	3.1	2.1	
0.47	730P474X9400	0.545 [13.8]	1.00 [25.4]	32.0	5.7	5.5	5.0	4.4	3.8	3.2	2.2	
0.56	730P564X9400	0.506 [12.9]	1.25 [31.8]	31.0	5.7	5.7	5.3	4.4	4.1	3.3	2.3	
0.68	730P684X9400	0.551 [14.0]	1.25 [31.8]	30.0	5.7	5.7	5.5	4.8	4.3	3.5	2.4	
0.82	730P824X9400	0.599 [15.2]	1.25 [31.8]	28.0	5.7	5.7	5.6	5.3	4.5	3.7	2.6	
1.0	730P105X9400	0.655 [16.6]	1.25 [31.8]	27.0	5.7	5.7	5.7	5.7	5.7	4.7	4.3	
1.2	730P125X9400	0.712 [18.1]	1.25 [31.8]	26.0	6.3	6.2	6.0	5.9	5.8	4.9	4.5	
1.5	730P155X9400	0.658 [16.7]	1.75 [44.5]	25.0	7.0	6.9	6.7	6.6	6.5	5.2	4.7	
1.8	730P185X9400	0.716 [18.2]	1.75 [44.5]	23.0	8.0	7.9	7.8	7.7	6.8	5.5	5.0	
2.0	730P205X9400	0.752 [19.1]	1.75 [44.5]	21.0	9.0	9.0	9.0	8.0	7.0	5.7	5.2	
2.2	730P225X9400	0.786 [20.0]	1.75 [44.5]	20.0	9.0	9.0	9.0	8.3	7.4	5.9	5.4	
2.7	730P275X9400	0.865 [22.0]	1.75 [44.5]	19.0	9.0	9.0	9.0	8.6	7.6	6.0	5.6	
3.0	730P305X9400	0.909 [23.1]	1.75 [44.5]	17.0	9.0	9.0	9.0	9.0	7.9	6.4	5.9	
3.3	730P335X9400	0.951 [24.2]	1.75 [44.5]	16.0	9.0	9.0	9.0	9.0	8.1	6.6	6.3	
3.9	730P395X9400	1.031 [26.2]	1.75 [44.5]	15.0	9.0	9.0	9.0	9.0	8.3	6.8	6.5	
<b>630VDC</b>												
0.022	730P223X9630	0.283 [7.2]	0.75 [19.0]	-	0.8	0.8	0.8	0.8	0.8	0.8	0.8	
0.027	730P273X9630	0.307 [7.8]	0.75 [19.0]	-	1.0	1.0	1.0	1.0	1.0	1.0	0.9	
0.033	730P333X9630	0.334 [8.5]	0.75 [19.0]	-	1.2	1.2	1.2	1.2	1.2	1.2	1.0	
0.039	730P393X9630	0.358 [9.1]	0.75 [19.0]	-	1.4	1.4	1.4	1.4	1.4	1.4	1.0	
0.047	730P473X9630	0.388 [9.9]	0.75 [19.0]	-	1.7	1.7	1.7	1.7	1.7	1.6	1.1	
0.056	730P563X9630	0.418 [10.6]	0.75 [19.0]	-	2.1	2.1	2.1	2.1	2.1	1.7	1.2	
0.068	730P683X9630	0.346 [8.8]	1.00 [25.4]	-	1.3	1.3	1.3	1.3	1.3	1.3	1.3	
0.082	730P823X9630	0.374 [9.5]	1.00 [25.4]	-	1.6	1.6	1.6	1.6	1.6	1.6	1.6	
0.10	730P104X9630	0.408 [10.4]	1.00 [25.4]	-	1.9	1.9	1.9	1.9	1.9	1.9	1.6	
0.12	730P124X9630	0.443 [11.3]	1.00 [25.4]	-	2.3	2.3	2.3	2.3	2.3	2.3	1.8	
0.15	730P154X9630	0.496 [12.6]	1.00 [25.4]	-	2.9	2.9	2.9	2.9	2.9	2.9	1.9	
0.18	730P184X9630	0.538 [13.7]	1.00 [25.4]	-	3.5	3.5	3.5	3.5	3.5	2.7	1.9	

### Notes

Other capacitance values and voltage ratings are available on request

(1) Part Numbers listed are for a capacitance tolerance of  $\pm 10\%$ . To specify  $\pm 20\%$  tolerance, change the "X9" in the Part Number to "X0"; for  $\pm 5\%$ , from "X9" to "X5".

(2) The peak current pulse capability of these capacitors is 10 A/ $\mu$ F. The maximum rate voltage change is 10 V/ $\mu$ s.

# Type 730P, Metallized Polypropylene Film Capacitors

## High Frequency, Wrap and Fill

CAPACITANCE ( $\mu$ F)	Catalog Part Number	Case Size		ESR (m $\Omega$ ) 20 KHz to 100 KHz	Maximum Ripple Current (Arms ) at 20 KHz Case Temperature <sup>(2)</sup> at							
		D Inches [MM]	L Inches [MM]		+25°C	+35°C	+45°C	+55°C	+65°C	+75°C	+85°C	
<b>630VDC</b>												
0.22	730P224X9630	0.496 [12.6]	1.25 [31.8]	-	2.8	2.8	2.8	2.8	2.8	2.8	2.3	
0.27	730P274X9630	0.542 [13.8]	1.25 [31.8]	-	3.5	3.5	3.5	3.5	3.5	3.5	3.3	
0.33	730P334X9630	0.593 [15.1]	1.25 [31.8]	-	4.3	4.3	4.3	4.3	4.3	4.3	3.5	
0.39	730P394X9630	0.639 [16.2]	1.25 [31.8]	-	5.0	5.0	5.0	5.0	5.0	4.6	3.7	
0.47	730P474X9630	0.696 [17.7]	1.25 [31.8]	28.0	6.8	6.3	5.8	5.2	4.5	3.6	2.6	
0.56	730P564X9630	0.608 [15.4]	1.75 [44.5]	26.0	7.4	6.9	6.3	5.6	4.8	4.0	2.8	
0.68	730P684X9630	0.664 [16.9]	1.75 [44.5]	25.0	7.8	7.2	6.6	5.9	5.1	4.2	2.9	
0.82	730P824X9630	0.724 [18.4]	1.75 [44.5]	22.0	8.1	7.5	6.9	6.2	5.3	4.3	3.1	
1.0	730P105X9630	0.794 [20.2]	1.75 [44.5]	18.0	8.6	7.9	7.3	6.5	5.6	4.6	3.6	

### Notes

Other capacitance values and voltage ratings are available on request

(1) Part Numbers listed are for a capacitance tolerance of  $\pm 10\%$ . To specify  $\pm 20\%$  tolerance, change the "X9" in the Part Number to "X0"; for  $\pm 5\%$ , from "X9" to "X5".

(2) The peak current pulse capability of these capacitors is 10 A/ $\mu$ F. The maximum rate voltage change is 10 V/ $\mu$ s.

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