

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

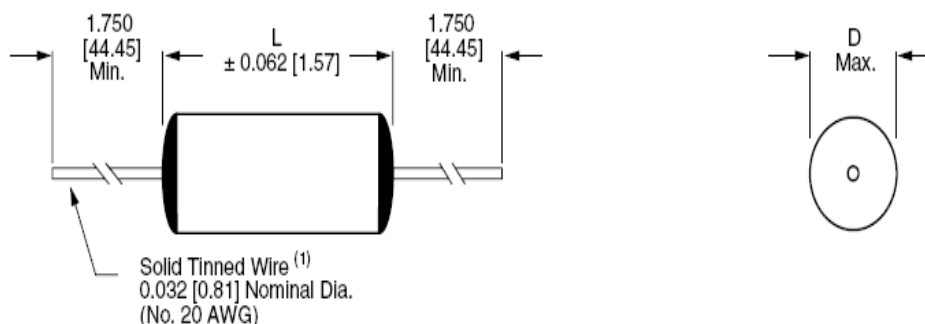
- Excellent AC performance
- Low power dissipation
- Low dielectric absorption
- Close tolerance
- High stability
- Compliant to RoHS directive 2002/95/EC

Specifications

Capacitance Range	0.022 to 10.0 μ F
Capacitance Tolerance	$\pm 20\%$, $\pm 10\%$, $\pm 5\%$
Rated Voltage	100 to 630 Vdc (70 V _{RMS} to 275 V _{RMS} , 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 Ω / μ F or 400 000 M Ω minimum At +85 °C: 10 000 M Ω / μ F or 20 000 M Ω minimum At +105 °C: 1000 M Ω / μ F or 2000 M Ω 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 Δ 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 Δ 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 Δ 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

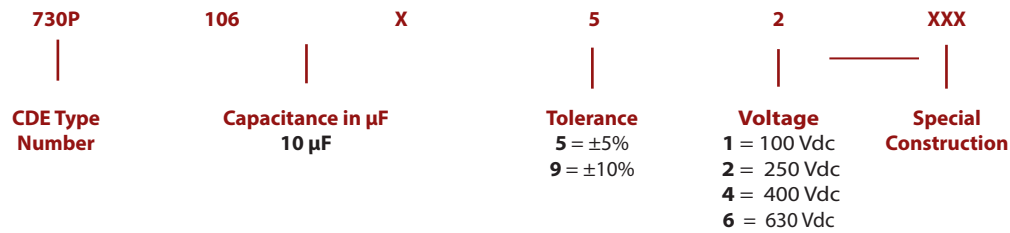
Dimensions



Type 730P, Metallized Polypropylene Film Capacitors

High Frequency, Wrap and Fill

Part Numbering System



Ratings

CAPACITANCE (μF)	Catalog Part Number	Case Size		ESR (mΩ) 20 KHz to 100 KHz	Maximum Ripple Current (Arms) at 20 KHz Case Temperature ⁽²⁾ 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/ μF . The maximum rate voltage change is 10 V/ μs .

Type 730P, Metallized Polypropylene Film Capacitors

High Frequency, Wrap and Fill

CAPACITANCE (μ F)	Catalog Part Number	Case Size		ESR (m Ω) 20 KHz to 100 KHz	Maximum Ripple Current (Arms) at 20 KHz Case Temperature ⁽²⁾ at						
		D	L		+25°C	+35°C	+45°C	+55°C	+65°C	+75°C	+85°C
		Inches [MM]	Inches [MM]								
250VDC											
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
400VDC											
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/ μ F. The maximum rate voltage change is 10 V/ μ s.

Type 730P, Metallized Polypropylene Film Capacitors

High Frequency, Wrap and Fill

CAPACITANCE (μF)	Catalog Part Number	Case Size		ESR (mΩ) 20 KHz to 100 KHz	Maximum Ripple Current (Arms) at 20 KHz Case Temperature ⁽²⁾ at						
		D	L		+25°C	+35°C	+45°C	+55°C	+65°C	+75°C	+85°C
		Inches [MM]	Inches [MM]								
400VDC											
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
630VDC											
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 ± 10 %. To specify ± 20 % tolerance, change the "X9" in the Part Number to "X0"; for ± 5 %, from "X9" to "X5".

(2) The peak current pulse capability of these capacitors is 10 A/μF. The maximum rate voltage change is 10 V/μs.

Type 730P, Metallized Polypropylene Film Capacitors

High Frequency, Wrap and Fill

CAPACITANCE (μF)	Catalog Part Number	Case Size		ESR (mΩ) 20 KHz to 100 KHz	Maximum Ripple Current (Arms) at 20 KHz Case Temperature ⁽²⁾ at						
		D	L		+25°C	+35°C	+45°C	+55°C	+65°C	+75°C	+85°C
		Inches [MM]	Inches [MM]								
630VDC											
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	3.3	2.3
0.33	730P334X9630	0.593 [15.1]	1.25 [31.8]	-	4.3	4.3	4.3	4.3	4.3	3.5	2.4
0.39	730P394X9630	0.639 [16.2]	1.25 [31.8]	-	5.0	5.0	5.0	5.0	4.6	3.7	2.5
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/ μ F. The maximum rate voltage change is 10 V/ μ s.

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