

Film Capacitors

High Frequency, Wrap-and-Fill, Metallized Polypropylene



FEATURES

- Excellent AC performance
- Low Power dissipation
- Low dielectric absorption
- Close tolerance
- High stability

PERFORMANCE CHARACTERISTICS

Operating Temperature: - 55 °C to + 85 °C

Voltage derating:

At + 105 °C, 50 % of + 85 °C rating

ESR: 20 kHz to 100 kHz

Capacitance Range: 0.022 μ F to 10.0 μ F

Capacitance Tolerance: ± 20 %, ± 10 %, ± 5 %

DC Voltage Rating: 100 WVDC to 630 WVDC

AC Voltage Rating: 70 Vrms to 275 Vrms, 60 Hz to 400 Hz

Dissipation Factor: 0.1 % maximum
Measure all units at 1000 Hz at + 25 °C

DC Voltage Test: 200 % of rated voltage for 2 minutes

AC Voltage Test: 130 % of rated rms voltage at 60 Hz for 15 seconds

Insulation Resistance: Measured at 100 WVDC after a 2 minute charge.

At + 25 °C: 200 000 Megohm - Microfarads
or 400 000 Megohm minimum.

At + 85 °C: 10 000 Megohm - Microfarads
or 20 000 Megohm minimum.

At + 105 °C: 1000 Megohm - Microfarads
or 2000 Megohm minimum.

Vibration Test (Condition B): No mechanical damage, short, open or intermittent circuits.

DC Life Test: 150 % of rated voltage for 1000 hours at + 85 °C. No open or short circuits. No visible damage.

Maximum Δ CAP ± 1.0 %

Minimum IR = 50 % of initial limit

Maximum DF = 0.12 %

Humidity Test: 95 % relative humidity at + 40 °C for 250 hours. No visible damage.

Maximum Δ CAP ± 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 hours at + 85 °C.

Maximum Δ CAP ± 5 %

Minimum IR = 50 % of initial limit

Maximum DF = 0.12 %

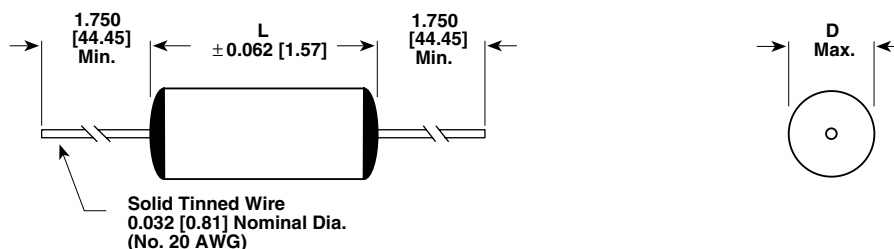
PHYSICAL CHARACTERISTICS

Lead Pull: 5 pounds (2.3 kilograms) for one minute. No physical damage.

Lead Bend: After three complete consecutive bends. No damage.

Marking: Sprague® trademark, type or part number, capacitance and voltage.

DIMENSIONS in inches [millimeters]



* Leads to be within 0.062" [1.57 mm] of center line at egress but not less than 0.031" [0.79 mm] from edge.

**STANDARD RATINGS** in inches [millimeters]

CAPACITANCE (μF)	PART NUMBER**	CASE SIZE		ESR (Milliohms)	MAXIMUM RIPPLE CURRENT (Amps rms) at 20 kHz							
		D	L	20 kHz -	Case Temperature*** at							
				100 KHz	+ 25 °C	+ 35 °C	+ 45 °C	+ 55 °C	+ 65 °C	+ 75 °C	+ 85 °C	
100 WVDC												
0.22	730P224X9100	0.275 [7.0]	0.75 [19.0]	-	Not applicable. These capacitance values are not customarily used in switched-mode power supplies.							
0.27	730P274X9100	0.298 [7.6]	0.75 [19.0]	-								
0.33	730P334X9100	0.324 [8.2]	0.75 [19.0]	-								
0.39	730P394X9100	0.347 [8.8]	0.75 [19.0]	-	-	-	-	-	-	-	-	
0.47*	730P474X9100	0.376 [9.6]	0.75 [19.0]	37.0	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]	35.0	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]	33.0	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]	31.0	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]	26.0	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]	24.0	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]	20.0	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]	19.0	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]	18.0	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]	18.0	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]	17.0	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]	16.0	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]	16.0	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]	15.0	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]	15.0	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]	15.0	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]	14.0	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]	14.0	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]	14.0	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]	13.0	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]	13.0	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]	13.0	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]	12.0	9.0	9.0	8.5	7.6	6.6	5.4	4.9	
250 WVDC												
0.1*	730P104X9250	0.279 [7.1]	0.75 [19.0]	-	Not applicable. These capacitance values are not customarily used in switched-mode power supplies.							
0.12	730P124X9250	0.300 [7.6]	0.75 [19.0]	-								
0.15	730P154X9250	0.327 [8.3]	0.75 [19.0]	-								
0.18	730P184X9250	0.353 [9.0]	0.75 [19.0]	-	-	-	-	-	-	-	-	
0.22*	730P224X9250	0.306 [7.8]	1.00 [25.4]	-	-	-	-	-	-	-	-	
0.27	730P274X9250	0.333 [8.5]	1.00 [25.4]	-	-	-	-	-	-	-	-	
0.33*	730P334X9250	0.362 [9.2]	1.00 [25.4]	-	-	-	-	-	-	-	-	
0.39	730P394X9250	0.389 [9.9]	1.00 [25.4]	-	-	-	-	-	-	-	-	
0.47*	730P474X9250	0.422 [10.7]	1.00 [25.4]	35.0	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]	33.0	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]	32.0	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]	31.0	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]	28.0	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]	27.0	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]	26.0	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]	25.0	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]	21.0	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]	20.0	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]	19.0	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]	18.0	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]	18.0	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]	17.0	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]	16.0	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]	16.0	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]	15.0	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]	15.0	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]	15.0	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]	15.0	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]	14.0	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]	14.0	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]	13.0	9.0	9.0	9.0	8.9	8.3	6.8	6.2	

* These ratings are stocked.

** 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".*** The peak current pulse capability of these capacitors is 10 amperes/ μ F. The maximum rate voltage change is 10 V/ μ S.

Film Capacitors
High Frequency, Wrap-and-Fill,
Metallized Polypropylene

Vishay Sprague

STANDARD RATINGS in inches [millimeters]											
CAPACITANCE (μF)	PART NUMBER**	CASE SIZE		ESR (Milliohms) 20 kHz - 100 Khz	MAXIMUM RIPPLE CURRENT (Amps rms) at 20 kHz Case Temperature*** at						
		D	L		+ 25 °C	+ 35 °C	+ 45 °C	+ 55 °C	+ 65 °C	+ 75 °C	+ 85 °C
400 WVDC											
0.047	730P473X9400	0.258 [6.6]	0.75 [19.0]	-	Not applicable. These capacitance values are not customarily used in switched-mode power supplies.						
0.056	730P563X9400	0.275 [7.0]	0.75 [19.0]	-							
0.068	730P683X9400	0.297 [7.5]	0.75 [19.0]	-							
0.082	730P823X9400	0.320 [8.1]	0.75 [19.0]	-							
0.1*	730P104X9400	0.348 [8.8]	0.75 [19.0]	-							
0.12	730P124X9400	0.299 [7.6]	1.00 [25.4]	-							
0.15*	730P154X9400	0.328 [8.3]	1.00 [25.4]	-							
0.18	730P184X9400	0.353 [9.0]	1.00 [25.4]	-							
0.22	730P224X9400	0.385 [9.8]	1.00 [25.4]	-							
0.27	730P274X9400	0.421 [10.7]	1.00 [25.4]	-							
0.33	730P334X9400	0.469 [11.9]	1.00 [25.4]	-							
0.39	730P394X9400	0.503 [12.8]	1.00 [25.4]	-	-	-	-	-	-	-	
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
630 WVDC											
0.022*	730P223X9630	0.283 [7.2]	0.75 [19.0]	-	Not applicable. These capacitance values are not customarily used in switched-mode power supplies.						
0.027	730P273X9630	0.307 [7.8]	0.75 [19.0]	-							
0.033	730P333X9630	0.334 [8.5]	0.75 [19.0]	-							
0.039	730P393X9630	0.358 [9.1]	0.75 [19.0]	-							
0.047	730P473X9630	0.388 [9.9]	0.75 [19.0]	-							
0.056	730P563X9630	0.418 [10.6]	0.75 [19.0]	-							
0.068	730P683X9630	0.346 [8.8]	1.00 [25.4]	-							
0.082	730P823X9630	0.374 [9.5]	1.00 [25.4]	-							
0.1	730P104X9630	0.408 [10.4]	1.00 [25.4]	-							
0.12	730P124X9630	0.443 [11.3]	1.00 [25.4]	-							
0.15	730P154X9630	0.496 [12.6]	1.00 [25.4]	-							
0.18	730P184X9630	0.538 [13.7]	1.00 [25.4]	-							
0.22	730P224X9630	0.496 [12.6]	1.25 [31.8]	-							
0.27	730P274X9630	0.542 [13.8]	1.25 [31.8]	-							
0.33	730P334X9630	0.593 [15.1]	1.25 [31.8]	-							
0.39	730P394X9630	0.639 [16.2]	1.25 [31.8]	-	-	-	-	-	-	-	
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

* These ratings are stocked.

** 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".*** The peak current pulse capability of these capacitors is 10 amperes/ μ F. The maximum rate voltage change is 10 V/ μ S.

ORDERING INFORMATION				
730P	224	X9		100
TYPE	CAPACITANCE	CAPACITANCE TOLERANCE		DC VOLTAGE RATING*
This is expressed in picofarads. The first two digits are the significant figures. The third is the number of zeros to follow.		X0 = ± 20 % X9 = ± 10 % X5 = ± 5 %		This is expressed in volts.
* At + 85 °C, AC rms ratings for frequencies up to and including 400 Hz correspond to this table:				
WVDC	100	250	400	630
RATED rms VOLTS	70	175	275	275



Disclaimer

All product specifications and data are subject to change without notice.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product.

Vishay disclaims any and all liability arising out of the use or application of any product described herein or of any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein, which apply to these products.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Vishay products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay for any damages arising or resulting from such use or sale. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Vishay:

<u>730P334X9400</u>	<u>730P395X9400</u>	<u>730P473X9400</u>	<u>730P105X5100</u>	<u>730P474X5100</u>	<u>730P335X9100</u>	<u>730P105X9100</u>
<u>730P405X9250</u>	<u>730P205X9250</u>	<u>730P105X9250</u>	<u>730P505X9250</u>	<u>730P205X9400</u>	<u>730P105X9400</u>	<u>730P474X9630</u>
<u>730P334X9630</u>	<u>730P224X9630</u>	<u>730P104X9630</u>	<u>730P394X9400</u>	<u>730P223X9630</u>	<u>730P474X9100</u>	<u>730P105X9630</u>
<u>730P334X9250</u>	<u>730P104X9250</u>	<u>730P154X9250</u>	<u>730P474X9250</u>	<u>730P224X9250</u>	<u>730P104X9400</u>	<u>730P154X9400</u>
<u>730P474X9400</u>	<u>730P224X9100</u>	<u>730P474X9400F</u>	<u>730P105X9630F</u>			