



**Type 730P  
High Frequency  
Round Wrap-and-Fill  
Metallized Polypropylene  
Film Capacitors**

**Performance Characteristics**

**Capacitance Range:**

0.022 to 10.0  $\mu$ F

**Capacitance Tolerance:**

$\pm$ 20%,  $\pm$ 10%,  $\pm$ 5% standard

**Voltage Rating:**

100 to 630 VDC

70 to 275 VAC, 60Hz to 400Hz

**Operating Temperature**

Units may be operated at full rated

voltage from -55°C to +85°C

**ESR:** 20 kHz to 100 kHz

**Voltage De-rating above +85°C:**

Units may be operated up to a maximum of +105°C provided the voltage is de-rated linearly to 50% of the +85°C rating.

**Dissipation Factor:** 0.1% maximum

**DC Voltage Test:** 200% of rated voltage for 2 Min.

**AC Voltage Test:** 130% of rated rms, 60Hz to 400Hz.

**Insulation Resistance (measured at 100 VDC, 2 min charge):**

At +25°C: 400,000 M $\Omega$  Minimum or 200,000 M $\Omega$ - $\mu$ F

At +85°C: 20,000 M $\Omega$  Minimum or 10,000 M $\Omega$ - $\mu$ F

At +105°C: 2000 M $\Omega$  Minimum or 1,000 M $\Omega$ - $\mu$ F

**RoHs Compliant:**

**Encapsulation:**

Wrapped with flame retardant polyester tape (meets UL510 specifications) and potted with flame retardant epoxy (meets UL94V-0 specifications).

**Dielectric/Construction:**

Metallized Polypropylene film, single section design. Non-Inductively wound.

**DC Life Test:** 150% of rated voltage for 1000 hours @ +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%

**AC Life Test:** 110% of rated rms voltage @ 60 Hz for 1000 Hours @ +85°C.

Maximum  $\Delta$  cap  $\pm$ 5%

Minimum IR = 50% of initial limit.

Maximum DF = 0.12%

**Humidity Test:** 95% RH @ 40°C for 250 hours. No visible Damage.

Maximum  $\Delta$  Cap  $\pm$  1.0%

Minimum IR = 20% of initial limit

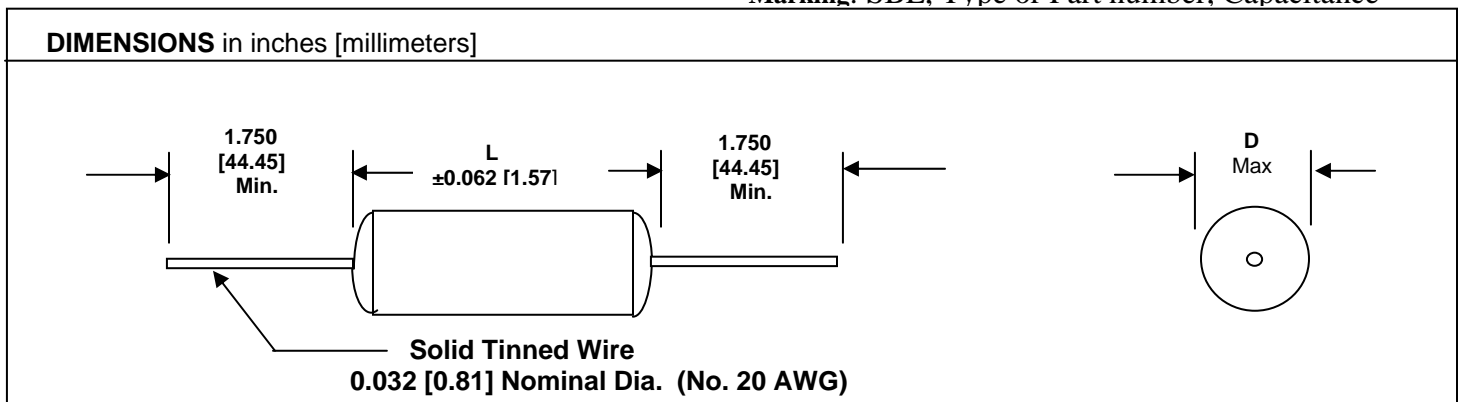
Maximum DF = 0.12%

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

**Lead Pull:** 5 lbs (2.3Kg) for one minute. No physical Damage.

**Lead Bend:** After 3 complete consecutive bends. No Damage.

**Marking:** SBE, Type or Part number, Capacitance



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

# Metallized Polypropylene Film Capacitors

STANDARD RATINGS in inches [millimeters]																			
Capacitance (uF)	Part Number**	CASE SIZE		ESR (Milliohms) 20kHz- 100kHz	Maximum Ripple Current (Amps rms) @ 20 kHz Case Temperature*** @														
		D	L		+25°C	+35°C	+45°C	+55°C	+65°C	+75°C	+85°C								
<b>100VVDC/70Vrms</b>																			
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	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								
<b>250VVDC/175Vrms</b>																			
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]	.075 [19.0]	----															
0.18	730P184X9250	0.353 [9.0]	.075 [19.0]	----															
0.22	730P224X9250	0.306 [7.8]	1.00 [25.4]	----															
0.27	730P274X9250	0.333 [8.5]	1.00 [25.4]	----	Not applicable. These capacitance values are not customarily used in switched-mode power supplies														
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									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								

Part Numbers listed are for a capacitance tolerance of ±10%. To Specify ± 5% change the "X9" to "X5". The maximum dv/dt is 10 V/u sec

#SBE730P 11/08

# Metallized Polypropylene Film Capacitors

STANDARD RATINGS in inches [millimeters]											
Capacitance ( $\mu$ F)	Part Number**	CASE SIZE		ESR (Milliohms) 20kHz- 100kHz	Maximum Ripple Current (Amps rms) @ 20 kHz Case Temperature*** @						
		D	L		+25°C	+35°C	+45°C	+55°C	+65°C	+75°C	+85°C
<b>400WVDC/275Vrms</b>											
0.047	730P473X9400	0.258 [6.6]	0.75 [19.0]	----							
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	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>630WVDC/275Vrms</b>											
0.022	730P223X9630	0.283 [7.2]	0.75 [19.0]	----							
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

Part Numbers listed are for a capacitance tolerance of  $\pm 10\%$ . To Specify  $\pm 5\%$  change the "X9" to "X5". The maximum dv/dt is 10 V/ $\mu$ sec

### Ordering Information

**730P**  
Type

**224**  
CAPACITANCE

**X9**  
CAPACITANCE  
TOLERANCE

**100**  
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 =  $\pm 20\%$   
X9 =  $\pm 10\%$   
X5 =  $\pm 5\%$

This is expressed in volts.

\* At + 85°C, AC rms ratings for frequencies up and including 400Hz are as indicated

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