



## Metallized Polyester Film Capacitors Wrap-and-Fill



### FEATURES

- Economical
- Extensive standard ratings
- Rugged construction
- Small size

### PERFORMANCE CHARACTERISTICS

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

**Capacitance Range:** 0.0047  $\mu$ F to 10.0  $\mu$ F

**Capacitance Tolerance:**  $\pm 20\%$ ,  $\pm 10\%$ ,  $\pm 5\%$

**DC Voltage Rating:** 50 WVDC to 600 WVDC

**Dissipation Factor:** 1.0 % maximum

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

**Insulation Resistance:**

At + 25 °C: 25 000 Megohm - Microfarads or 50000 Megohm minimum.

At + 85 °C: 1000 Megohm - Microfarads or 2500 Megohm minimum.

**Vibration Test (Condition B):**

No mechanical damage, short, open or intermittent circuits.

### 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.

**DC Life Test:** 125 % of rated voltage for 250 hours at + 85 °C. No open or short circuits. No visible damage. Maximum  $\Delta$  CAP =  $\pm 10\%$

Minimum IR = 50 % of initial limit

Maximum DF = 1.25 %

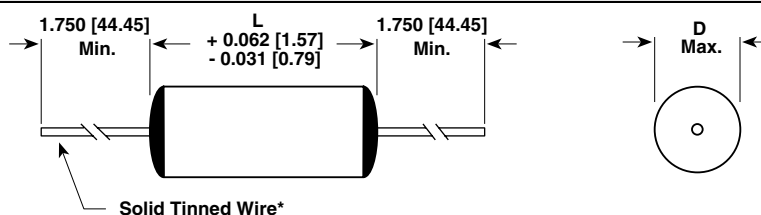
**Humidity Test:** 95 % relative humidity at + 40 °C for 250 hours, no visible damage.

Maximum  $\Delta$  CAP  $\pm 10\%$

Minimum IR = 20 % of initial limit

Maximum DF = 2.0 %

### DIMENSIONS in inches (millimeters)



\* Lead size: D Max. < 0.270 [6.86] 0.025 [0.64] (No. 22 AWG). D Max  $\geq$  0.270 [6.86] 0.032 [0.81] (No. 20 AWG). Leads to be within  $\pm 0.062$  [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<br>(μF) | PART NUMBER      |                 | CASE SIZE    |               | LEAD<br>AWG NO. |
|---------------------|------------------|-----------------|--------------|---------------|-----------------|
|                     | ± 10 % TOLERANCE | ± 5 % TOLERANCE | D            | L             |                 |
| 50 WVDC             |                  |                 |              |               |                 |
| 0.12                | 430P124X9050     | 430P124X5050    | 0.196 [4.98] | 0.625 [15.88] | 22              |
| 0.15                | 430P154X9050     | 430P154X5050    | 0.210 [5.33] | 0.625 [15.88] | 22              |
| 0.18                | 430P184X9050     | 430P184X5050    | 0.223 [5.66] | 0.625 [15.88] | 22              |
| 0.22                | 430P224X9050     | 430P224X5050    | 0.240 [6.10] | 0.625 [15.88] | 22              |
| 0.27                | 430P274X9050     | 430P274X5050    | 0.258 [6.55] | 0.625 [15.88] | 22              |
| 0.33                | 430P334X9050     | 430P334X5050    | 0.279 [7.09] | 0.625 [15.88] | 20              |
| 0.39                | 430P394X9050     | 430P394X5050    | 0.250 [6.35] | 0.750 [19.05] | 22              |
| 0.47                | 430P474X9050     | 430P474X5050    | 0.269 [6.83] | 0.750 [19.05] | 22              |
| 0.56                | 430P564X9050     | 430P564X5050    | 0.288 [7.32] | 0.750 [19.05] | 20              |
| 0.68                | 430P684X9050     | 430P684X5050    | 0.311 [7.90] | 0.750 [19.05] | 20              |
| 0.82                | 430P824X9050     | 430P824X5050    | 0.270 [6.86] | 1.000 [25.40] | 20              |



| STANDARD RATINGS in inches [millimeters] |                  |                 |               |               |                 |
|------------------------------------------|------------------|-----------------|---------------|---------------|-----------------|
| CAPACITANCE<br>(μF)                      | PART NUMBER      |                 | CASE SIZE     |               | LEAD<br>AWG NO. |
|                                          | ± 10 % TOLERANCE | ± 5 % TOLERANCE | D             | L             |                 |
| 50 WVDC                                  |                  |                 |               |               |                 |
| 1.0                                      | 430P105X9050     | 430P105X5050    | 0.291 [7.39]  | 1.000 [25.40] | 20              |
| 1.5                                      | 430P155X9050     | 430P155X5050    | 0.344 [8.74]  | 1.000 [25.40] | 20              |
| 2.0                                      | 430P205X9050     | 430P205X5050    | 0.400 [10.16] | 1.000 [25.40] | 20              |
| 2.5                                      | 430P255X9050     | 430P255X5050    | 0.438 [11.13] | 1.000 [25.40] | 20              |
| 3.0                                      | 430P305X9050     | 430P305X5050    | 0.398 [10.11] | 1.250 [31.75] | 20              |
| 4.0                                      | 430P405X9050     | 430P405X5050    | 0.434 [11.02] | 1.500 [38.10] | 20              |
| 5.0                                      | 430P505X9050     | 430P505X5050    | 0.476 [12.09] | 1.500 [38.10] | 20              |
| 6.0                                      | 430P605X9050     | 430P605X5050    | 0.515 [13.08] | 1.500 [38.10] | 20              |
| 7.0                                      | 430P705X9050     | 430P705X5050    | 0.551 [14.00] | 1.500 [38.10] | 20              |
| 10.0                                     | 430P106X9050     | 430P106X5050    | 0.647 [16.43] | 1.500 [38.10] | 20              |
| 100 WVDC                                 |                  |                 |               |               |                 |
| 0.082                                    | 430P823X9100     | 430P823X5100    | 0.192 [4.88]  | 0.625 [15.88] | 22              |
| 0.1                                      | 430P104X9100     | 430P104X5100    | 0.204 [5.18]  | 0.625 [15.88] | 22              |
| 0.12                                     | 430P124X9100     | 430P124X5100    | 0.216 [5.49]  | 0.625 [15.88] | 22              |
| 0.15                                     | 430P154X9100     | 430P154X5100    | 0.233 [5.92]  | 0.625 [15.88] | 22              |
| 0.18                                     | 430P184X9100     | 430P184X5100    | 0.213 [5.41]  | 0.750 [19.05] | 22              |
| 0.22*                                    | 430P224X9100     | 430P224X5100    | 0.228 [5.79]  | 0.750 [19.05] | 22              |
| 0.27                                     | 430P274X9100     | 430P274X5100    | 0.245 [6.22]  | 0.750 [19.05] | 22              |
| 0.33*                                    | 430P334X9100     | 430P334X5100    | 0.264 [6.71]  | 0.750 [19.05] | 22              |
| 0.39                                     | 430P394X9100     | 430P394X5100    | 0.230 [5.84]  | 1.000 [25.40] | 22              |
| 0.47                                     | 430P474X9100     | 430P474X5100    | 0.246 [6.25]  | 1.000 [25.40] | 22              |
| 0.56                                     | 430P564X9100     | 430P564X5100    | 0.262 [6.65]  | 1.000 [25.40] | 22              |
| 0.68                                     | 430P684X9100     | 430P684X5100    | 0.283 [7.19]  | 1.000 [25.40] | 20              |
| 0.82                                     | 430P824X9100     | 430P824X5100    | 0.265 [6.73]  | 1.250 [31.75] | 22              |
| 1.0*                                     | 430P105X9100     | 430P105X5100    | 0.286 [7.26]  | 1.250 [31.75] | 20              |
| 1.5                                      | 430P155X9100     | 430P155X5100    | 0.351 [8.92]  | 1.250 [31.75] | 20              |
| 2.0*                                     | 430P205X9100     | 430P205X5100    | 0.393 [9.98]  | 1.250 [31.75] | 20              |
| 2.5                                      | 430P255X9100     | 430P255X5100    | 0.430 [10.92] | 1.250 [31.75] | 20              |
| 3.0                                      | 430P305X9100     | 430P305X5100    | 0.464 [11.79] | 1.250 [31.75] | 20              |
| 4.0                                      | 430P405X9100     | 430P405X5100    | 0.494 [12.55] | 1.500 [38.10] | 20              |
| 5.0                                      | 430P505X9100     | 430P505X5100    | 0.544 [13.82] | 1.500 [38.10] | 20              |
| 6.0                                      | 430P605X9100     | 430P605X5100    | 0.591 [15.01] | 1.500 [38.10] | 20              |
| 7.0*                                     | 430P705X9100     | 430P705X5100    | 0.633 [16.08] | 1.500 [38.10] | 20              |
| 10.0                                     | 430P106X9100     | 430P106X5100    | 0.678 [17.22] | 1.750 [44.45] | 20              |
| 200 WVDC                                 |                  |                 |               |               |                 |
| 0.047                                    | 430P473X9200     | 430P473X5200    | 0.200 [5.08]  | 0.625 [15.88] | 22              |
| 0.056                                    | 430P563X9200     | 430P563X5200    | 0.211 [5.36]  | 0.625 [15.88] | 22              |
| 0.068                                    | 430P683X9200     | 430P683X5200    | 0.225 [5.72]  | 0.625 [15.88] | 22              |
| 0.082                                    | 430P823X9200     | 430P823X5200    | 0.240 [6.10]  | 0.625 [15.88] | 22              |
| 0.10*                                    | 430P104X9200     | 430P104X5200    | 0.221 [5.61]  | 0.750 [19.05] | 22              |
| 0.12                                     | 430P124X9200     | 430P124X5200    | 0.234 [5.94]  | 0.750 [19.05] | 22              |
| 0.15                                     | 430P154X9200     | 430P154X5200    | 0.254 [6.45]  | 0.750 [19.05] | 22              |
| 0.18                                     | 430P184X9200     | 430P184X5200    | 0.272 [6.91]  | 0.750 [19.05] | 20              |
| 0.22*                                    | 430P224X9200     | 430P224X5200    | 0.295 [7.49]  | 0.750 [19.05] | 20              |
| 0.27                                     | 430P274X9200     | 430P274X5200    | 0.258 [6.55]  | 1.000 [25.40] | 22              |
| 0.33                                     | 430P334X9200     | 430P334X5200    | 0.279 [7.09]  | 1.000 [25.40] | 20              |
| 0.39                                     | 430P394X9200     | 430P394X5200    | 0.298 [7.57]  | 1.000 [25.40] | 20              |
| 0.47*                                    | 430P474X9200     | 430P474X5200    | 0.321 [8.15]  | 1.000 [25.40] | 20              |
| 0.56                                     | 430P564X9200     | 430P564X5200    | 0.345 [8.76]  | 1.000 [25.40] | 20              |
| 0.68*                                    | 430P684X9200     | 430P684X5200    | 0.375 [9.53]  | 1.000 [25.40] | 20              |
| 0.82                                     | 430P824X9200     | 430P824X5200    | 0.350 [8.89]  | 1.250 [31.75] | 20              |
| 1.0*                                     | 430P105X9200     | 430P105X5200    | 0.380 [9.65]  | 1.250 [31.75] | 20              |
| 1.5                                      | 430P155X9200     | 430P155X5200    | 0.454 [11.53] | 1.250 [31.75] | 20              |
| 2.0*                                     | 430P205X9200     | 430P205X5200    | 0.469 [11.91] | 1.500 [38.10] | 20              |
| 2.5                                      | 430P255X9200     | 430P255X5200    | 0.516 [13.11] | 1.500 [38.10] | 20              |
| 3.0                                      | 430P305X9200     | 430P305X5200    | 0.559 [14.20] | 1.500 [38.10] | 20              |
| 4.0*                                     | 430P405X9200     | 430P405X5200    | 0.580 [14.73] | 1.750 [44.45] | 20              |
| 5.0                                      | 430P505X9200     | 430P505X5200    | 0.641 [16.28] | 1.750 [44.45] | 20              |

\* These ratings are stocked.

Metallized Polyester Film Capacitors  
Wrap and Fill

Vishay Sprague

| STANDARD RATINGS in inches [millimeters] |                  |                 |               |               |                 |
|------------------------------------------|------------------|-----------------|---------------|---------------|-----------------|
| CAPACITANCE<br>(μF)                      | PART NUMBER      |                 | CASE SIZE     |               | LEAD<br>AWG NO. |
|                                          | ± 10 % TOLERANCE | ± 5 % TOLERANCE | D             | L             |                 |
| 400 WVDC                                 |                  |                 |               |               |                 |
| 0.015                                    | 430P153X9400     | 430P153X5400    | 0.186 [4.72]  | 0.625 [15.88] | 22              |
| 0.018                                    | 430P183X9400     | 430P183X5400    | 0.197 [5.00]  | 0.625 [15.88] | 22              |
| 0.022                                    | 430P223X9400     | 430P223X5400    | 0.210 [5.33]  | 0.625 [15.88] | 22              |
| 0.027                                    | 430P273X9400     | 430P273X5400    | 0.224 [5.69]  | 0.625 [15.88] | 22              |
| 0.033                                    | 430P333X9400     | 430P333X5400    | 0.241 [6.12]  | 0.625 [15.88] | 22              |
| 0.039                                    | 430P393X9400     | 430P393X5400    | 0.256 [6.50]  | 0.625 [15.88] | 22              |
| 0.047                                    | 430P473X9400     | 430P473X5400    | 0.275 [6.99]  | 0.625 [15.88] | 20              |
| 0.056                                    | 430P563X9400     | 430P563X5400    | 0.248 [6.30]  | 0.750 [19.05] | 22              |
| 0.068                                    | 430P683X9400     | 430P683X5400    | 0.266 [6.76]  | 0.750 [19.05] | 22              |
| 0.082                                    | 430P823X9400     | 430P823X5400    | 0.286 [7.26]  | 0.750 [19.05] | 20              |
| 0.10*                                    | 430P104X9400     | 430P104X5400    | 0.310 [7.87]  | 0.750 [19.05] | 20              |
| 0.12                                     | 430P124X9400     | 430P124X5400    | 0.268 [6.81]  | 1.000 [25.40] | 22              |
| 0.15                                     | 430P154X9400     | 430P154X5400    | 0.293 [7.44]  | 1.000 [25.40] | 20              |
| 0.18                                     | 430P184X9400     | 430P184X5400    | 0.315 [8.00]  | 1.000 [25.40] | 20              |
| 0.22                                     | 430P224X9400     | 430P224X5400    | 0.342 [8.69]  | 1.000 [25.40] | 20              |
| 0.27                                     | 430P274X9400     | 430P274X5400    | 0.322 [8.18]  | 1.250 [31.75] | 20              |
| 0.33                                     | 430P334X9400     | 430P334X5400    | 0.350 [8.89]  | 1.250 [31.75] | 20              |
| 0.39                                     | 430P394X9400     | 430P394X5400    | 0.337 [8.56]  | 1.500 [38.10] | 20              |
| 0.47                                     | 430P474X9400     | 430P474X5400    | 0.364 [9.25]  | 1.500 [38.10] | 20              |
| 0.56                                     | 430P564X9400     | 430P564X5400    | 0.393 [9.98]  | 1.500 [38.10] | 20              |
| 0.68                                     | 430P684X9400     | 430P684X5400    | 0.402 [10.21] | 1.750 [44.45] | 20              |
| 0.82                                     | 430P824X9400     | 430P824X5400    | 0.434 [11.02] | 1.750 [44.45] | 20              |
| 1.0                                      | 430P105X9400     | 430P105X5400    | 0.472 [11.99] | 1.750 [44.45] | 20              |
| 1.5                                      | 430P155X9400     | 430P155X5400    | 0.563 [14.30] | 1.750 [44.45] | 20              |
| 2.0                                      | 430P205X9400     | 430P205X5400    | 0.640 [16.26] | 1.750 [44.45] | 20              |
| 600 WVDC                                 |                  |                 |               |               |                 |
| 0.0047                                   | 430P472X9600     | 430P472X5600    | 0.187 [4.75]  | 0.625 [15.88] | 22              |
| 0.0056                                   | 430P562X9600     | 430P562X5600    | 0.197 [5.00]  | 0.625 [15.88] | 22              |
| 0.0068                                   | 430P682X9600     | 430P682X5600    | 0.209 [5.31]  | 0.625 [15.88] | 22              |
| 0.0082                                   | 430P822X9600     | 430P822X5600    | 0.223 [5.66]  | 0.625 [15.88] | 22              |
| 0.01                                     | 430P103X9600     | 430P103X5600    | 0.239 [6.07]  | 0.625 [15.88] | 22              |
| 0.012                                    | 430P123X9600     | 430P123X5600    | 0.255 [6.48]  | 0.625 [15.88] | 22              |
| 0.015                                    | 430P153X9600     | 430P153X5600    | 0.224 [5.69]  | 0.750 [19.05] | 22              |
| 0.018                                    | 430P183X9600     | 430P183X5600    | 0.239 [6.07]  | 0.750 [19.05] | 22              |
| 0.022                                    | 430P223X9600     | 430P223X5600    | 0.257 [6.53]  | 0.750 [19.05] | 22              |
| 0.027                                    | 430P273X9600     | 430P273X5600    | 0.278 [7.06]  | 0.750 [19.05] | 20              |
| 0.033                                    | 430P333X9600     | 430P333X5600    | 0.300 [7.62]  | 0.750 [19.05] | 20              |
| 0.039                                    | 430P393X9600     | 430P393X5600    | 0.251 [6.38]  | 1.000 [25.40] | 22              |
| 0.047                                    | 430P473X9600     | 430P473X5600    | 0.269 [6.83]  | 1.000 [25.40] | 22              |
| 0.056                                    | 430P563X9600     | 430P563X5600    | 0.288 [7.32]  | 1.000 [25.40] | 20              |
| 0.068                                    | 430P683X9600     | 430P683X5600    | 0.311 [7.90]  | 1.000 [25.40] | 20              |
| 0.082                                    | 430P823X9600     | 430P823X5600    | 0.336 [8.53]  | 1.000 [25.40] | 20              |
| 0.10*                                    | 430P104X9600     | 430P104X5600    | 0.365 [9.27]  | 1.000 [25.40] | 20              |
| 0.12                                     | 430P124X9600     | 430P124X5600    | 0.335 [8.51]  | 1.250 [31.75] | 20              |
| 0.15                                     | 430P154X9600     | 430P154X5600    | 0.368 [9.35]  | 1.250 [31.75] | 20              |
| 0.18                                     | 430P184X9600     | 430P184X5600    | 0.354 [8.99]  | 1.500 [38.10] | 20              |
| 0.22*                                    | 430P224X9600     | 430P224X5600    | 0.385 [9.78]  | 1.500 [38.10] | 20              |
| 0.27                                     | 430P274X9600     | 430P274X5600    | 0.421 [10.69] | 1.500 [38.10] | 20              |
| 0.33                                     | 430P334X9600     | 430P334X5600    | 0.428 [10.87] | 1.750 [44.45] | 20              |
| 0.39                                     | 430P394X9600     | 430P394X5600    | 0.459 [11.66] | 1.750 [44.45] | 20              |
| 0.47*                                    | 430P474X9600     | 430P474X5600    | 0.497 [12.62] | 1.750 [44.45] | 20              |
| 0.56                                     | 430P564X9600     | 430P564X5600    | 0.537 [13.64] | 1.750 [44.45] | 20              |
| 0.68                                     | 430P684X9600     | 430P684X5600    | 0.585 [14.86] | 1.750 [44.45] | 20              |

\* These ratings are stocked.

| ORDERING INFORMATION                                                                                                                                                                                                                                                                                                                                                                                                           |             |                       |                   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-----------------------|-------------------|
| 430P                                                                                                                                                                                                                                                                                                                                                                                                                           | 124         | X9                    | 050               |
| TYPE                                                                                                                                                                                                                                                                                                                                                                                                                           | CAPACITANCE | CAPACITANCE TOLERANCE | DC VOLTAGE RATING |
| <div>This is expressed in picofarads. The first two digits are the significant figures. The third is the number of zeros to follow. Values must conform to the decade rating for the tolerance specified.</div> <div>X0 = <math>\pm 20\%</math><br/>X9 = <math>\pm 10\%</math><br/>X5 = <math>\pm 5\%</math></div> <div>This is expressed in volts. To complete the three-digit block, zeros precede the voltage rating.</div> |             |                       |                   |



### Disclaimer

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