



Film Capacitors High Current, Wrap-and-Fill, Metalized Polypropylene



FEATURES

- Wire or lug terminals
- High stability
- High ripple to 30 amperes
- Low inductance
- Low ESR

PERFORMANCE CHARACTERISTICS

Operating Temperature: - 55°C to + 105°C.

Capacitance Range: 1.0µF to 30.0µF.

Capacitance Tolerance: ± 10%, ± 5%.

DC Voltage Rating: 100 WVDC to 400 WVDC.

Equivalent Series Resistance: 20kHz to 100kHz.

Dissipation Factor: 0.1% maximum.
Measure at 1000Hz @ + 25°C.

ΔV/ΔT: 10V/millisecond maximum.

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

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

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

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

DC Life Test: 140% of rated voltage for 1000 hours @ + 105°C. No visible damage. No open or short circuits. Maximum Δ CAP ± 1.0%. Minimum IR = 50% of initial limit. Maximum DF = 0.10%.

Humidity Test: 95% relative humidity @ + 40°C for 250 hours. No visible damage. Maximum Δ CAP ± 1.0%. Maximum IR = 20% of initial limit. Maximum DF = 0.12%.

PHYSICAL CHARACTERISTICS

Pull Test:

Wire Leads - 5 pounds (2.3 kilograms) for one minute. No physical damage.

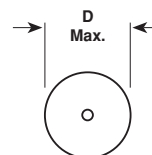
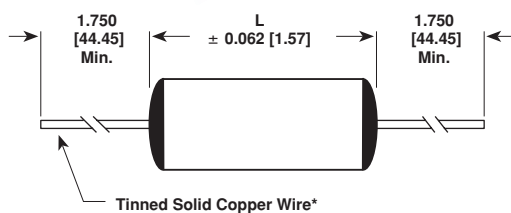
Terminal Lugs - 10 pounds (4.5 kilograms) for one minute. No physical damage.

Lead Bend: After three complete consecutive bends, no damage.

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

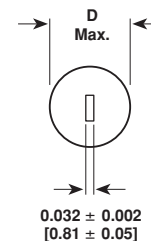
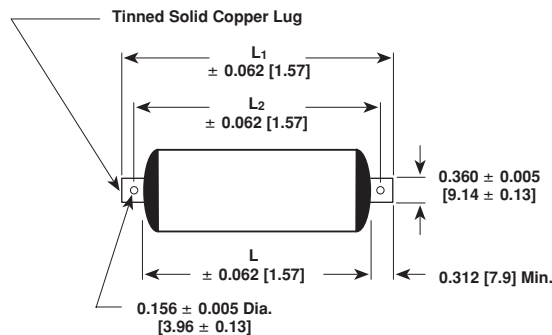
DIMENSIONS in inches [millimeters]

Terminal Style L



D Max. < 0.700 [17.78], No. 20 AWG wire 0.032 [0.812] nominal diameter.
D Max. ≥ 0.700 [17.78], No. 18 AWG wire 0.040 [1.016] nominal diameter.

Terminal Style H



L₁ = L + 0.766 [19.46]
L₂ = L + 0.437 [11.10]

* Leads to be within ± 0.062" [1.57mm] of center line at egress but not less than 0.031" [0.78mm] from edge (Terminal Style L only).



| STANDARD RATINGS in inches [millimeters] | | | | | | | | | | | | | |
|--|---------------|-----------|---------|--|---|--------|--------|--------|--------|--------|--------|------|------|
| CAPACITANCE (μ F) | PART NUMBER** | CASE SIZE | | ESR LIMIT (Milliohm) 20kHz - 100kHz | MAXIMUM RIPPLE CURRENT (Amps rms) @ 20kHz - 100kHz Case Temperature @ | | | | | | | | |
| | | D | L | | + 25°C | + 35°C | + 45°C | + 55°C | + 65°C | + 75°C | + 85°C | | |
| Terminal Style L – Units with Wire Leads | | | | | | | | | | | | | |
| 100 WVDC | | | | | | | | | | | | | |
| 1.0* | 735P105X9100L | 0.531 | [13.49] | 0.750 | [19.05] | 15.0 | 9.2 | 8.5 | 7.8 | 7.0 | 6.0 | 4.9 | 4.5 |
| 2.0 | 735P205X9100L | 0.596 | [15.14] | 0.938 | [23.81] | 12.0 | 10.8 | 10.0 | 9.1 | 8.2 | 7.0 | 5.8 | 5.3 |
| 3.0 | 735P305X9100L | 0.717 | [18.21] | 0.938 | [23.81] | 11.0 | 12.1 | 11.2 | 10.3 | 9.2 | 8.0 | 6.5 | 5.9 |
| 5.0 | 735P505X9100L | 0.733 | [18.62] | 1.250 | [31.75] | 10.0 | 13.8 | 12.7 | 11.6 | 10.4 | 9.0 | 7.4 | 6.7 |
| 10.0* | 735P106X9100L | 0.898 | [22.81] | 1.500 | [38.10] | 9.0 | 15.0 | 15.0 | 14.2 | 12.7 | 11.0 | 9.0 | 8.2 |
| 20.0 | 735P206X9100L | 1.000 | [25.40] | 2.250 | [57.15] | 8.0 | 15.0 | 15.0 | 15.0 | 15.0 | 13.6 | 11.1 | 10.0 |
| 30.0 | 735P306X9100L | 1.200 | [30.48] | 2.250 | [57.15] | 6.0 | 15.0 | 15.0 | 15.0 | 15.0 | 15.0 | 12.4 | 11.4 |
| 200 WVDC | | | | | | | | | | | | | |
| 1.0* | 735P105X9200L | 0.512 | [13.01] | 1.250 | [31.75] | 20.0 | 7.3 | 7.3 | 7.3 | 7.3 | 7.2 | 5.9 | 5.4 |
| 2.0* | 735P205X9200L | 0.698 | [17.73] | 1.250 | [31.75] | 15.0 | 12.0 | 12.0 | 11.3 | 10.1 | 8.7 | 7.1 | 6.5 |
| 3.0 | 735P305X9200L | 0.747 | [18.97] | 1.500 | [38.10] | 13.0 | 15.0 | 13.8 | 12.6 | 11.3 | 9.8 | 8.0 | 7.3 |
| 5.0* | 735P505X9200L | 0.862 | [21.89] | 1.750 | [44.45] | 11.0 | 15.0 | 15.0 | 14.7 | 13.1 | 11.4 | 9.3 | 8.5 |
| 10.0* | 735P106X9200L | 1.030 | [26.16] | 2.250 | [57.15] | 9.0 | 15.0 | 15.0 | 15.0 | 15.0 | 13.8 | 11.3 | 10.3 |
| 20.0 | 735P206X9200L | 1.440 | [36.58] | 2.250 | [57.15] | 6.0 | 15.0 | 15.0 | 15.0 | 15.0 | 15.0 | 14.1 | 12.8 |
| 400 WVDC | | | | | | | | | | | | | |
| 1.0* | 735P105X9400L | 0.713 | [18.11] | 1.500 | [38.10] | 19.0 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 7.8 | 7.1 |
| 2.0* | 735P205X9400L | 0.895 | [22.73] | 1.750 | [44.45] | 15.0 | 15.0 | 15.0 | 15.0 | 13.4 | 11.6 | 9.5 | 8.7 |
| 3.0* | 735P305X9400L | 1.086 | [27.58] | 1.750 | [44.45] | 12.0 | 15.0 | 15.0 | 15.0 | 15.0 | 13.1 | 10.7 | 9.8 |
| 5.0* | 735P505X9400L | 1.192 | [30.28] | 2.250 | [57.15] | 10.0 | 15.0 | 15.0 | 15.0 | 15.0 | 15.0 | 12.5 | 11.4 |
| 10.0* | 735P106X9400L | 1.668 | [42.37] | 2.250 | [57.15] | 6.0 | 15.0 | 15.0 | 15.0 | 15.0 | 15.0 | 15.0 | 14.1 |
| Terminal Style H – Units with Terminal Lugs | | | | | | | | | | | | | |
| 100 WVDC | | | | | | | | | | | | | |
| 1.0 | 735P105X9100H | 0.531 | [13.49] | 0.875 | [22.23] | 15.0 | 10.3 | 9.5 | 8.7 | 7.8 | 6.7 | 5.5 | 5.0 |
| 2.0 | 735P205X9100H | 0.596 | [15.14] | 1.062 | [26.97] | 12.0 | 12.0 | 11.0 | 10.0 | 8.9 | 7.8 | 6.3 | 5.8 |
| 3.0 | 735P305X9100H | 0.717 | [18.21] | 1.062 | [26.97] | 11.0 | 13.3 | 12.3 | 11.2 | 10.0 | 8.7 | 7.1 | 6.5 |
| 5.0 | 735P505X9100H | 0.733 | [18.62] | 1.375 | [34.93] | 10.0 | 14.8 | 13.7 | 12.5 | 11.2 | 9.7 | 7.9 | 7.2 |
| 10.0 | 735P106X9100H | 0.898 | [22.81] | 1.625 | [41.28] | 9.0 | 17.8 | 16.5 | 15.0 | 13.5 | 11.7 | 9.5 | 8.7 |
| 20.0 | 735P206X9100H | 1.000 | [25.40] | 2.375 | [60.33] | 8.0 | 21.6 | 20.0 | 18.3 | 16.4 | 14.2 | 11.6 | 10.6 |
| 30.0 | 735P306X9100H | 1.200 | [30.48] | 2.375 | [60.33] | 6.0 | 24.3 | 22.5 | 20.5 | 18.4 | 15.9 | 13.0 | 11.9 |
| 200 WVDC | | | | | | | | | | | | | |
| 1.0 | 735P105X9200H | 0.512 | [13.00] | 1.375 | [34.93] | 20.0 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 6.4 | 5.8 |
| 2.0 | 735P205X9200H | 0.698 | [17.73] | 1.375 | [34.93] | 15.0 | 14.3 | 13.3 | 12.1 | 10.8 | 9.4 | 7.7 | 7.0 |
| 3.0 | 735P305X9200H | 0.747 | [18.97] | 1.625 | [41.28] | 13.0 | 15.9 | 14.7 | 13.5 | 12.0 | 10.4 | 8.5 | 7.8 |
| 5.0 | 735P505X9200H | 0.862 | [21.89] | 1.875 | [47.63] | 11.0 | 18.3 | 17.0 | 15.5 | 13.9 | 12.0 | 9.8 | 8.9 |
| 10.0 | 735P106X9200H | 1.030 | [26.16] | 2.375 | [60.33] | 9.0 | 22.4 | 20.7 | 18.9 | 16.9 | 14.6 | 12.0 | 10.9 |
| 20.0 | 735P206X9200H | 1.440 | [36.58] | 2.375 | [60.33] | 6.0 | 27.4 | 25.4 | 23.2 | 20.7 | 17.9 | 14.7 | 13.4 |
| 400 WVDC | | | | | | | | | | | | | |
| 1.0 | 735P105X9400H | 0.713 | [18.11] | 1.625 | [41.28] | 19.0 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 8.3 | 7.5 |
| 2.0 | 735P205X9400H | 0.895 | [22.73] | 1.875 | [47.63] | 15.0 | 15.0 | 15.0 | 15.0 | 14.2 | 12.3 | 10.0 | 9.1 |
| 3.0 | 735P305X9400H | 1.086 | [27.58] | 1.875 | [47.63] | 12.0 | 21.1 | 19.5 | 17.8 | 15.9 | 13.8 | 11.3 | 10.3 |
| 5.0 | 735P505X9400H | 1.192 | [30.28] | 2.375 | [60.33] | 10.0 | 24.4 | 22.6 | 20.6 | 18.5 | 16.0 | 13.1 | 11.9 |
| 10.0 | 735P106X9400H | 1.668 | [42.37] | 2.375 | [60.33] | 6.0 | 30.0 | 27.8 | 25.4 | 22.7 | 19.7 | 16.1 | 14.7 |

* These ratings are stocked.

** Part Numbers listed are for a capacitance tolerance of $\pm 10\%$. To specify $\pm 5\%$ tolerance, change the "X9" in the Part Number to "X5".

| ORDERING INFORMATION | | | | |
|-----------------------------|--|-----------------------------------|-----------------------------|----------------------------|
| 735P | 105 | X9 | 100 | L |
| TYPE | CAPACITANCE | CAPACITANCE TOLERANCE | DC VOLTAGE RATING | TERMINAL STYLE |
| | | | | |
| | This is expressed in picofarads. The first two digits are the significant figures. The third is the number of zeros to follow. | X9 = $\pm 10\%$ X5 = $\pm 5\%$ | This is expressed in volts. | L = Wire Leads H = Lugs |



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