Type 735P

Vishay Sprague

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.

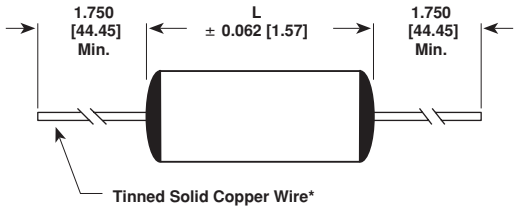
Terminal Lugs - 10 pounds (4.5 kilograms) for one minute. No physical damage.

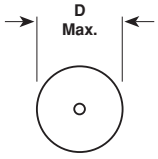
Lead Bend: After three complete consecutive bends, no damage.

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

DIMENSIONS in inches [millimeters]

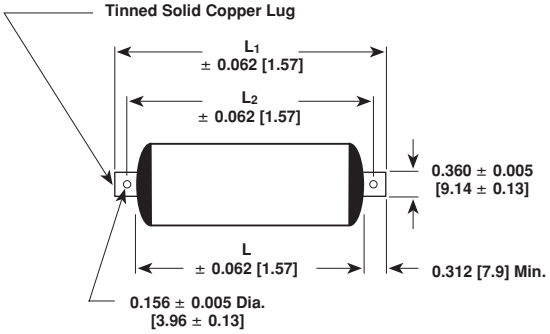
Terminal Style L

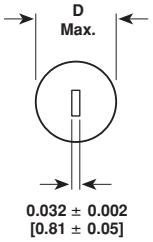




D Max. < 0.700 [17.78], No. 20 AWG wire 0.032 [0.812] nominal diameter.
D Max. ≥ 0.700 [17.78], No. 18 AWG wire 0.040 [1.016] nominal diameter.

Terminal Style H





L_1 = L + 0.766 [19.46]
L_2 = 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).

For technical questions, contact spresale@vishay.com

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Revision 17-Nov-03

STANDARD RATINGS in inches [millimeters]

CAPACITANCE (μF)	PART NUMBER**	CASE SIZE D	CASE SIZE L	ESR LIMIT (Milliohm) 20kHz - 100kHz	MAXIMUM RIPPLE CURRENT (Amps rms) @ 20kHz - 100kHz Case Temperature @ + 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 ± 10%. To specify ± 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 = ± 10% X5 = ± 5%	This is expressed in volts.	L = Wire Leads H = Lugs

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