Type 735P, Metallized Polypropylene Film Capacitors

High Frequency, Wrap and Fill

The 735P series is designed and manufactured for use in many demanding power applications. They are non-inductively wound using the most reliable metallized polypropylene film available. A wide range of capacitance values, voltage ratings, lead terminations and sizes offer the designer an array of options to best meet the form, fit and function requirements specified.

Highlights

- Excellent AC performance
- Low power dissipation
- Low dielectric absorption
- Low ESR
- Close tolerance
- High stability
- High ripple to 30 A
- Compliant to RoHS directive 2002/95/EC

Specifications

Capacitance Range	1.0 to 30.0 µF
Capacitance Tolerance	±10%, ±5%
DC Rated Voltage	100 WVdc to 400 WVdc
Operating Temperature Range	–55 °C to 105 °C
ESR	20 kHz to 100 kHz
Dissipation Factor	0.1% maximum - Measure all units at 1000 Hz, at +25 °C ΔV/ ΔT: 10 V/ms maximum
Insulation Resistance	Measured at 100 WVDC after a 2 min charge: At +25 °C: 200 000 MΩ/µF or 400 000 MΩ minimum
DC Voltage Test	200% of rated voltage for 2 minutes
Vibration Test (Condition B)	No mechanical damage, short, open or intermittent circuits
DC Life Test	140% of rated voltage for 1000 h at +105 °C. No open or short circuits. No visible damage. Maximum Δ CAP ±1.0% Minimum IR = 50% of initial limit Maximum DF = 0.10%
Humidity Test	95% relative humidity at +40 °C for 250 h. No visible damage. Maximum Δ CAP ±1.0% Minimum IR = 20% of initial limit Maximum DF = 0.12%
Physical Characteristics	Pull Test Wire Leads: 5 lb (2.3 g) for one min. No physical damage. Terminal Lugs: -10 lb (4.5 kg) for one min. No physical damage. Lead Bend: After three complete consecutive bend. No damage. Marking: Type or part number, capacitance and voltage.
Regulatory Information	

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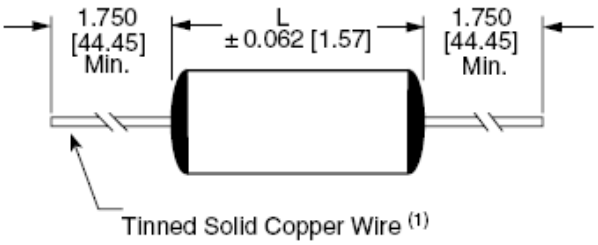
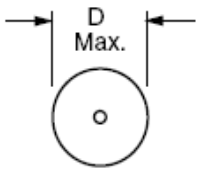
Dimensions

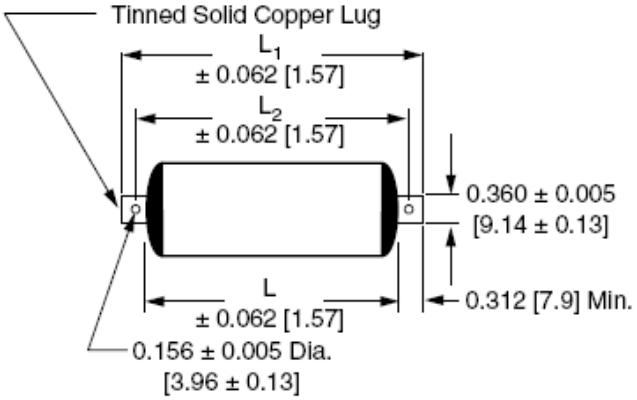
Terminal Style L

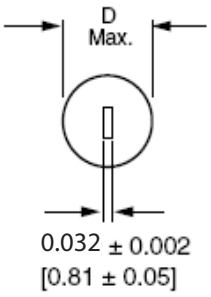




1 & 2 µF 100 Vdc ratings are No. 22 AWG wire .025 [.635] Nominal Diameter
D Max < .700 [17.78], No. 20 AWG wire .032 [.812] Nominal Diameter
D Max ≥ .700 [17.78], No. 18 AWG wire .040 [1.016] Nominal Diameter

Terminal Style H





L1 = L2 + 0.312 (7.9)

Part Numbering System

735P	106	X	5	2	XXX
CDE Type Number	**Capacitance in µF** **10 µF**		**Tolerance** **5** = ±5% **9** = ±10%	**Voltage** **1** = 100 Vdc **2** = 250 Vdc **4** = 400 Vdc	**Special Construction**

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High Frequency, Wrap and Fill

CAP (µF)	Catalog Part Number	Case Size D Inches [MM]	Case Size L Inches [MM]		ESR (mΩ) 20 Khz to 100 Khz	Maximum Ripple Current (Arms) at 20 Khz Case Temperature [2] at +25°C	+35°C	+45°C	+55°C	+65°C	+75°C	+85°C
100 VDC												
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 VDC												
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 VDC												
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												
L2 100 VDC												
1.0	735P105X9100H	0.531 [13.49]	0.875 [22.23]	1.325 (33.66)	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]	1.522 (38.66)	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]	1.522 (38.66)	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]	1.794 (45.60)	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]	2.105 (53.47)	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]	2.841 (72.16)	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]	2.841 (72.16)	6.0	24.3	22.5	20.5	18.4	15.9	13.0	11.9
200 VDC												
1.0	735P105X9200H	0.512 [13.00]	1.375 [34.93]	1.794 (45.60)	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]	1.794 (45.60)	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]	2.054 (52.17)	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]	2.294 (58.27)	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]	2.841 (72.16)	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]	2.841 (72.16)	6.0	27.4	25.4	23.2	20.7	17.9	14.7	13.4
400 VDC												
1.0	735P105X9400H	0.713 [18.11]	1.625 [41.28]	2.054 (52.17)	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]	2.294 (58.27)	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]	2.294 (58.27)	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]	2.841 (72.16)	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]	2.841 (72.16)	6.0	30.0	27.8	25.4	22.7	19.7	16.1	14.7

Notes: (1) Part Numbers listed are for a capacitance tolerance of ± 10 %. To specifiy ± 5 % tolerance, change the "X9" in the Part Number to "X5". (2) The peak current pulse capability ot these capacitors is 10 A/µF. The maximum rate voltage change is 10 V/µs.• Other capacitance values and voltage ratings are available upon request

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