

Type 715P/717P, Orange Drop®, High Voltage, Polypropylene Film/Foil



Type 715P/717P are high AC voltage, film/foil polypropylene capacitors. Well suited for high AC voltage applications requiring corona free performance. These capacitors are ideal in high frequency, high pulse current applications and offer excellent stability, virtually linear temperature coefficient.

Highlights

- Very low dissipation factor
- High dV/dt rating

Specifications

Capacitance Range	470 pF to .015 μ F
Capacitance Tolerance	$\pm 1\%$ to $\pm 10\%$
Rated Voltage	800/900 Vac (1800/2000 Vdc)
Operating Temperature Range	-55 °C to 85 °C +105 °C with proper voltage derating
Lead Wire	Tinned copper clad steel, .032" (0.8) diameter, #20 AWG
Corona Start Voltage (typical)	800 Vac units: 950 - 1000 V RMS 900 Vac units: 1050 - 1100 V RMS
Dielectric	Polypropylene film; utilizing a floating common of metallized polypropylene, which provides self-healing characteristics
Construction	Non-inductively wound with extended foil, internal series section design
Encapsulations	Conformal coating of flame retardant orange epoxy (meets UL94V-0)
Insulation Resistance	400,000 M Ω minimum at +25 °C 20,000 M Ω minimum at +85 °C 2,000 M Ω minimum at +105 °C
Regulatory Information	

Part Numbering System

Dimensions in inches, metric (mm) in parenthesis.

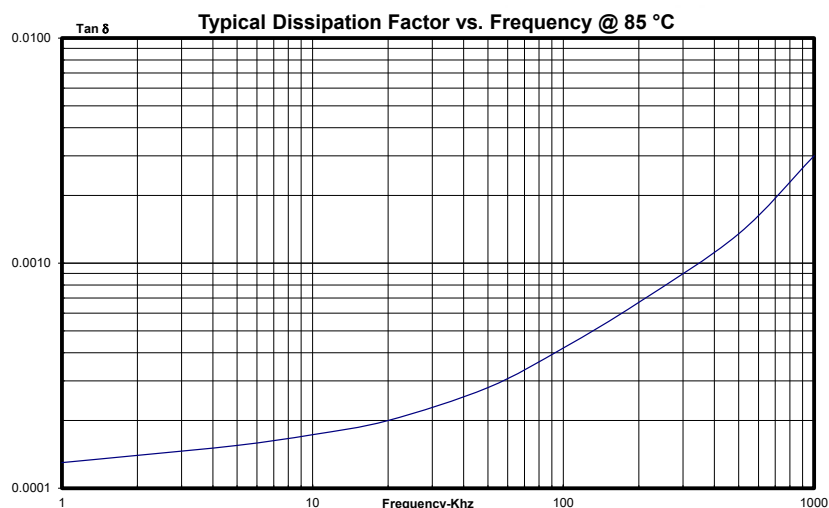
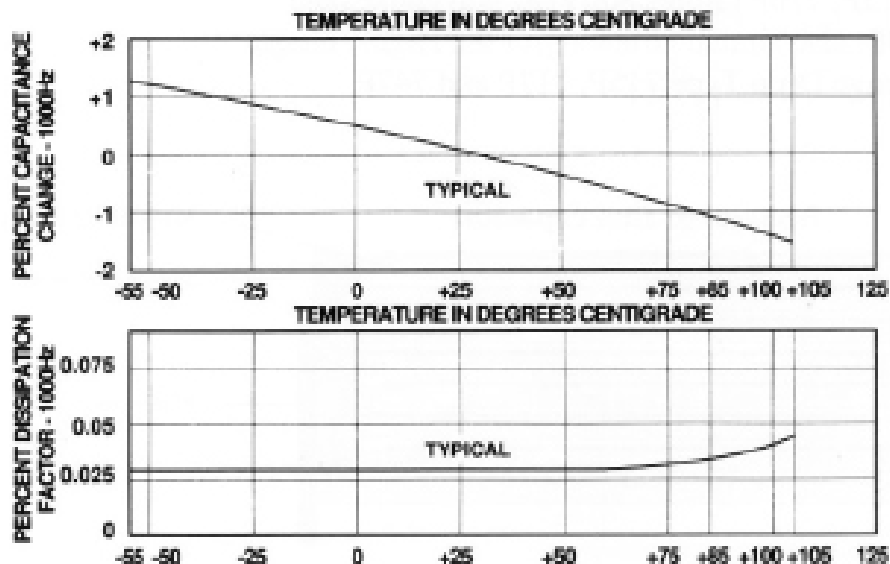
715P/717P	222	5	800	L	B	3	(XXXX)
Series	Capacitance	Capacitance Tolerance	AC Voltage Rating	Case Code	Terminal	Lead Length	Suffix
715P Round Profile	222 = 2200 pF	9 = $\pm 10\%$			A = Straight Lead	1 = 0.187 (4.7) ± 0.030 (0.8)	May be added
717P Pressed Profile		5 = $\pm 5\%$			B = Hairpin Crimp	2 = 0.250 (6.4) ± 0.030 (0.8)	by factory to
		3 = $\pm 3\%$			C = Captive Crimp *	3 = 1.250 (32) Minimum	denote special
		2 = $\pm 2\%$			D = Hockey Stick Crimp	(Custom lead lengths available)	construction
		1 = $\pm 1\%$					

*Terminal C has a lead length of 0.156 (4.0) ± 0.020 (0.5) therefore it is not necessary to indicate the lead length digit. The Captive Crimp is designed for circuit boards with hole sizes of .044 (1.1) to .048 (1.2) in diameter.

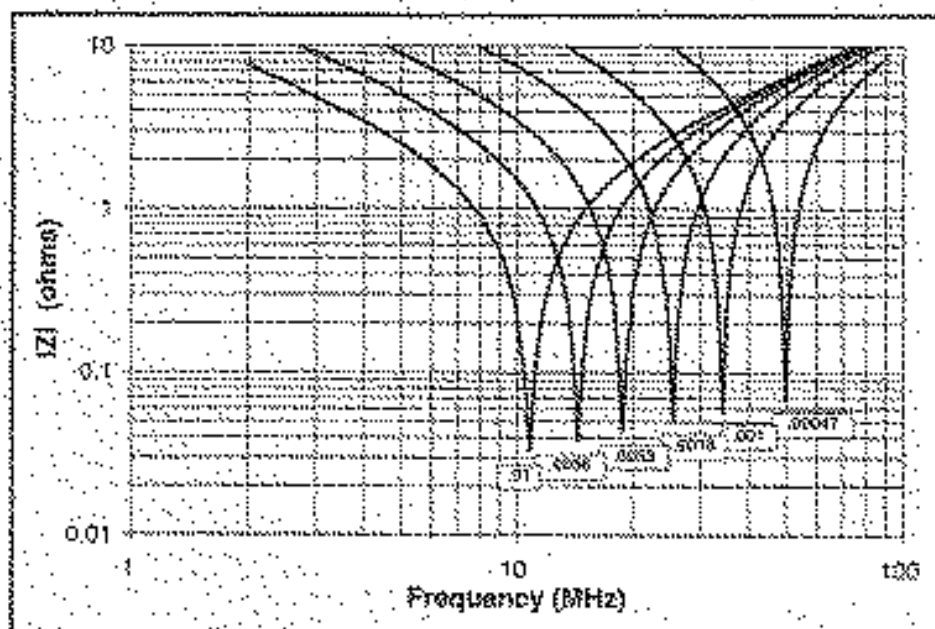
Type 715P/717P, Orange Drop®, High Voltage, Polypropylene Film/Foil Ratings

Cap. (μF)	Catalog Part Number	L Max	Dia Max	H Max	Seated Height	Max dV/dt (Volts/μsec)	Max % D.F. @	
Type 715P, 800 Vac Standard Sizes/Ratings								
0.00047	715P4715800L	1.125 (28.5)	.29 (7.4)	.35 (8.9)	.60 (15.3)	95000	0.029	0.039
0.00056	715P5615800L	1.125 (28.5)	.30 (7.6)	.36 (9.2)	.61 (15.5)	87000	0.029	0.040
0.00068	715P6815800L	1.125 (28.5)	.32 (8.1)	.37 (9.4)	.62 (15.8)	79000	0.029	0.040
0.00082	715P8215800L	1.125 (28.5)	.28 (7.1)	.33 (8.4)	.58 (14.7)	72000	0.030	0.043
0.001	715P1025800L	1.125 (28.5)	.28 (7.1)	.33 (8.4)	.58 (14.7)	65000	0.030	0.043
0.0012	715P1225800L	1.125 (28.5)	.29 (7.4)	.35 (8.9)	.60 (15.3)	60000	0.030	0.044
0.0015	715P1525800L	1.125 (28.5)	.31 (7.9)	.36 (9.2)	.61 (15.5)	53000	0.030	0.044
0.0018	715P1825800L	1.125 (28.5)	.32 (8.1)	.38 (9.7)	.63 (16.0)	49000	0.030	0.044
0.0022	715P2225800L	1.125 (28.5)	.34 (8.6)	.40 (10.2)	.65 (16.5)	44000	0.030	0.045
0.0027	715P2725800L	1.125 (28.5)	.36 (9.2)	.42 (10.7)	.67 (17.0)	40000	0.030	0.045
0.0033	715P3325800L	1.125 (28.5)	.38 (9.7)	.44 (11.2)	.69 (17.5)	36000	0.031	0.046
0.0039	715P3925800L	1.125 (28.5)	.41 (10.4)	.46 (11.7)	.71 (18.0)	33000	0.031	0.046
0.0047	715P4725800L	1.125 (28.5)	.43 (10.9)	.49 (12.5)	.74 (18.8)	30000	0.031	0.047
0.0056	715P5625800L	1.125 (28.5)	.46 (11.7)	.52 (13.2)	.77 (19.6)	28000	0.031	0.048
0.0068	715P6825800L	1.125 (28.5)	.49 (12.5)	.55 (14.0)	.80 (20.3)	25000	0.031	0.049
0.0082	715P8225800L	1.125 (28.5)	.53 (13.5)	.58 (14.7)	.83 (21.2)	23000	0.031	0.051
0.01	715P1035800L	1.125 (28.5)	.57 (14.5)	.63 (16.0)	.88 (22.4)	21000	0.032	0.053
0.012	715P1235800L	1.125 (28.5)	.61 (15.5)	.67 (17.0)	.92 (23.4)	19000	0.032	0.055
0.015	715P1535800L	1.125 (28.5)	.67 (17.0)	.72 (18.3)	.97 (24.6)	17000	0.033	0.058
Type 717P, 800 Vac Standard Sizes/Ratings								
0.00047	717P4715800L	1.125 (28.5)	.21 (5.4)	.39 (9.9)	.64 (16.3)	95000	0.029	0.039
0.00056	717P5615800L	1.125 (28.5)	.22 (5.6)	.40 (10.2)	.65 (16.5)	87000	0.029	0.040
0.00068	717P6815800L	1.125 (28.5)	.24 (6.1)	.42 (10.7)	.67 (17.0)	79000	0.029	0.040
0.00082	717P8215800L	1.125 (28.5)	.20 (5.1)	.38 (9.7)	.63 (16.0)	72000	0.030	0.043
0.001	717P1025800L	1.125 (28.5)	.20 (5.1)	.38 (9.7)	.63 (16.0)	65000	0.030	0.043
0.0012	717P1225800L	1.125 (28.5)	.21 (5.4)	.39 (9.9)	.64 (16.3)	60000	0.030	0.044
0.0015	717P1525800L	1.125 (28.5)	.31 (7.9)	.41 (10.4)	.66 (16.8)	53000	0.030	0.044
0.0018	717P1825800L	1.125 (28.5)	.23 (5.9)	.42 (10.7)	.67 (17.0)	49000	0.030	0.044
0.0022	717P2225800L	1.125 (28.5)	.24 (6.1)	.45 (11.4)	.70 (17.8)	44000	0.030	0.045
0.0027	717P2725800L	1.125 (28.5)	.25 (6.4)	.47 (11.9)	.72 (18.3)	40000	0.030	0.045
0.0033	717P3325800L	1.125 (28.5)	.27 (6.9)	.50 (12.7)	.75 (19.1)	36000	0.031	0.046
0.0039	717P3925800L	1.125 (28.5)	.29 (7.4)	.55 (14.0)	.80 (20.3)	33000	0.031	0.046
0.0047	717P4725800L	1.125 (28.5)	.29 (7.4)	.57 (14.5)	.82 (20.8)	30000	0.031	0.047
0.0056	717P5625800L	1.125 (28.5)	.32 (8.1)	.60 (15.3)	.85 (21.6)	28000	0.031	0.048
0.0068	717P6825800L	1.125 (28.5)	.34 (8.6)	.63 (16.0)	.88 (22.4)	25000	0.031	0.049
0.0082	717P8225800L	1.125 (28.5)	.38 (9.7)	.69 (17.5)	.94 (23.9)	23000	0.031	0.051
0.01	717P1035800L	1.125 (28.5)	.43 (10.9)	.73 (18.5)	.98 (24.9)	21000	0.032	0.053
0.012	717P1235800L	1.125 (28.5)	.44 (11.2)	.79 (20.1)	1.04 (26.4)	19000	0.032	0.055
0.015	717P1535800L	1.125 (28.5)	.50 (12.7)	.85 (21.6)	1.10 (27.9)	17000	0.033	0.058

800 Vac Performance Characteristics

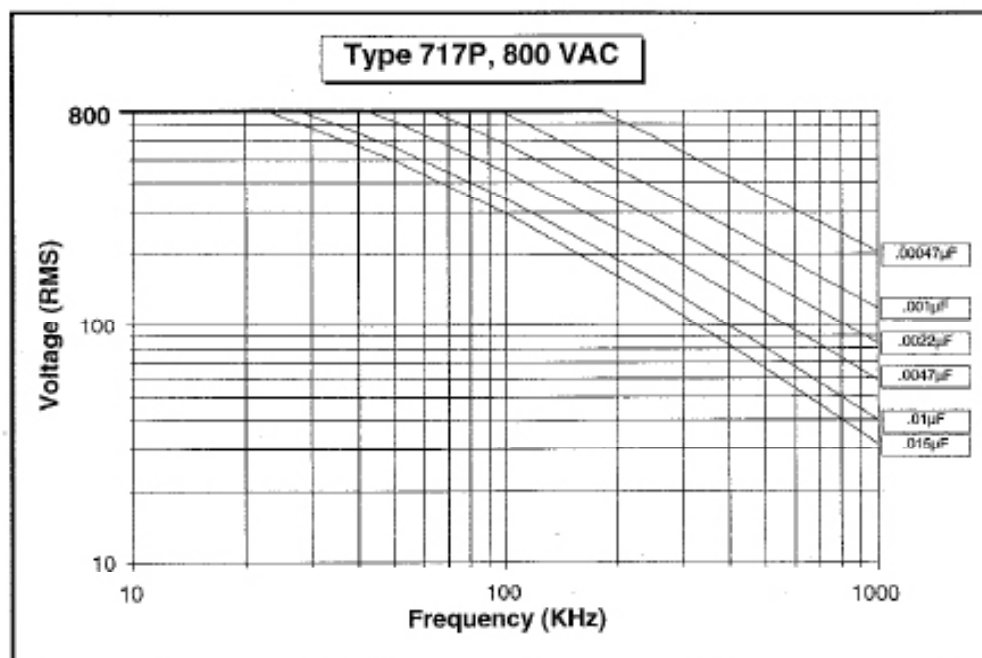
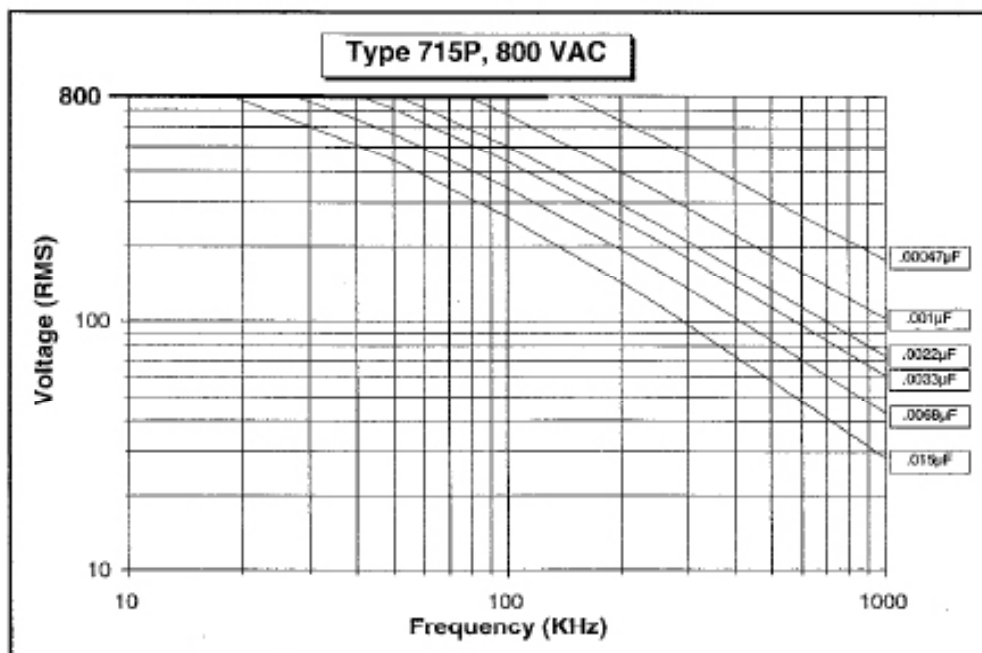


Typical Impedance vs. Frequency



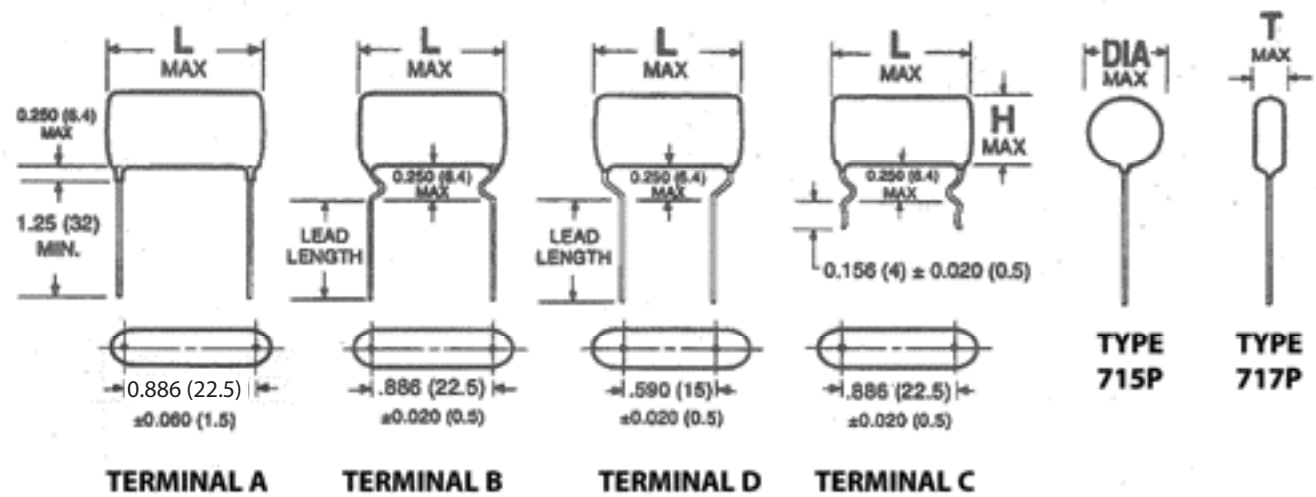
800 Vac Performance Characteristics

RMS Voltage vs. Frequency @ +85 °C



Type 715P/717P, Orange Drop®, High Voltage, Polypropylene Film/Foil

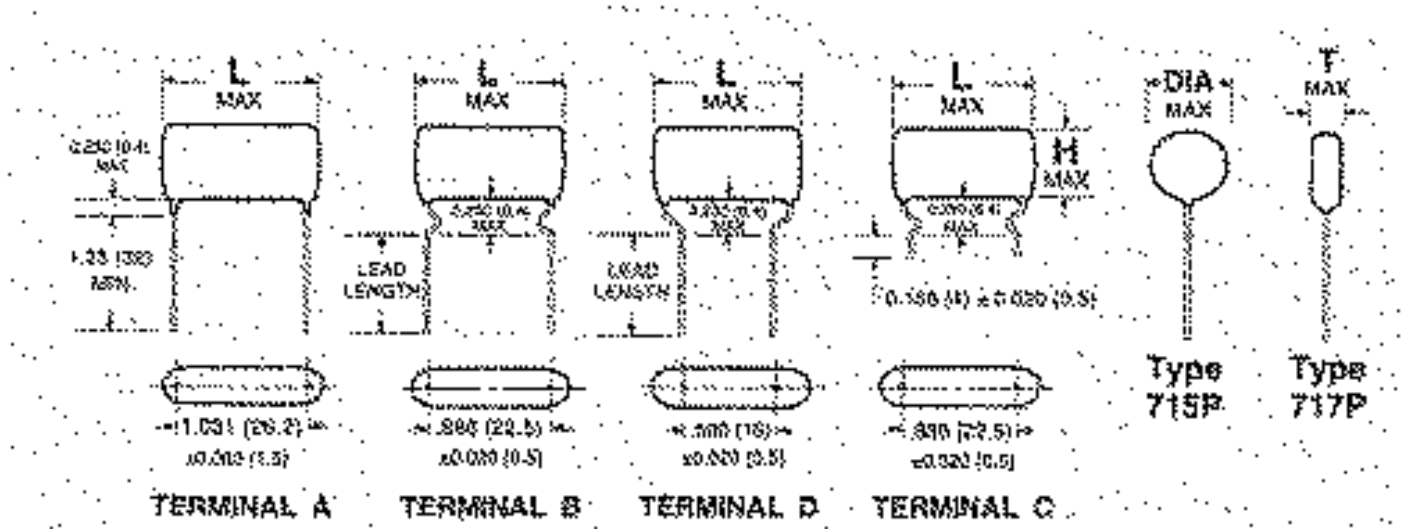
Standard Lead Styles/Lead Spacing 800 Vac



Standard Marking Format

Sample Marking on unit	Description		Tolerance codes per EIA standards	
	CDE	CDE Electronics identification	F	±1%
CDE715P800VAC	715P	Type number	G	±2%
222J 9810	800VAC	AC Voltage rating, Volts	H	±3%
	222J	Capacitance and tolerance code	J	±5%
	9810	Weekly date code (i.e. 10th wk of 1998)	K	±10%

Standard Lead Styles/Lead Spacing 900 Vac



Standard Marking Format

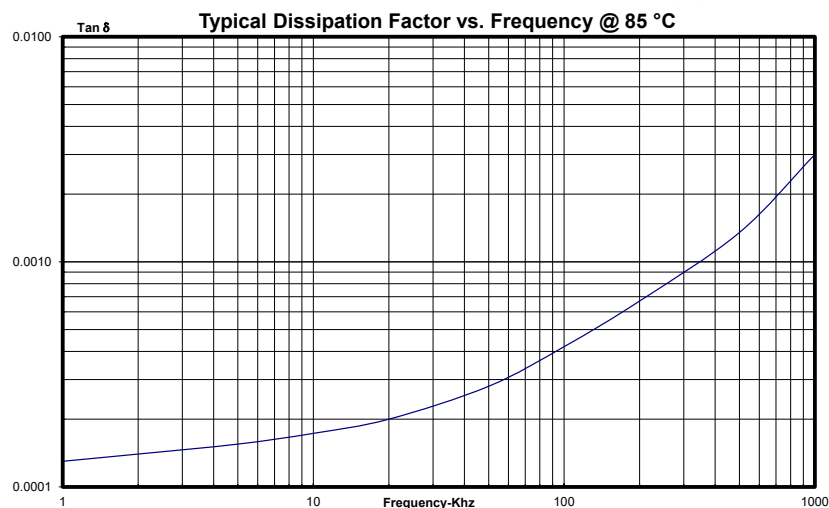
Sample Marking on unit	Description		Tolerance codes per EIA standards	
	CDE	CDE Electronics identification	F	±1%
CDE715P900VAC	715P	Type number	G	±2%
222J 9810	900VAC	AC Voltage rating, Volts	H	±3%
	222J	Capacitance and tolerance code	J	±5%
	9810	Weekly date code (i.e. 10th wk of 1998)	K	±10%

Type 715P/717P, Orange Drop®, High Voltage, Polypropylene Film/Foil

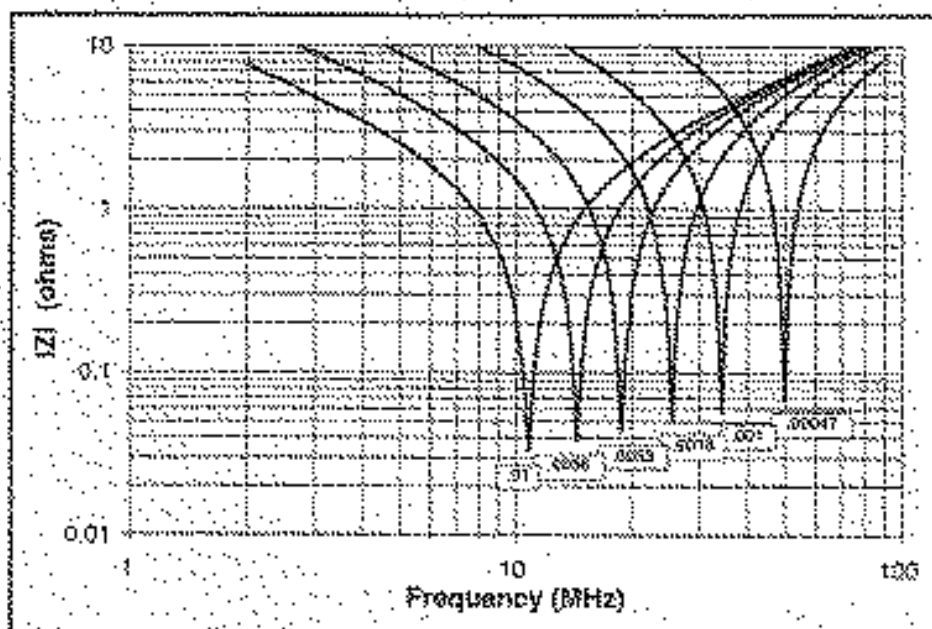
Ratings

Cap. (μF)	Catalog Part Number	L Max	Dia Max	H Max	Seated Height	Max dV/dt (Volts/μsec)	Max % D.F. @	
							20 KHz	100 KHz
Type 715P, 900 Vac Standard Sizes/Ratings								
0.00047	715P4715900L	1.25 (31.8)	.27 (6.9)	.33 (8.4)	.58 (14.8)	104000	0.031	0.043
0.00056	715P5615900L	1.25 (31.8)	.28 (7.1)	.34 (8.7)	.59 (15.0)	95000	0.031	0.043
0.00068	715P6815900L	1.25 (31.8)	.29 (7.4)	.35 (8.9)	.60 (15.3)	86000	0.031	0.043
0.00082	715P8215900L	1.25 (31.8)	.31 (7.9)	.36 (9.2)	.61 (15.5)	78000	0.031	0.043
0.001	715P1025900L	1.25 (31.8)	.31 (7.9)	.37 (9.4)	.62 (15.8)	71000	0.031	0.043
0.0012	715P1225900L	1.25 (31.8)	.33 (8.4)	.38 (9.7)	.63 (16.0)	65000	0.031	0.043
0.0015	715P1525900L	1.25 (31.8)	.35 (8.9)	.40 (10.2)	.65 (16.5)	58000	0.031	0.044
0.0018	715P1825900L	1.25 (31.8)	.37 (9.4)	.42 (10.7)	.67 (17.0)	53000	0.031	0.044
0.0022	715P2225900L	1.25 (31.8)	.39 (9.9)	.45 (11.4)	.69 (17.5)	48000	0.031	0.044
0.0027	715P2725900L	1.25 (31.8)	.42 (10.7)	.47 (11.9)	.70 (17.8)	43000	0.031	0.044
0.0033	715P3325900L	1.25 (31.8)	.45 (11.4)	.50 (12.7)	.72 (18.3)	39000	0.031	0.046
0.0039	715P3925900L	1.25 (31.8)	.47 (11.9)	.53 (13.5)	.75 (19.1)	36000	0.031	0.046
0.0047	715P4725900L	1.25 (31.8)	.51 (13.0)	.56 (14.2)	.81 (20.6)	33000	0.031	0.047
0.0056	715P5625900L	1.25 (31.8)	.54 (13.7)	.60 (15.3)	.85 (21.6)	30000	0.031	0.048
0.0068	715P6825900L	1.25 (31.8)	.58 (14.7)	.64 (16.3)	.89 (22.6)	27000	0.031	0.049
0.0082	715P8225900L	1.25 (31.8)	.63 (16.0)	.69 (17.5)	.93 (23.6)	25000	0.032	0.051
0.01	715P1035900L	1.25 (31.8)	.68 (17.3)	.73 (18.5)	.98 (24.9)	23000	0.032	0.053
Type 717P, 900 Vac Standard Sizes/Ratings								
0.00047	717P4715900L	1.25 (31.8)	.20 (5.1)	.37 (9.4)	.62 (15.8)	104000	0.031	0.043
0.00056	717P5615900L	1.25 (31.8)	.21 (5.4)	.38 (9.7)	.63 (16.0)	95000	0.031	0.043
0.00068	717P6815900L	1.25 (31.8)	.23 (5.9)	.39 (9.9)	.64 (16.3)	86000	0.031	0.043
0.00082	717P8215900L	1.25 (31.8)	.23 (5.9)	.40 (10.2)	.65 (16.5)	78000	0.031	0.043
0.001	717P1025900L	1.25 (31.8)	.23 (5.9)	.43 (10.9)	.68 (17.3)	71000	0.031	0.043
0.0012	717P1225900L	1.25 (31.8)	.25 (6.4)	.44 (11.2)	.69 (17.5)	65000	0.031	0.043
0.0015	717P1525900L	1.25 (31.8)	.27 (6.9)	.47 (11.9)	.72 (18.3)	58000	0.031	0.044
0.0018	717P1825900L	1.25 (31.8)	.27 (6.9)	.52 (13.2)	.77 (19.6)	53000	0.031	0.044
0.0022	717P2225900L	1.25 (31.8)	.30 (7.6)	.54 (13.7)	.79 (20.1)	48000	0.031	0.044
0.0027	717P2725900L	1.25 (31.8)	.32 (7.6)	.57 (14.5)	.82 (20.8)	43000	0.031	0.044
0.0033	717P3325900L	1.25 (31.8)	.33 (8.4)	.63 (16.0)	.88 (22.4)	39000	0.031	0.046
0.0039	717P3925900L	1.25 (31.8)	.36 (9.2)	.66 (16.8)	.91 (23.1)	36000	0.031	0.046
0.0047	717P4725900L	1.25 (31.8)	.39 (9.9)	.69 (17.5)	.94 (23.9)	33000	0.031	0.047
0.0056	717P5625900L	1.25 (31.8)	.43 (10.9)	.73 (18.5)	.98 (24.9)	30000	0.031	0.048
0.0068	717P6825900L	1.25 (31.8)	.47 (11.9)	.78 (19.8)	1.03 (26.2)	27000	0.031	0.049
0.0082	717P8225900L	1.25 (31.8)	.49 (12.5)	.85 (23.1)	1.10 (27.9)	25000	0.032	0.051
0.01	717P1035900L	1.25 (31.8)	.54 (13.7)	.91 (23.1)	1.16 (29.5)	23000	0.032	0.053

900 Vac Performance Characteristics



Typical Impedance vs. Frequency



900 Vac Performance Characteristics

The graph shows the relationship between RMS voltage and frequency for a Type 715P transformer at 900 VAC. The y-axis represents Voltage (RMS) on a logarithmic scale from 10 to 900. The x-axis represents Frequency (KHz) on a logarithmic scale from 10 to 1000. Five curves are plotted, each corresponding to a different power rating: 100W, 200W, 300W, 400W, and 500W. The curves show that the RMS voltage decreases as the frequency increases, and higher power ratings result in higher RMS voltages across the frequency range.

Frequency (KHz)	100W (V)	200W (V)	300W (V)	400W (V)	500W (V)
10	~150	~200	~250	~300	~350
100	~100	~130	~160	~190	~220
1000	~60	~80	~100	~120	~140

