

WRAP-AND-FILL METALIZED POLYESTER FILM CAPACITORS



FEATURES

- Smallest polyester capacitor available
- Wide temperature range
- Rated for DC and AC operation
- Capacitance values to 10 μF

MAJOR APPLICATIONS:

Blocking, filtering, bypass, timing, coupling decoupling, pulse operations, power supplies.

PHYSICAL CHARACTERISTICS

CONSTRUCTION:

Non-inductive wound metalized polyester.

CASE: Flame retardant tape wrap and epoxy endfill.

LEAD MATERIAL: Solder coated solid wire.

LEAD WIRE SIZES:

Case Dia.	Lead AWG
< 0.270	0.025 (No. 22)
\geq 0.270	0.032 (No. 20)

LEAD STRENGTH:

Capable of withstanding a five pound pull force on lead axis.

MARKING:

Dearborn trademark, type or catalog number, capacitance, tolerance and voltage.

ELECTRICAL SPECIFICATIONS

CAPACITANCE RANGE: 0.01 μF to 10.0 μF

VOLTAGE RATING:

- 63 VDC to 400 VDC
- 40 VAC to 200 VAC

CAPACITANCE TOLERANCE: $\pm 10\%$, $\pm 5\%$, $\pm 2\%$

OPERATING TEMPERATURE: -55°C to $+125^{\circ}\text{C}$

VOLTAGE DERATING: At $+125^{\circ}\text{C}$, 50% of the 85°C rating

DISSIPATION FACTOR: 0.9% maximum

DC VOLTAGE TEST: 200% of rated voltage for 2 minutes

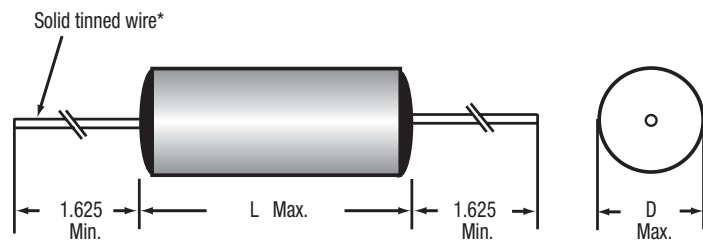
INSULATION RESISTANCE:

- At $+25^{\circ}\text{C}$, 25,000 Megaohm-Microfarads, need not exceed 50,000 Megaohms
- At $+85^{\circ}\text{C}$, 1,000 Megaohm-Microfarads, need not exceed 2,500 Megaohms

MAXIMUM PULSE RISE TIME

Capacitor Length (inch)	Rise Time dv / dt (V / μs)			
	63 VDC	100 VDC	250 VDC	400 VDC
0.450	20	40	80	-
0.580	15	20	40	80
0.700	10	15	-	50
0.830	8	10	20	40
1.00	6	8	15	30
1.20	-	6	10	20
1.50	-	-	-	15
1.70	-	-	8	-
1.95	-	-	8	10

DIMENSIONS (in inches)



*Leads to be within ± 0.062 " (1.57 mm) of the center line at egress, but not less than 0.031" for the edge.

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TYPE 442P

STANDARD RATINGS

Capacitance		Voltage Code 063 63 VDC / 40 VAC*		Voltage Code 100 100 VDC / 63 VAC*		Voltage Code 250 250 VDC / 160 VAC*		Voltage Code 400 400 VDC / 200 VAC*	
μ F	Code	D	L	D	L	D	L	D	L
0.010	103	-	-	-	-	0.200	0.450	0.200	0.580
0.015	153	-	-	-	-	0.200	0.450	0.200	0.580
0.022	223	-	-	-	-	0.200	0.450	0.230	0.580
0.033	333	-	-	-	-	0.200	0.450	0.270	0.580
0.047	473	-	-	-	-	0.230	0.450	0.300	0.580
0.068	683	-	-	0.200	0.450	0.230	0.580	0.290	0.700
0.10	104	-	-	0.200	0.450	0.270	0.580	0.330	0.700
0.15	154	-	-	0.210	0.450	0.310	0.580	0.340	0.830
0.22	224	0.200	0.450	0.240	0.450	0.340	0.580	0.400	0.830
0.33	334	0.230	0.450	0.230	0.580	0.340	0.830	0.430	1.00
0.47	474	0.260	0.450	0.260	0.580	0.390	0.830	0.440	1.20
0.68	684	0.240	0.580	0.290	0.580	0.370	1.00	0.510	1.20
1.00	105	0.280	0.580	0.350	0.580	0.430	1.00	0.600	1.20
1.50	155	0.320	0.580	0.360	0.700	0.510	1.00	0.640	1.50
2.20	225	0.380	0.580	0.380	0.830	0.530	1.20	0.650	1.95
3.30	335	0.380	0.700	0.460	0.830	0.630	1.20	0.780	1.95
5.00	505	0.460	0.700	0.510	1.00	0.740	1.20	0.910	1.95
6.00	605	0.500	0.830	0.440	1.20	0.640	1.70	-	-
8.00	805	0.510	1.00	0.500	1.20	0.690	1.95	-	-
10.00	106	0.560	1.00	0.620	1.20	0.860	1.95	-	-

Additional capacitance values, voltages, and tolerances are available upon request.

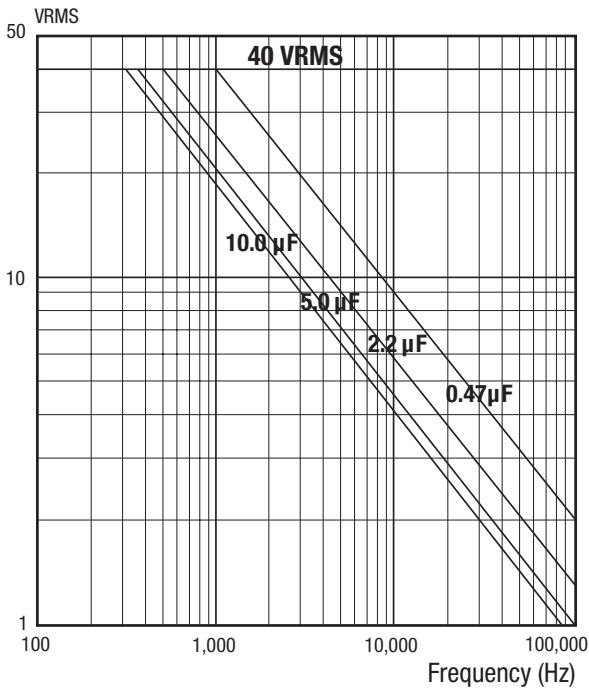
* AC voltage rating is at 60Hz 1.4 x VRMS + VDC should not exceed the rated VDC.

* Graphs of AC voltage vs. frequency follow.

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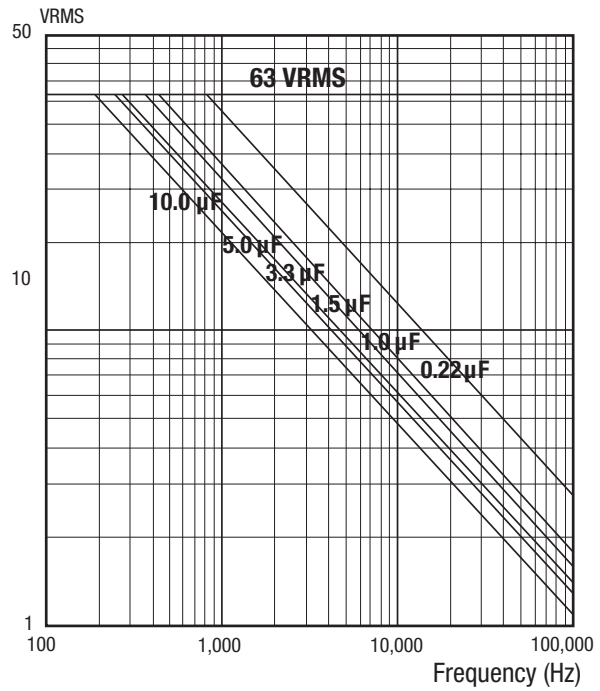
VOLTAGE VS. FREQUENCY TYPE 442P

63 VDC / 40 VAC



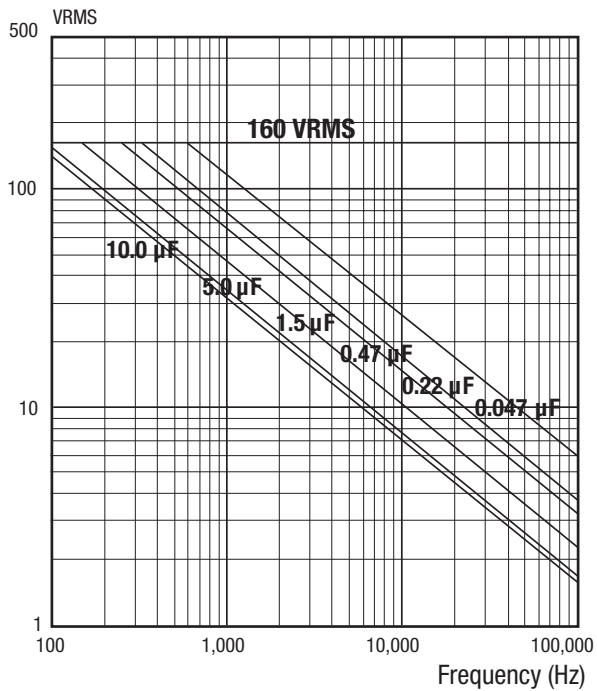
VOLTAGE VS. FREQUENCY TYPE 442P

100 VDC / 63 VAC



VOLTAGE VS. FREQUENCY TYPE 442P

250 VDC / 160 VAC



VOLTAGE VS. FREQUENCY TYPE 442P

400 VDC / 200 VAC

