METAL CASE HERMETICALLY SEALED TUBULAR POLYPROPYLENE FILM / FOIL CAPACITORS

TYPE 700P

FEATURES

- High stability
- High insulation resistance
- Low series resistance
- Low losses
- Low dielectric absorption
- Excellent AC performance
- Hermetically sealed

MAJOR APPLICATIONS:
High current and high pulse operations, protection circuits in SMPS, snubber and SCR commutating circuits, oscillator, timing and filter circuits, high frequency coupling and other applications where severe environments require hermetically sealed cases.

PHYSICAL CHARACTERISTICS

CONSTRUCTION:
Polypropylene film extended aluminum foil.

CASE:
Hermetically sealed metal enclosure. Styles and dimensions are in Guide to Ordering section in the front of the catalog.

LEAD MATERIAL:
Solder coated copper wire.

LEAD WIRE SIZES:

Case Dia.	Lead AWG
0.400 - 0.500	No. 20
0.562 and over	No. 18

LEAD PULL: 5 lbs (2.3 kg) for one minute. No physical damage.

LEAD BEND: After three complete consecutive bends. No damage.

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

ELECTRICAL SPECIFICATIONS

CAPACITANCE RANGE:
0.01 µF to 1.0 µF

VOLTAGE RATING:
- 200 VDC to 800 VDC
- 155 VRMS to 500 VRMS

CAPACITANCE TOLERANCE:
±20%, ±10%, ±5%

OPERATING TEMPERATURE:
-55°C to +105°C

VOLTAGE DERATING:
- At +105°C, 70% of the 85° rating for DC applications
- For AC applications above 85°C, see Table 1

DISSIPATION FACTOR:
0.1% maximum

DC VOLTAGE TEST:
250% of rated voltage for 5 seconds

INSULATION RESISTANCE:
Measured at rated VDC after a 2 minute test.
- At +25°C, 200,000 Megaohm Microfarads, need not exceed 400,000 Megaohms
- At +85°C, 10,000 Megaohm-Microfarads, need not exceed 20,000 Megaohms
- At +105°C, 1,000 Megaohm-Microfarads, need not exceed 2,000 Megaohms

MAXIMUM PULSE RISE TIME

Capacitor Length (inch)	Rise Time dv / dt (V / µs)			
	200 VDC	400 VDC	600 VDC	800 VDC
0.875	1000	1800	3000	-
1.062	700	1000	2000	-
1.125	-	-	-	2500
1.375	450	650	1000	1500
1.750	400	500	700	1000
2.125	-	400	600	800

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TABLE 1: AC VOLTAGE RATINGS

Capacitance Range	EQUIVALENT VAC RATINGS										
	1,000Hz		5,000Hz		10,000Hz		15,000Hz		20,000Hz		Max. AC Life Test Voltage (RMS)
	85°C	105°C	85°C	105°C	85°C	105°C	85°C	105°C	85°C	105°C	
200 V											
0.047 - 0.068	155	75	115	75	85	60	70	50	60	45	155
0.082 - 0.47	155	75	75	60	55	40	45	35	40	30	155
0.68 - 1.0	155	75	75	50	55	30	45	20	40	15	155
400 V											
0.033	200	100	190	100	135	105	110	85	95	75	200
0.039 - 0.47	200	100	100	80	75	55	60	45	50	40	200
0.68 - 1.0	200	100	100	50	75	30	60	20	50	15	200
600 V											
0.001- 0.033	240	165	240	200	190	140	155	120	130	100	240
0.039 - 0.22	240	165	150	115	100	75	90	65	75	50	240
0.27 - 0.47	240	120	150	65	100	35	90	25	70	15	240
800 V											
0.0056 - 0.033	500	250	500	190	500	150	450	120	405	100	500
0.039 - 0.10	500	250	400	120	240	100	185	75	140	60	500
0.12 - 0.33	500	195	280	75	160	45	115	30	85	20	500

STANDARD RATINGS

Capacitance		Voltage Code 200 200 VDC / 155 VAC*		Voltage Code 400 400 VDC / 200 VAC*		Voltage Code 600 600 VDC / 240 VAC*		Voltage Code 800 800 VDC / 500 VAC*	
µF	Code	D	L	D	L	D	L	D	L
0.010	103	-	-	-	-	0.400	0.875	0.400	1.125
0.015	153	-	-	-	-	0.400	0.875	0.500	1.125
0.022	223	-	-	-	-	0.400	1.062	0.500	1.125
0.033	333	-	-	0.400	0.875	0.500	1.062	0.500	1.375
0.047	473	0.400	0.875	0.400	1.062	0.500	1.375	0.562	1.375
0.068	683	0.400	1.062	0.500	1.062	0.562	1.375	0.670	1.375
0.10	104	0.400	1.062	0.500	1.375	0.670	1.375	0.670	1.750
0.15	154	0.500	1.062	0.562	1.375	0.670	1.750	0.750	1.750
0.22	224	0.500	1.375	0.670	1.375	0.750	1.750	1.000	1.750
0.33	334	0.670	1.375	0.750	1.750	1.000	1.750	1.000	2.125
0.47	474	0.670	1.750	0.750	1.750	1.000	2.125	-	-
0.68	684	0.750	1.750	1.000	1.750	-	-	-	-
1.00	105	1.000	1.750	1.000	2.125	-	-	-	-

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

* 1.4 x VRMS + VDC should not exceed the rated VDC.

* See Table 1 for AC voltage vs frequency and temperature.

400 and 600 VAC parts are available upon request.