

ELECTRONIC FILM CAPACITORS, INC.

Reidville Industrial Park * 41 Interstate Lane
WATERBURY, CONNECTICUT 06705

PHONE (203) 755-5629 FAX (203) 755-0659



POLYSTYRENE and FOIL

SERIES 1906

EFC Series 1906 are polystyrene and foil capacitors. This series offers the advantage of extremely high insulation resistance (IR), low dissipation factor and very low dielectric absorption. 1906 have a linear negative temperature coefficient. Applications include: timing circuits and filters. Packaging options include: wrap and fill (TC), radial lead box (EFR), axial lead (EC, EF). Application options: -120 PPM/°C temperature coefficient (T1906), -80 PPM/°C temperature coefficient (A1906).

SPECIFICATIONS

1. TEMPERATURE RANGE

- 55 °C to + 85 °C at rated voltage.

2. CAPACITANCE

Capacity shall be measured at 1KHz ± 20 HZ.

Measurements shall be taken at 25°C.

3. DIELECTRIC STRENGTH

At 25 °C, 200% of rated voltage when applied terminal to terminal for one minute through a current limiting resistance.

4. INSULATION RESISTANCE

At 25 °C after 2 minutes charge time at rated voltage or 500 VDC, whichever is less, the minimum IR shall be 500,000 Megohm-Microfarads, but need not exceed 1,000,000 Megohms.

5. HUMIDITY RESISTANCE

Series 1906 shall meet the requirements of MIL-STD. 202C, Method 103B.

6. DISSIPATION FACTOR

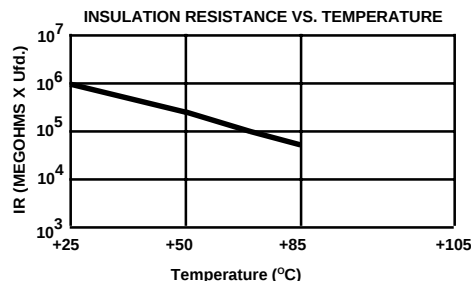
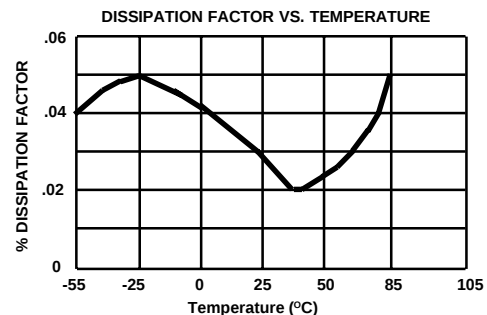
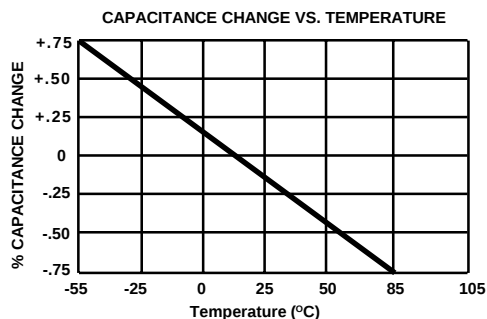
Shall be 0.1 % max. when measured as in Par. 2.

7. LIFE TEST

Will withstand the application of 140% rated voltage at +85°C for 250 hours with not more than one failure in 12 permitted.

TYPICAL TEMPERATURE CURVES

POLYSTYRENE and FOIL





CATALOG NOMENCLATURE

* 1906 TC - 3 - .001 - 1 - 5

CASE CODE

TC - WRAP & FILL - ROUND - AXIAL
TF - WRAP & FILL - FLAT - AXIAL
EC - EPOXY CASE - ROUND - AXIAL
EF - EPOXY CASE - FLAT - AXIAL
EFR - EPOXY CASE - FLAT - RADIAL

DIELECTRIC CODE

1206 - POLYPROPYLENE/FOIL
1213 - METALLIZED POLYPROPYLENE
1306 - POLYESTER/FOIL
1313 - METALLIZED POLYESTER
1606 - POLYCARBONATE/FOIL
1613 - METALLIZED POLYCARBONATE
1906 - POLYSTYRENE/FOIL

SIZE CODE

3 - STANDARD
2 - MINIATURE
1 - SUBMINIATURE
X - NON-STANDARD

FOR EFC METRIC CASES USE THE
ONE LETTER CASE CODE LISTED.

FOR EFC "EC" STYLE USE THE
TWO LETTER CASE CODE.

CAPACITANCE

IN MICROFARADS (μF)

VOLTAGE

.35 - 35 VDC
0 - 50 VDC
1 - 100 VDC
2 - 200 VDC
3 - 300 VDC
4 - 400 VDC
ETC.

TOLERANCE

1 - 1%
2 - 2%
5 - 5%
ETC.

* OPTIONS

THE FOLLOWING OPTIONS ARE AVAILABLE FROM EFC BY SPECIFYING THE APPROPRIATE PREFIX.

TEMPERATURE COEFFICIENTS:

Different T.C.'s are available in both Polypropylene and Polystyrene dielectrics. T.C.'s and the appropriate prefixes are as follows:

A1206 = -150 PPM/ $^{\circ}\text{C}$ $\pm$ 30 PPM
T1206 = -270 PPM/ $^{\circ}\text{C}$ $\pm$ 30 PPM
01906 = ZERO PPM/ $^{\circ}\text{C}$ $\pm$ 50 PPM
A1906 = -80 PPM/ $^{\circ}\text{C}$ $\pm$ 30 PPM
T1906 = -120 PPM/ $^{\circ}\text{C}$ $\pm$ 30 PPM

HIGH VOLTAGE:

EFC high voltage metallized polyester capacitors are designed for use in high voltage power supplies, rectifiers and other similar circuits. Voltage ratings to 15,000 DC are common-place at EFC. Specify with the prefix **HV**.

AC CURRENT:

Specify metallized polyester and termination procedures to enable EFC to supply a small sized **AC** rated capacitor for general purpose use at 60 HZ. Specify with the prefix **AC**.

HIGH AMPERAGE AND PULSE CURRENTS:

Dual metallized carriers allow these capacitors to handle high amperage and pulsing currents. Available in both polyester and polypropylene dielectrics. Specify with the prefix **MF**. Contact the factory for an **MF** spec. sheet.

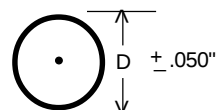
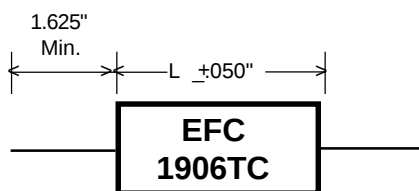
SWITCH MODE POWER SUPPLY:

Polypropylene and polyester capacitors designed for SMPS have low ESR and high current rating should be specified with the **SP** prefix.

EFC will manufacture to any non-standard value and size. Please consult factory for special requirements.

EFC**1906TC**

Polystyrene and Foil Capacitors



(All dimensions in inches)

**Tubular
Wrap and Fill**

Lead Specs.

Tinned Copperweld

Under .250D = 24 AWG

.250 - .440D = 22 AWG

Above .440D = 20 AWG

DIMENSIONS and RATINGS

Cap.	1906TC-2 50 VDC		1906TC-3 100 VDC		1906TC-3 200 VDC		1906TC-3 400 VDC		1906TC-3 600 VDC			
μF	D	L	D	L	D	L	D	L	D	L		
.001	.160	.406	.180	.406	.180	.406	.230	.406	.240	.531		
.0012	.160	.406	.180	.406	.180	.406	.250	.406	.260	.531		
.0015	.160	.406	.180	.406	.180	.406	.170	.531	.290	.531		
.0022	.160	.406	.180	.406	.220	.406	.200	.531	.250	.656		
.0027	.160	.406	.180	.406	.240	.406	.220	.531	.270	.656		
.0039	.190	.406	.210	.406	.190	.531	.260	.531	.320	.656		
.0047	.200	.406	.220	.406	.210	.531	.280	.531	.350	.656		
.0056	.220	.406	.240	.406	.230	.531	.240	.656	.320	.781		
.0068	.240	.406	.180	.531	.250	.531	.270	.656	.350	.781		
.0082	.180	.531	.200	.531	.270	.531	.290	.656	.390	.781		
.01	.190	.531	.220	.531	.300	.531	.320	.656	.370	.906		
.012	.210	.531	.230	.531	.260	.656	.350	.656	.400	.906		
.015	.230	.531	.260	.531	.290	.656	.340	.781	.450	.906		
.018	.250	.531	.280	.531	.320	.656	.370	.781	.490	.906		
.022	.280	.531	.250	.656	.350	.656	.400	.781	.450	1.190		
.027	.250	.656	.280	.656	.340	.781	.390	.906	.500	1.190		
.033	.270	.656	.300	.656	.370	.781	.430	.906	.550	1.190		
.039	.300	.656	.330	.656	.400	.781	.470	.906	.590	1.190		
.047	.320	.656	.310	.781	.440	.781	.510	.906	.650	1.190		
.056	.350	.656	.340	.781	.430	.906	.470	1.190	.610	1.440		
.068	.340	.781	.370	.781	.470	.906	.520	1.190	.670	1.440		
.082	.370	.781	.410	.781	.510	.906	.570	1.190	.740	1.440		
.1	.410	.781	.400	.906	.480	1.190	.630	1.190	.730	1.690		
.12	.440	.781	.440	.906	.530	1.190	.600	1.440	.800	1.690		
.15	.440	.906	.490	.906	.580	1.190	.670	1.440	.890	1.690		
.18	.480	.906	.450	1.190	.640	1.190	.730	1.440	.970	1.690		
.22	.530	.906	.500	1.190	.620	1.440	.730	1.690	1.070	1.690		
.27	.500	1.190	.550	1.190	.680	1.440	.810	1.690				
.33	.550	1.190	.610	1.190	.750	1.440	.890	1.690				
.39	.590	1.190	.590	1.440	.740	1.690	.970	1.690				
.47	.650	1.190	.640	1.440	.810	1.690	1.060	1.690				
.56	.620	1.440	.700	1.440	.890	1.690						
.68	.690	1.440	.690	1.690	.980	1.690						
.82	.750	1.440	.760	1.690								
1.0	.750	1.690	.840	1.690								
1.25	.840	1.690	.930	1.690								
1.5	.920	1.690	1.020	1.690								

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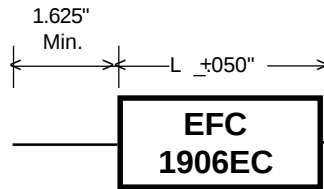
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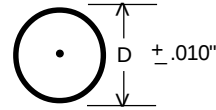
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EFC

Polystyrene and Foil Capacitors



(All dimensions in inches)

**1906EC**
**Epoxy Case
(Axial Leads)**

Lead Specs.

Tinned Copperweld

Under .250D = 24 AWG

.250 - .440D = 22 AWG

Above .440D = 20 AWG

DIMENSIONS and RATINGS

Cap.	1906EC 50 VDC		1906EC 100 VDC		1906EC 200 VDC		1906EC 400 VDC		1906EC 600 VDC			
μF	D	L	D	L	D	L	D	L	D	L		
.001	1	A	1	A	2	A	1	B	2	C		
.0012	1	A	1	A	2	A	2	B	2	C		
.0015	1	A	1	A	2	A	2	B	3	C		
.0022	2	A	2	A	2	B	3	B	4	C		
.0027	2	A	2	A	2	B	3	B	4	C		
.0039	1	B	2	B	2	B	3	C	4	D		
.0047	1	B	2	B	3	B	3	C	5	D		
.0056	2	B	2	B	3	C	4	C	5	D		
.0068	2	B	2	B	3	C	4	C	5	E		
.0082	2	B	3	B	3	C	4	D	6	E		
.01	2	B	3	B	4	C	4	D	6	F		
.012	3	B	3	C	4	C	5	D	6	F		
.015	3	C	3	C	4	D	5	D	6	F		
.018	3	C	4	C	4	D	5	E	7	F		
.022	4	C	4	D	5	D	6	E	7	F		
.027	4	C	4	D	5	D	6	E				
.033	4	C	4	D	5	E	7	E				
.039	4	D	5	D	6	E	7	F				
.047	5	D	5	D	6	E	7	F				
.056	5	D	5	D	7	E						
.068	5	D	5	E	6	F						
.082	5	E	6	E	7	F						
.1	6	E	6	E								
.12	6	E	7	E								
.15	7	E	7	F								
.18	7	F	7	F								
.22	7	F										

DIAMETER

1 = .187 5 = .375
 2 = .225 6 = .437
 3 = .250 7 = .500
 4 = .312

SIZE CODE**LENGTH**

A = .375 D = .750
 B = .500 E = .875
 C = .625 F = 1.190

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