

# Series 1313 Metallized Polyester

**Features:** Flame retardant to UL94, small size, self healing, low costs.

**Applications:** Medical electronics, telecommunications, high voltage power supplies.

**Packaging:** Axial wrap and fill (TF, TC), radial lead box (EFR, DFR), axial lead epoxy tube (EC).

## Specifications

### 1) Temperature Range

-55°C to 85°C at rated voltage to 125°C with 50% voltage derating.

### 2) Capacitance

0.001 $\mu$ F to 20 $\mu$ F

### 3) Dielectric Strength

At 25°C, 150% 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 30,000 Megohm-Microfarads, but need not exceed 50,000 Megohms for voltages greater than 50 VDC, and 15,000 Megohm-Microfarads, but need not exceed 30,000 Megohms for 50 VDC or less.

### 5) Humidity Resistance

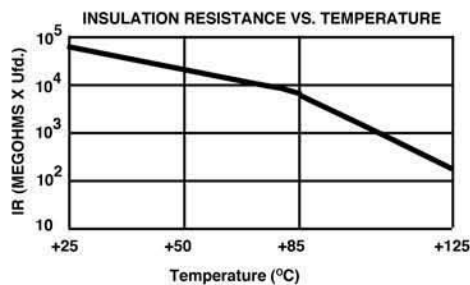
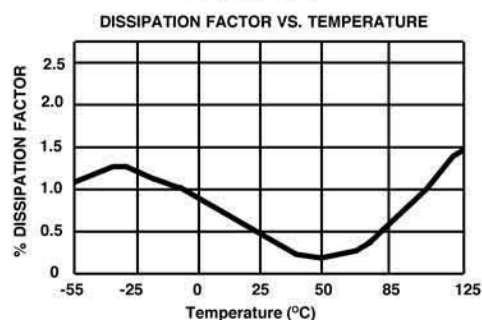
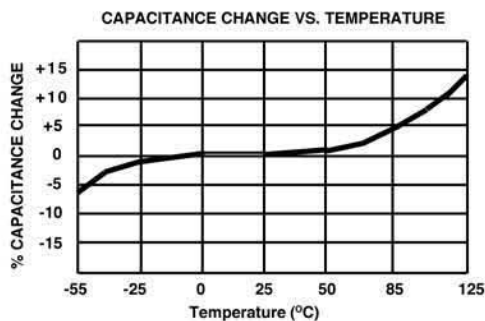
Series 1313 shall meet the requirements of MIL-STD. 202, Method 103B.

### 6) Dissipation Factor

Shall be 1.0% max. when measured at 1KHz.

### 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 Metallized Polyester

# Catalog Nomenclature

**\* 1 3 0 6 E F R - 3 - . 0 0 1 - 1 - 5**

**Case Code:**

- TC - Wrap & Fill - Round - Axial
- TF - Wrap & Fill - Flat - Axial
- EC - Epoxy Case - Round - Axial
- EFR - Epoxy Case - Flat - Radial
- DFR - Dipped Construction - Flat - Radial
- HS - Hermetically Sealed

**Dielectric Code:**

- 1206 - Polypropylene/Foil
- 1213 - Metallized Polypropylene
- 1306 - Polyester/Foil
- 1313 - Metallized Polyester
- 1613 - Metallized Polycarbonate
- 1906 - Polystyrene/Foil
- 2113 - Metallized Polyphenylene Sulfide

**Size Code:**

- 3 - Standard
- 2 - Miniature (1313DFR Series Only)
- X - Non-standard
- Or one letter case code

**Capacitance:**

In microfarads ( $\mu$ F)

**Voltage:**

- .35 - 35 VDC
- 0 - 50 VDC
- 1 - 100 VDC
- 2 - 200 VDC
- 3 - 300 VDC
- 4 - 400 VDC
- 10 - 1000 VDC
- 1.6K - 1600VDC
- Etc.

**Tolerance:**

- 1 - 1%
- 2 - 2%
- 5 - 5%
- Etc.

**\* Options**

The following options are available from EFC by specifying the appropriate prefix.

- A - Aluminum foil electrodes
- T - Tin foil electrodes
- HV - High voltage DC applications
- AC - AC voltage rated applications
- MF - Metallized and foil hybrid for maximum pulse current applications
- M - Dual metallized design for pulse current applications
- SP - Low ESR, high RMS current applications
- PC - Direct mount terminals for high current filter applications
- FT - Feed thru filter applications
- RC - Resistor capacitor suppressors



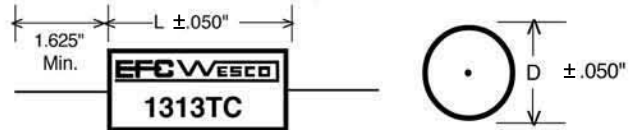
Please consult factory for special requirements, including non-standard values and sizes

## 1313TC Tubular Wrap & Fill

## Metallized Polyester Capacitors

Lead Spec.  
Tinned Copperweld  
Under .250D = 24 AWG  
.250 - .440D = 22AWG  
Above .440D = 20 AWG

### Dimensions and Ratings



50 VDC		D	L
Cap. $\mu$ F	Part #		
.001	1313TC-3-.001-0-*	.180	.406
.0012	1313TC-3-.0012-0-*	.180	.406
.0015	1313TC-3-.0015-0-*	.180	.406
.0018	1313TC-3-.0018-0-*	.180	.406
.0022	1313TC-3-.0022-0-*	.180	.406
.0027	1313TC-3-.0027-0-*	.180	.406
.0033	1313TC-3-.0033-0-*	.180	.406
.0039	1313TC-3-.0039-0-*	.180	.406
.0047	1313TC-3-.0047-0-*	.180	.406
.0056	1313TC-3-.0056-0-*	.180	.406
.0068	1313TC-3-.0068-0-*	.180	.406
.0082	1313TC-3-.0082-0-*	.180	.406
.01	1313TC-3-.01-0-*	.180	.406
.012	1313TC-3-.012-0-*	.180	.406
.015	1313TC-3-.015-0-*	.180	.406
.018	1313TC-3-.018-0-*	.180	.406
.022	1313TC-3-.022-0-*	.180	.406
.027	1313TC-3-.027-0-*	.180	.406
.033	1313TC-3-.033-0-*	.180	.406
.039	1313TC-3-.039-0-*	.180	.406
.047	1313TC-3-.047-0-*	.180	.406
.056	1313TC-3-.056-0-*	.180	.406
.068	1313TC-3-.068-0-*	.180	.406
.082	1313TC-3-.082-0-*	.180	.406
.1	1313TC-3-.1-0-*	.180	.406
.12	1313TC-3-.12-0-*	.190	.406
.15	1313TC-3-.15-0-*	.200	.406
.18	1313TC-3-.18-0-*	.220	.406
.22	1313TC-3-.22-0-*	.190	.468
.27	1313TC-3-.27-0-*	.210	.468
.33	1313TC-3-.33-0-*	.230	.468
.39	1313TC-3-.39-0-*	.250	.468
.47	1313TC-3-.47-0-*	.230	.531
.56	1313TC-3-.56-0-*	.250	.531
.68	1313TC-3-.68-0-*	.270	.531
.82	1313TC-3-.82-0-*	.240	.656
1.0	1313TC-3-1.0-0-*	.270	.656
1.25	1313TC-3-1.25-0-*	.300	.656
1.5	1313TC-3-1.5-0-*	.300	.781
2.0	1313TC-3-2.0-0-*	.350	.781
3.0	1313TC-3-3.0-0-*	.400	.781
4.0	1313TC-3-4.0-0-*	.420	.906
5.0	1313TC-3-5.0-0-*	.470	.906
6.0	1313TC-3-6.0-0-*	.440	1.190
10.0	1313TC-3-10.0-0-*	.500	1.190
20.0	1313TC-3-20.0-0-*	.700	1.440

100 VDC		D	L
Cap. $\mu$ F	Part #		
.001	1313TC-3-.001-1-*	.180	.406
.0012	1313TC-3-.0012-1-*	.180	.406
.0015	1313TC-3-.0015-1-*	.180	.406
.0018	1313TC-3-.0018-1-*	.180	.406
.0022	1313TC-3-.0022-1-*	.180	.406
.0027	1313TC-3-.0027-1-*	.180	.406
.0033	1313TC-3-.0033-1-*	.180	.406
.0039	1313TC-3-.0039-1-*	.180	.406
.0047	1313TC-3-.0047-1-*	.180	.406
.0056	1313TC-3-.0056-1-*	.180	.406
.0068	1313TC-3-.0068-1-*	.180	.406
.0082	1313TC-3-.0082-1-*	.180	.406
.01	1313TC-3-.01-1-*	.180	.406
.012	1313TC-3-.012-1-*	.180	.406
.015	1313TC-3-.015-1-*	.180	.406
.018	1313TC-3-.018-1-*	.180	.406
.022	1313TC-3-.022-1-*	.180	.406
.027	1313TC-3-.027-1-*	.180	.406
.033	1313TC-3-.033-1-*	.180	.406
.039	1313TC-3-.039-1-*	.180	.406
.047	1313TC-3-.047-1-*	.180	.406
.056	1313TC-3-.056-1-*	.200	.406
.068	1313TC-3-.068-1-*	.220	.406
.082	1313TC-3-.082-1-*	.190	.468
.1	1313TC-3-.1-1-*	.210	.468
.12	1313TC-3-.12-1-*	.220	.468
.15	1313TC-3-.15-1-*	.210	.531
.18	1313TC-3-.18-1-*	.230	.531
.22	1313TC-3-.22-1-*	.250	.531
.27	1313TC-3-.27-1-*	.280	.531
.33	1313TC-3-.33-1-*	.250	.656
.39	1313TC-3-.39-1-*	.270	.656
.47	1313TC-3-.47-1-*	.290	.656
.56	1313TC-3-.56-1-*	.310	.656
.68	1313TC-3-.68-1-*	.300	.781
.82	1313TC-3-.82-1-*	.330	.781
1.0	1313TC-3-1.0-1-*	.360	.781
1.25	1313TC-3-1.25-1-*	.400	.781
1.5	1313TC-3-1.5-1-*	.390	.906
2.0	1313TC-3-2.0-1-*	.440	.906
3.0	1313TC-3-3.0-1-*	.460	1.190
4.0	1313TC-3-4.0-1-*	.530	1.190
5.0	1313TC-3-5.0-1-*	.520	1.440
6.0	1313TC-3-6.0-1-*	.560	1.440
10.0	1313TC-3-10.0-1-*	.690	1.570
20.0	1313TC-3-20.0-1-*	.920	1.690

160 VDC		D	L
Cap. $\mu$ F	Part #		
.001	1313TC-3-.001-1.6-*	.180	.406
.0012	1313TC-3-.0012-1.6-*	.180	.406
.0015	1313TC-3-.0015-1.6-*	.180	.406
.0018	1313TC-3-.0018-1.6-*	.180	.406
.0022	1313TC-3-.0022-1.6-*	.180	.406
.0027	1313TC-3-.0027-1.6-*	.180	.406
.0033	1313TC-3-.0033-1.6-*	.180	.406
.0039	1313TC-3-.0039-1.6-*	.180	.406
.0047	1313TC-3-.0047-1.6-*	.180	.406
.0056	1313TC-3-.0056-1.6-*	.180	.406
.0068	1313TC-3-.0068-1.6-*	.180	.406
.0082	1313TC-3-.0082-1.6-*	.180	.406
.01	1313TC-3-.01-1.6-*	.180	.406
.012	1313TC-3-.012-1.6-*	.180	.406
.015	1313TC-3-.015-1.6-*	.180	.406
.018	1313TC-3-.018-1.6-*	.180	.406
.022	1313TC-3-.022-1.6-*	.180	.406
.027	1313TC-3-.027-1.6-*	.200	.406
.033	1313TC-3-.033-1.6-*	.220	.406
.039	1313TC-3-.039-1.6-*	.230	.406
.047	1313TC-3-.047-1.6-*	.240	.406
.056	1313TC-3-.056-1.6-*	.250	.406
.068	1313TC-3-.068-1.6-*	.200	.531
.082	1313TC-3-.082-1.6-*	.220	.531
.1	1313TC-3-.1-1.6-*	.240	.531
.12	1313TC-3-.12-1.6-*	.260	.531
.15	1313TC-3-.15-1.6-*	.240	.656
.18	1313TC-3-.18-1.6-*	.260	.656
.22	1313TC-3-.22-1.6-*	.280	.656
.27	1313TC-3-.27-1.6-*	.310	.656
.33	1313TC-3-.33-1.6-*	.350	.656
.39	1313TC-3-.39-1.6-*	.320	.781
.47	1313TC-3-.47-1.6-*	.350	.781
.56	1313TC-3-.56-1.6-*	.380	.781
.68	1313TC-3-.68-1.6-*	.380	.906
.82	1313TC-3-.82-1.6-*	.410	.906
1.0	1313TC-3-1.0-1.6-*	.450	.906
1.25	1313TC-3-1.25-1.6-*	.430	1.190
1.5	1313TC-3-1.5-1.6-*	.470	1.190
2.0	1313TC-3-2.0-1.6-*	.540	1.190
3.0	1313TC-3-3.0-1.6-*	.580	1.440
4.0	1313TC-3-4.0-1.6-*	.660	1.440
5.0	1313TC-3-5.0-1.6-*	.700	1.570
6.0	1313TC-3-6.0-1.6-*	.770	1.570
10.0	1313TC-3-10.0-1.6-*	.940	1.690
20.0	1313TC-3-20.0-1.6-*	1.200	1.940

\* - Please insert appropriate tolerance code





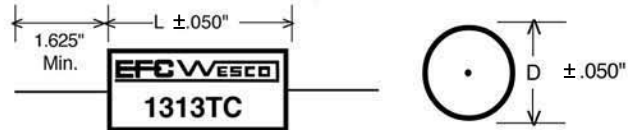
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## 1313TC Tubular Wrap & Fill

## Metallized Polyester Capacitors

Lead Spec.  
Tinned Copperweld  
Under .250D = 24 AWG  
.250 - .440D = 22AWG  
Above .440D = 20 AWG

### Dimensions and Ratings



200 VDC			
Cap. $\mu$ F	Part #	D	L
.001	1313TC-3-.001-2-*	.180	.406
.0012	1313TC-3-.0012-2-*	.180	.406
.0015	1313TC-3-.0015-2-*	.180	.406
.0018	1313TC-3-.0018-2-*	.180	.406
.0022	1313TC-3-.0022-2-*	.180	.406
.0027	1313TC-3-.0027-2-*	.180	.406
.0033	1313TC-3-.0033-2-*	.180	.406
.0039	1313TC-3-.0039-2-*	.180	.406
.0047	1313TC-3-.0047-2-*	.180	.406
.0056	1313TC-3-.0056-2-*	.180	.406
.0068	1313TC-3-.0068-2-*	.180	.406
.0082	1313TC-3-.0082-2-*	.180	.406
.01	1313TC-3-.01-2-*	.180	.406
.012	1313TC-3-.012-2-*	.180	.406
.015	1313TC-3-.015-2-*	.180	.406
.018	1313TC-3-.018-2-*	.180	.406
.022	1313TC-3-.022-2-*	.200	.406
.027	1313TC-3-.027-2-*	.220	.406
.033	1313TC-3-.033-2-*	.240	.406
.039	1313TC-3-.039-2-*	.190	.531
.047	1313TC-3-.047-2-*	.200	.531
.056	1313TC-3-.056-2-*	.210	.531
.068	1313TC-3-.068-2-*	.220	.531
.082	1313TC-3-.082-2-*	.250	.531
.1	1313TC-3-.1-2-*	.270	.531
.12	1313TC-3-.12-2-*	.290	.531
.15	1313TC-3-.15-2-*	.250	.656
.18	1313TC-3-.18-2-*	.290	.656
.22	1313TC-3-.22-2-*	.320	.656
.27	1313TC-3-.27-2-*	.300	.781
.33	1313TC-3-.33-2-*	.330	.781
.39	1313TC-3-.39-2-*	.360	.781
.47	1313TC-3-.47-2-*	.400	.781
.56	1313TC-3-.56-2-*	.380	.906
.68	1313TC-3-.68-2-*	.420	.906
.82	1313TC-3-.82-2-*	.450	.906
1.0	1313TC-3-1.0-2-*	.430	1.190
1.25	1313TC-3-1.25-2-*	.480	1.190
1.5	1313TC-3-1.5-2-*	.530	1.190
2.0	1313TC-3-2.0-2-*	.600	1.190
3.0	1313TC-3-3.0-2-*	.650	1.440
4.0	1313TC-3-4.0-2-*	.740	1.440
5.0	1313TC-3-5.0-2-*	.790	1.570
6.0	1313TC-3-6.0-2-*	.820	1.690
10.0	1313TC-3-10.0-2-*	.970	1.940

400 VDC			
Cap. $\mu$ F	Part #	D	L
.001	1313TC-3-.001-4-*	.180	.406
.0012	1313TC-3-.0012-4-*	.180	.406
.0015	1313TC-3-.0015-4-*	.180	.406
.0018	1313TC-3-.0018-4-*	.180	.406
.0022	1313TC-3-.0022-4-*	.180	.406
.0027	1313TC-3-.0027-4-*	.180	.406
.0033	1313TC-3-.0033-4-*	.180	.406
.0039	1313TC-3-.0039-4-*	.180	.406
.0047	1313TC-3-.0047-4-*	.180	.406
.0056	1313TC-3-.0056-4-*	.180	.406
.0068	1313TC-3-.0068-4-*	.180	.406
.0082	1313TC-3-.0082-4-*	.180	.406
.01	1313TC-3-.01-4-*	.180	.406
.012	1313TC-3-.012-4-*	.180	.406
.015	1313TC-3-.015-4-*	.180	.406
.018	1313TC-3-.018-4-*	.200	.531
.022	1313TC-3-.022-4-*	.220	.531
.027	1313TC-3-.027-4-*	.240	.531
.033	1313TC-3-.033-4-*	.260	.531
.039	1313TC-3-.039-4-*	.280	.531
.047	1313TC-3-.047-4-*	.250	.656
.056	1313TC-3-.056-4-*	.270	.656
.068	1313TC-3-.068-4-*	.290	.656
.082	1313TC-3-.082-4-*	.320	.656
.1	1313TC-3-.1-4-*	.310	.781
.12	1313TC-3-.12-4-*	.340	.781
.15	1313TC-3-.15-4-*	.370	.781
.18	1313TC-3-.18-4-*	.410	.781
.22	1313TC-3-.22-4-*	.400	.906
.27	1313TC-3-.27-4-*	.440	.906
.33	1313TC-3-.33-4-*	.490	.906
.39	1313TC-3-.39-4-*	.450	1.190
.47	1313TC-3-.47-4-*	.490	1.190
.56	1313TC-3-.56-4-*	.530	1.190
.68	1313TC-3-.68-4-*	.580	1.190
.82	1313TC-3-.82-4-*	.640	1.190
1.0	1313TC-3-1.0-4-*	.620	1.440
1.25	1313TC-3-1.25-4-*	.690	1.440
1.5	1313TC-3-1.5-4-*	.760	1.440
2.0	1313TC-3-2.0-4-*	.790	1.690
3.0	1313TC-3-3.0-4-*	.960	1.690

600 VDC			
Cap. $\mu$ F	Part #	D	L
.001	1313TC-3-.001-6-*	.180	.406
.0012	1313TC-3-.0012-6-*	.180	.406
.0015	1313TC-3-.0015-6-*	.180	.406
.0018	1313TC-3-.0018-6-*	.180	.406
.0022	1313TC-3-.0022-6-*	.180	.406
.0027	1313TC-3-.0027-6-*	.200	.406
.0033	1313TC-3-.0033-6-*	.220	.406
.0039	1313TC-3-.0039-6-*	.240	.406
.0047	1313TC-3-.0047-6-*	.190	.531
.0056	1313TC-3-.0056-6-*	.200	.531
.0068	1313TC-3-.0068-6-*	.210	.531
.0082	1313TC-3-.0082-6-*	.220	.531
.01	1313TC-3-.01-6-*	.240	.531
.012	1313TC-3-.012-6-*	.260	.531
.015	1313TC-3-.015-6-*	.290	.531
.018	1313TC-3-.018-6-*	.250	.656
.022	1313TC-3-.022-6-*	.280	.656
.027	1313TC-3-.027-6-*	.310	.656
.033	1313TC-3-.033-6-*	.340	.656
.039	1313TC-3-.039-6-*	.320	.781
.047	1313TC-3-.047-6-*	.350	.781
.056	1313TC-3-.056-6-*	.380	.781
.068	1313TC-3-.068-6-*	.410	.781
.082	1313TC-3-.082-6-*	.400	.906
.1	1313TC-3-.1-6-*	.440	.906
.12	1313TC-3-.12-6-*	.480	.906
.15	1313TC-3-.15-6-*	.460	1.190
.18	1313TC-3-.18-6-*	.500	1.190
.22	1313TC-3-.22-6-*	.550	1.190
.27	1313TC-3-.27-6-*	.600	1.190
.33	1313TC-3-.33-6-*	.580	1.440
.39	1313TC-3-.39-6-*	.640	1.440
.47	1313TC-3-.47-6-*	.700	1.440
.56	1313TC-3-.56-6-*	.720	1.570
.68	1313TC-3-.68-6-*	.800	1.570
.82	1313TC-3-.82-6-*	.800	1.820
1.0	1313TC-3-1.0-6-*	.880	1.820
1.25	1313TC-3-1.25-6-*	.970	1.820
1.5	1313TC-3-1.5-6-*	.960	2.250
2.0	1313TC-3-2.0-6-*	1.100	2.250

\* - Please insert appropriate tolerance code