ELECTRONIC FILM CAPACITORS, INC.

Reidville Industrial Park * 41 Interstate Lane
WATERBURY, CONNECTICUT 06705

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

# METALLIZED POLYESTER

# SERIES 1313

EFC Series 1313 are metallized polyester capacitors. This series offers the advantage of small size, self healing and low cost. Suggested applications include: medical electronics, telecommunications and high voltage power supplies. Packaging options include: wrap and fill (TF, TC), radial lead box (EFR), axial lead (EC, EF). Application options include: high voltage (HV), "AC" across the line (AC), noise suppression (RC) and switching power supply (SP).

## SPECIFICATIONS

1. TEMPERATURE RANGE

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

2. CAPACITANCE

Capacitors ≤ 1.0 MFD shall be measured at 1 KHz ± 20 HZ. Capacitors >1.0 MFD shall be measured at 120 HZ. Measurements shall be taken at 25 °C.

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-Microfarad, 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. 202C, Method 103B.

6. DISSIPATION FACTOR

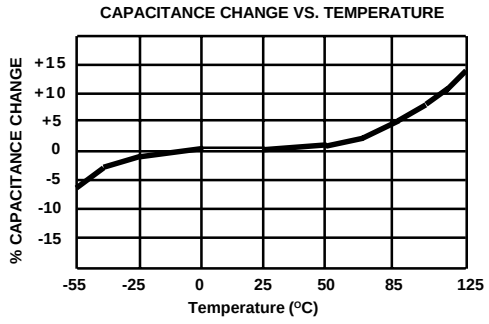
Shall be 1.0 % max. when measured as in Par. 2.

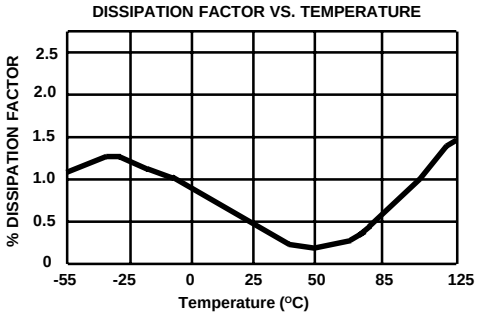
7. LIFE TEST

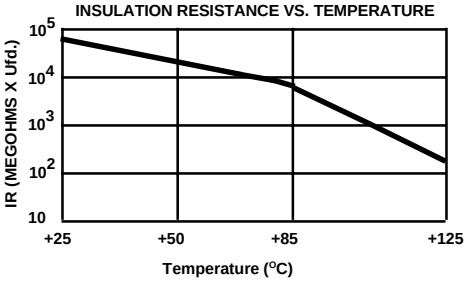
Will withstand the application of 150% rated voltage at +125 °C for 250 hours with not more than one failure in 12 permitted.

## TYPICAL TEMPERATURE CURVES

### METALLIZED POLYESTER



# CATALOG NOMENCLATURE

*** 1313 EFR - 3 - .1 - 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/°C ±30 PPM
T1206 = -270 PPM/°C ±30 PPM
01906 = ZERO PPM/°C ±50 PPM
A1906 = -80 PPM/°C ±30 PPM
T1906 = -120 PPM/°C ±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.

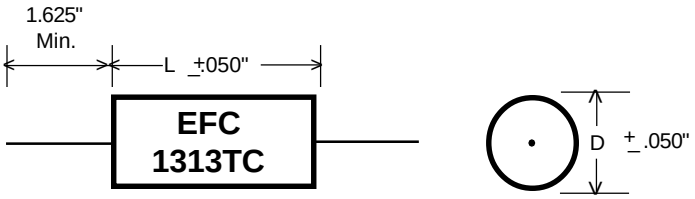
**SWITCH MODE POWER SUPPLY:**
Polypropylene and polyester capacitors designed for SMPS have low ESR and high current rating should be specified with the **SP** prefix.

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

# 1313TC

**Tubular**
**Wrap and Fill**

# Metallized Polyester Capacitors




(All dimensions in inches)

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

## DIMENSIONS and RATINGS

| Cap. | 1313TC-1 50 VDC | | 1313TC-2 100 VDC | | 1313TC-3 150 VDC | | 1313TC-3 200 VDC | | 1313TC-3 400 VDC | | 1313TC-3 600 VDC | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| µF | D | L | D | L | D | L | D | L | D | L | D | L |
| .001 | .180 | .406 | .180 | .406 | .180 | .406 | .180 | .406 | .180 | .406 | .180 | .406 |
| .0012 | .180 | .406 | .180 | .406 | .180 | .406 | .180 | .406 | .180 | .406 | .180 | .406 |
| .0015 | .180 | .406 | .180 | .406 | .180 | .406 | .180 | .406 | .180 | .406 | .180 | .406 |
| .0018 | .180 | .406 | .180 | .406 | .180 | .406 | .180 | .406 | .180 | .406 | .180 | .406 |
| .0022 | .180 | .406 | .180 | .406 | .180 | .406 | .180 | .406 | .180 | .406 | .180 | .406 |
| .0027 | .180 | .406 | .180 | .406 | .180 | .406 | .180 | .406 | .180 | .406 | .200 | .406 |
| .0033 | .180 | .406 | .180 | .406 | .180 | .406 | .180 | .406 | .180 | .406 | .220 | .406 |
| .0039 | .180 | .406 | .180 | .406 | .180 | .406 | .180 | .406 | .180 | .406 | .240 | .406 |
| .0047 | .180 | .406 | .180 | .406 | .180 | .406 | .180 | .406 | .180 | .406 | .190 | .531 |
| .0056 | .180 | .406 | .180 | .406 | .180 | .406 | .180 | .406 | .180 | .406 | .200 | .531 |
| .0068 | .180 | .406 | .180 | .406 | .180 | .406 | .180 | .406 | .180 | .406 | .210 | .531 |
| .0082 | .180 | .406 | .180 | .406 | .180 | .406 | .180 | .406 | .180 | .406 | .220 | .531 |
| .01 | .180 | .406 | .180 | .406 | .180 | .406 | .180 | .406 | .180 | .406 | .240 | .531 |
| .012 | .180 | .406 | .180 | .406 | .180 | .406 | .180 | .406 | .180 | .406 | .260 | .531 |
| .015 | .180 | .406 | .180 | .406 | .180 | .406 | .180 | .406 | .180 | .406 | .290 | .531 |
| .018 | .180 | .406 | .180 | .406 | .180 | .406 | .180 | .406 | .200 | .531 | .250 | .656 |
| .022 | .180 | .406 | .180 | .406 | .180 | .406 | .200 | .406 | .220 | .531 | .280 | .656 |
| .027 | .180 | .406 | .180 | .406 | .200 | .406 | .220 | .406 | .240 | .531 | .310 | .656 |
| .033 | .180 | .406 | .180 | .406 | .220 | .406 | .240 | .406 | .260 | .531 | .340 | .656 |
| .039 | .180 | .406 | .180 | .406 | .230 | .406 | .190 | .531 | .280 | .531 | .320 | .781 |
| .047 | .180 | .406 | .180 | .406 | .240 | .406 | .200 | .531 | .250 | .656 | .350 | .781 |
| .056 | .180 | .406 | .200 | .406 | .250 | .406 | .210 | .531 | .270 | .656 | .380 | .781 |
| .068 | .180 | .406 | .220 | .406 | .200 | .531 | .220 | .531 | .290 | .656 | .410 | .781 |
| .082 | .180 | .406 | .190 | .468 | .220 | .531 | .250 | .531 | .320 | .656 | .400 | .906 |
| .1 | .180 | .406 | .210 | .468 | .240 | .531 | .270 | .531 | .310 | .781 | .440 | .906 |
| .12 | .190 | .406 | .220 | .468 | .260 | .531 | .290 | .531 | .340 | .781 | .480 | .906 |
| .15 | .200 | .406 | .210 | .531 | .240 | .656 | .250 | .656 | .370 | .781 | .460 | 1.190 |
| .18 | .220 | .406 | .230 | .531 | .260 | .656 | .290 | .656 | .410 | .781 | .500 | 1.190 |
| .22 | .190 | .468 | .250 | .531 | .280 | .656 | .320 | .656 | .400 | .906 | .550 | 1.190 |
| .27 | .210 | .468 | .280 | .531 | .310 | .656 | .300 | .781 | .440 | .906 | .600 | 1.190 |
| .33 | .230 | .468 | .250 | .656 | .350 | .656 | .330 | .781 | .490 | .906 | .580 | 1.440 |
| .39 | .250 | .468 | .270 | .656 | .320 | .781 | .360 | .781 | .450 | 1.190 | .640 | 1.440 |
| .47 | .230 | .531 | .290 | .656 | .350 | .781 | .400 | .781 | .490 | 1.190 | .700 | 1.440 |
| .56 | .250 | .531 | .310 | .656 | .380 | .781 | .380 | .906 | .530 | 1.190 | .720 | 1.570 |
| .68 | .270 | .531 | .300 | .781 | .380 | .906 | .420 | .906 | .580 | 1.190 | .800 | 1.570 |
| .82 | .240 | .656 | .330 | .781 | .410 | .906 | .450 | .906 | .640 | 1.190 | .800 | 1.820 |
| 1.0 | .270 | .656 | .360 | .781 | .450 | .906 | .430 | 1.190 | .620 | 1.440 | .880 | 1.820 |
| 1.25 | .300 | .656 | .400 | .781 | .430 | 1.190 | .480 | 1.190 | .690 | 1.440 | .970 | 1.820 |
| 1.5 | .300 | .781 | .390 | .906 | .470 | 1.190 | .530 | 1.190 | .760 | 1.440 | .960 | 2.250 |
| 2.0 | .350 | .781 | .440 | .906 | .540 | 1.190 | .600 | 1.190 | .790 | 1.690 | 1.100 | 2.250 |
| 3.0 | .400 | .781 | .460 | 1.190 | .580 | 1.440 | .650 | 1.440 | .960 | 1.690 | | |
| 4.0 | .420 | .906 | .530 | 1.190 | .660 | 1.440 | .740 | 1.440 | | | | |
| 5.0 | .470 | .906 | .520 | 1.440 | .700 | 1.570 | .790 | 1.570 | | | | |
| 6.0 | .440 | 1.190 | .560 | 1.440 | .770 | 1.570 | .820 | 1.690 | | | | |
| 10.0 | .500 | 1.190 | .690 | 1.570 | .940 | 1.690 | .970 | 1.940 | | | | |
| 20.0 | .700 | 1.440 | .920 | 1.690 | 1.200 | 1.940 | | | | | | |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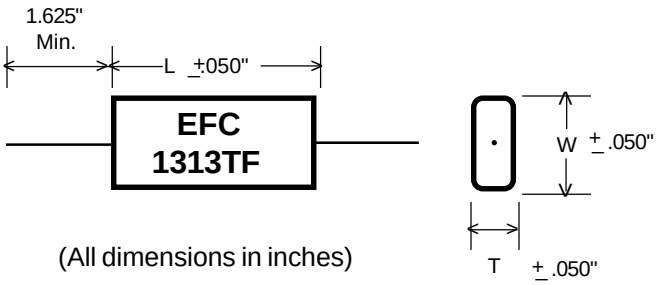
# 1313TF

**Oval**
**Wrap and Fill**

# Metallized Polyester Capacitors




(All dimensions in inches)

Lead Specs.
Tinned Copperweld
Under .190T = 24 AWG
.190 - .380T = 22 AWG
Above .380T = 20 AWG

## DIMENSIONS and RATINGS

| Cap. | 1313TF-1 50 VDC | | | 1313TF-2 100 VDC | | | 1313TF-3 150 VDC | | | 1313TF-3 200 VDC | | | 1313TF-3 400 VDC | | | 1313TF-3 600 VDC | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| µF | T | W | L | T | W | L | T | W | L | T | W | L | T | W | L | T | W | L |
| .001 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 |
| .0012 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 |
| .0015 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 |
| .0018 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 |
| .0022 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 |
| .0027 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 | .140 | .240 | .406 |
| .0033 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 | .160 | .260 | .406 |
| .0039 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 | .180 | .280 | .406 |
| .0047 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 | .130 | .230 | .531 |
| .0056 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 | .140 | .240 | .531 |
| .0068 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 | .150 | .250 | .531 |
| .0082 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 | .140 | .240 | .406 | .160 | .260 | .531 |
| .01 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 | .160 | .260 | .406 | .180 | .280 | .531 |
| .012 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 | .180 | .280 | .406 | .200 | .300 | .531 |
| .015 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 | .130 | .230 | .531 | .230 | .330 | .531 |
| .018 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 | .125 | .225 | .406 | .140 | .240 | .531 | .190 | .290 | .656 |
| .022 | .125 | .225 | .406 | .125 | .225 | .406 | .126 | .225 | .406 | .140 | .240 | .406 | .160 | .260 | .531 | .220 | .320 | .656 |
| .027 | .125 | .225 | .406 | .125 | .225 | .406 | .140 | .240 | .406 | .160 | .260 | .406 | .180 | .280 | .531 | .250 | .350 | .656 |
| .033 | .125 | .225 | .406 | .125 | .225 | .406 | .160 | .260 | .406 | .180 | .280 | .406 | .200 | .300 | .531 | .280 | .380 | .656 |
| .039 | .125 | .225 | .406 | .125 | .225 | .406 | .170 | .270 | .406 | .130 | .230 | .531 | .220 | .320 | .531 | .240 | .370 | .781 |
| .047 | .125 | .225 | .406 | .125 | .225 | .406 | .180 | .280 | .406 | .140 | .240 | .531 | .190 | .290 | .656 | .270 | .400 | .781 |
| .056 | .125 | .225 | .406 | .140 | .240 | .406 | .190 | .290 | .406 | .150 | .250 | .531 | .210 | .310 | .656 | .300 | .430 | .781 |
| .068 | .125 | .225 | .406 | .160 | .260 | .406 | .140 | .240 | .531 | .160 | .260 | .531 | .230 | .330 | .656 | .330 | .460 | .781 |
| .082 | .125 | .225 | .406 | .130 | .230 | .468 | .160 | .260 | .531 | .190 | .290 | .531 | .260 | .360 | .656 | .320 | .450 | .906 |
| .1 | .125 | .225 | .406 | .150 | .250 | .468 | .180 | .280 | .531 | .210 | .310 | .531 | .230 | .380 | .781 | .360 | .490 | .906 |
| .12 | .130 | .230 | .406 | .160 | .260 | .468 | .200 | .300 | .531 | .230 | .330 | .531 | .260 | .390 | .781 | .400 | .530 | .906 |
| .15 | .140 | .240 | .406 | .150 | .250 | .531 | .180 | .280 | .656 | .190 | .290 | .656 | .290 | .420 | .781 | .350 | .520 | 1.190 |
| .18 | .160 | .260 | .406 | .170 | .270 | .531 | .200 | .300 | .656 | .230 | .330 | .656 | .330 | .460 | .781 | .390 | .560 | 1.190 |
| .22 | .130 | .230 | .468 | .190 | .290 | .531 | .220 | .320 | .656 | .260 | .360 | .656 | .320 | .450 | .906 | .440 | .610 | 1.190 |
| .27 | .150 | .250 | .468 | .220 | .320 | .531 | .250 | .350 | .656 | .220 | .350 | .781 | .360 | .490 | .906 | .490 | .660 | 1.190 |
| .33 | .170 | .270 | .468 | .190 | .290 | .656 | .290 | .390 | .656 | .250 | .380 | .781 | .410 | .540 | .906 | .470 | .640 | 1.440 |
| .39 | .190 | .290 | .468 | .210 | .310 | .656 | .240 | .370 | .781 | .280 | .410 | .781 | .340 | .510 | 1.190 | .530 | .700 | 1.440 |
| .47 | .170 | .270 | .531 | .230 | .330 | .656 | .270 | .400 | .781 | .320 | .450 | .781 | .380 | .550 | 1.190 | .590 | .760 | 1.440 |
| .56 | .190 | .290 | .531 | .250 | .350 | .656 | .300 | .430 | .781 | .320 | .450 | .906 | .420 | .590 | 1.190 | .610 | .780 | 1.570 |
| .68 | .210 | .310 | .531 | .220 | .350 | .781 | .300 | .430 | .906 | .340 | .470 | .906 | .470 | .640 | 1.190 | .690 | .860 | 1.570 |
| .82 | .180 | .280 | .656 | .250 | .380 | .781 | .330 | .460 | .906 | .370 | .500 | .906 | .530 | .700 | 1.190 | .670 | .870 | 1.820 |
| 1.0 | .210 | .310 | .656 | .280 | .410 | .781 | .370 | .500 | .906 | .320 | .490 | 1.190 | .510 | .680 | 1.440 | .750 | .950 | 1.820 |
| 1.25 | .240 | .340 | .656 | .320 | .450 | .781 | .320 | .490 | 1.190 | .370 | .540 | 1.190 | .580 | .750 | 1.440 | .840 | 1.040 | 1.820 |
| 1.5 | .220 | .350 | .781 | .310 | .440 | .906 | .360 | .530 | 1.190 | .420 | .590 | 1.190 | .650 | .820 | 1.440 | .830 | 1.030 | 2.250 |
| 2.0 | .270 | .400 | .781 | .360 | .490 | .906 | .430 | .600 | 1.190 | .490 | .660 | 1.190 | .660 | .860 | 1.690 | .990 | 1.190 | 2.250 |
| 3.0 | .320 | .450 | .781 | .350 | .520 | 1.190 | .470 | .640 | 1.440 | .540 | .710 | 1.440 | .830 | 1.030 | 1.690 | | | |
| 4.0 | .340 | .470 | .906 | .420 | .590 | 1.190 | .550 | .720 | 1.440 | .630 | .800 | 1.440 | | | | | | |
| 5.0 | .390 | .520 | .906 | .410 | .580 | 1.440 | .590 | .760 | 1.570 | .680 | .850 | 1.570 | | | | | | |
| 6.0 | .330 | .500 | 1.190 | .450 | .620 | 1.440 | .660 | .830 | 1.570 | .690 | .890 | 1.690 | | | | | | |
| 10.0 | .450 | .620 | 1.190 | .580 | .750 | 1.570 | .810 | 1.010 | 1.690 | .840 | 1.040 | 1.940 | | | | | | |
| 20.0 | .590 | .760 | 1.440 | .790 | .990 | 1.690 | 1.070 | 1.270 | 1.940 | | | | | | | | | |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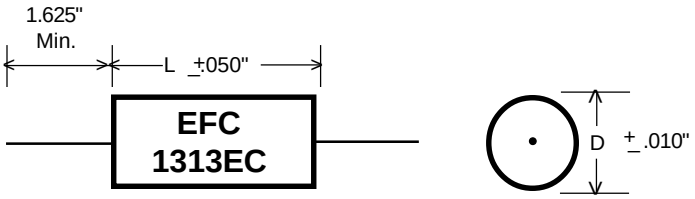
# 1313EC

**Epoxy case (Axial Leads)**

# Metallized Polyester Capacitors




(All dimensions in inches)

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

## DIMENSIONS and RATINGS

| Cap. | 1313EC 50 VDC | | 1313EC 100 VDC | | 1313EC 150 VDC | | 1313EC 200 VDC | | 1313EC 400 VDC | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| µF | D | L | D | L | D | L | D | L | D | L | | |
| .001 | 1 | A | 1 | A | 1 | A | 1 | A | 1 | A | | |
| .0012 | 1 | A | 1 | A | 1 | A | 1 | A | 1 | A | | |
| .0015 | 1 | A | 1 | A | 1 | A | 1 | A | 1 | A | | |
| .0018 | 1 | A | 1 | A | 1 | A | 1 | A | 1 | A | | |
| .0022 | 1 | A | 1 | A | 1 | A | 1 | A | 1 | A | | |
| .0027 | 1 | A | 1 | A | 1 | A | 1 | A | 1 | A | | |
| .0033 | 1 | A | 1 | A | 1 | A | 1 | A | 1 | A | | |
| .0039 | 1 | A | 1 | A | 1 | A | 1 | A | 1 | A | | |
| .0047 | 1 | A | 1 | A | 1 | A | 1 | A | 1 | A | | |
| .0056 | 1 | A | 1 | A | 1 | A | 1 | A | 1 | A | | |
| .0068 | 1 | A | 1 | A | 1 | A | 1 | A | 2 | A | | |
| .0082 | 1 | A | 1 | A | 1 | A | 1 | A | 2 | A | | |
| .01 | 1 | A | 1 | A | 1 | A | 1 | A | 2 | A | | |
| .012 | 1 | A | 1 | A | 1 | A | 1 | A | 3 | A | | |
| .015 | 1 | A | 1 | A | 1 | A | 1 | A | 2 | B | | |
| .018 | 1 | A | 1 | A | 1 | A | 2 | A | 2 | B | | |
| .022 | 1 | A | 1 | A | 1 | A | 2 | A | 2 | B | | |
| .027 | 1 | A | 1 | A | 2 | A | 2 | A | 3 | B | | |
| .033 | 1 | A | 1 | A | 2 | A | 3 | A | 2 | C | | |
| .039 | 1 | A | 1 | A | 3 | A | 1 | B | 3 | C | | |
| .047 | 1 | A | 2 | A | 3 | A | 2 | B | 3 | C | | |
| .056 | 1 | A | 2 | A | 2 | B | 2 | B | 4 | C | | |
| .068 | 1 | A | 2 | A | 2 | B | 3 | B | 4 | C | | |
| .082 | 1 | A | 3 | A | 2 | B | 3 | B | 4 | D | | |
| .1 | 1 | A | 1 | B | 3 | B | 2 | C | 4 | D | | |
| .12 | 1 | A | 2 | B | 2 | C | 3 | C | 5 | D | | |
| .15 | 2 | A | 2 | B | 3 | C | 4 | C | 5 | D | | |
| .18 | 3 | A | 3 | B | 3 | C | 4 | C | 5 | E | | |
| .22 | 1 | B | 3 | B | 4 | C | 4 | D | 6 | E | | |
| .27 | 2 | B | 2 | C | 4 | C | 4 | D | 7 | E | | |
| .33 | 2 | B | 3 | C | 4 | D | 5 | D | 7 | E | | |
| .39 | 3 | B | 4 | C | 5 | D | 5 | D | 7 | F | | |
| .47 | 2 | C | 4 | C | 5 | D | 5 | E | 7 | F | | |
| .56 | 3 | C | 4 | D | 5 | D | 6 | E | | | | |
| .68 | 3 | C | 4 | D | 5 | E | 6 | E | | | | |
| .82 | 4 | C | 5 | D | 6 | E | 7 | E | | | | |
| 1.0 | 4 | C | 5 | D | 7 | E | 6 | F | | | | |
| 1.2 | 4 | D | 5 | E | 7 | E | 7 | F | | | | |
| 1.5 | 4 | D | 6 | E | 7 | F | | | | | | |

**DIAMETER**

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

**SIZE CODE**

**LENGTH**

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

**ELECTRONIC FILM CAPACITORS, INC.**

Reidville Industrial Park * 41 Interstate Lane * WATERBURY, CONNECTICUT 06705

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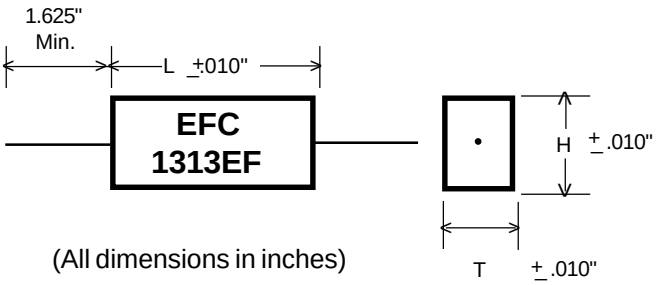
# 1313EF

**Epoxy Case (Axial Leads)**

# Metallized Polyester Capacitors




(All dimensions in inches)

Lead Specs.
Tinned Copperweld
Under .190T = 24 AWG
.190 - .380T = 22 AWG
Above .380T = 20 AWG

## DIMENSIONS and RATINGS

| Cap. | 1313EF-1 50 VDC | | | 1313EF-2 100 VDC | | | 1313EF-3 200 VDC | | | 1313EF-3 400 VDC | | | 1313EF-3 600 VDC | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| µF | T | H | L | T | H | L | T | H | L | T | H | L | T | H | L | | | |
| .001 | .160 | .240 | .420 | .160 | .240 | .420 | .160 | .240 | .420 | .170 | .290 | .420 | .170 | .290 | .570 | | | |
| .0012 | .160 | .240 | .420 | .160 | .240 | .420 | .160 | .240 | .420 | .170 | .290 | .420 | .170 | .290 | .570 | | | |
| .0015 | .160 | .240 | .420 | .160 | .240 | .420 | .160 | .240 | .420 | .170 | .290 | .420 | .170 | .290 | .570 | | | |
| .0018 | .160 | .240 | .420 | .160 | .240 | .420 | .160 | .240 | .420 | .170 | .290 | .420 | .170 | .290 | .570 | | | |
| .0022 | .160 | .240 | .420 | .160 | .240 | .420 | .160 | .240 | .420 | .170 | .290 | .420 | .170 | .290 | .570 | | | |
| .0027 | .160 | .240 | .420 | .160 | .240 | .420 | .160 | .240 | .420 | .170 | .290 | .420 | .170 | .290 | .570 | | | |
| .0033 | .160 | .240 | .420 | .160 | .240 | .420 | .160 | .240 | .420 | .170 | .290 | .420 | .170 | .290 | .570 | | | |
| .0039 | .160 | .240 | .420 | .160 | .240 | .420 | .160 | .240 | .420 | .170 | .290 | .420 | .170 | .290 | .570 | | | |
| .0047 | .160 | .240 | .420 | .160 | .240 | .420 | .160 | .240 | .420 | .170 | .290 | .420 | .170 | .290 | .570 | | | |
| .0056 | .160 | .240 | .420 | .160 | .240 | .420 | .160 | .240 | .420 | .170 | .290 | .420 | .170 | .290 | .570 | | | |
| .0068 | .160 | .240 | .420 | .160 | .240 | .420 | .160 | .240 | .420 | .170 | .290 | .420 | .170 | .290 | .570 | | | |
| .0082 | .160 | .240 | .420 | .160 | .240 | .420 | .160 | .240 | .420 | .170 | .290 | .420 | .170 | .290 | .570 | | | |
| .01 | .160 | .240 | .420 | .160 | .240 | .420 | .160 | .240 | .420 | .170 | .290 | .420 | .170 | .290 | .570 | | | |
| .012 | .160 | .240 | .420 | .160 | .240 | .420 | .170 | .290 | .420 | .170 | .290 | .420 | .170 | .290 | .570 | | | |
| .015 | .160 | .240 | .420 | .160 | .240 | .420 | .160 | .240 | .420 | .170 | .290 | .420 | .170 | .290 | .570 | | | |
| .018 | .160 | .240 | .420 | .160 | .240 | .420 | .170 | .290 | .420 | .170 | .290 | .570 | .170 | .290 | .570 | | | |
| .022 | .160 | .240 | .420 | .160 | .240 | .420 | .170 | .290 | .420 | .170 | .290 | .570 | .170 | .290 | .570 | | | |
| .027 | .160 | .240 | .420 | .160 | .240 | .420 | .170 | .290 | .420 | .170 | .290 | .570 | .290 | .420 | .570 | | | |
| .033 | .160 | .240 | .420 | .160 | .240 | .420 | .170 | .290 | .420 | .170 | .290 | .570 | .290 | .420 | .570 | | | |
| .039 | .160 | .240 | .420 | .170 | .290 | .420 | .170 | .290 | .570 | .230 | .360 | .550 | .290 | .420 | .670 | | | |
| .047 | .160 | .240 | .420 | .170 | .290 | .420 | .170 | .290 | .570 | .230 | .360 | .550 | .290 | .420 | .670 | | | |
| .056 | .160 | .240 | .420 | .170 | .290 | .420 | .170 | .290 | .570 | .230 | .360 | .550 | .290 | .420 | .670 | | | |
| .068 | .170 | .290 | .420 | .170 | .290 | .420 | .170 | .290 | .570 | .230 | .360 | .550 | .290 | .420 | .820 | | | |
| .082 | .170 | .290 | .420 | .170 | .290 | .420 | .230 | .360 | .550 | .290 | .420 | .570 | .290 | .420 | .820 | | | |
| .1 | .170 | .290 | .420 | .170 | .290 | .420 | .230 | .360 | .550 | .290 | .420 | .570 | .290 | .420 | .820 | | | |
| .12 | .170 | .290 | .420 | .170 | .290 | .570 | .290 | .420 | .570 | .290 | .420 | .670 | .390 | .540 | .820 | | | |
| .15 | .170 | .290 | .420 | .170 | .290 | .570 | .290 | .420 | .570 | .290 | .420 | .670 | .390 | .540 | .820 | | | |
| .18 | .170 | .290 | .570 | .170 | .290 | .570 | .290 | .420 | .570 | .290 | .420 | .820 | .390 | .540 | 1.040 | | | |
| .22 | .170 | .290 | .570 | .170 | .290 | .570 | .290 | .420 | .670 | .290 | .420 | .820 | .390 | .540 | 1.240 | | | |
| .27 | .170 | .290 | .570 | .230 | .360 | .550 | .290 | .420 | .820 | .390 | .540 | .820 | .390 | .540 | 1.240 | | | |
| .33 | .170 | .290 | .550 | .230 | .360 | .550 | .290 | .420 | .820 | .390 | .540 | .820 | .390 | .540 | 1.240 | | | |
| .39 | .230 | .360 | .550 | .290 | .420 | .570 | .290 | .540 | .820 | .390 | .540 | 1.040 | .560 | .720 | 1.240 | | | |
| .47 | .230 | .360 | .550 | .290 | .420 | .570 | .290 | .540 | .820 | .390 | .540 | 1.040 | .560 | .720 | 1.240 | | | |
| .56 | .290 | .420 | .570 | .290 | .420 | .570 | .290 | .540 | .820 | .390 | .540 | 1.240 | .560 | .720 | 1.240 | | | |
| .68 | .290 | .420 | .570 | .290 | .420 | .670 | .390 | .540 | 1.040 | .390 | .540 | 1.240 | .560 | .720 | 1.500 | | | |
| .82 | .290 | .420 | .570 | .290 | .420 | .820 | .390 | .540 | 1.040 | .390 | .540 | 1.240 | | | | | | |
| 1.0 | .290 | .420 | .670 | .290 | .420 | .820 | .390 | .540 | 1.240 | .560 | .720 | 1.240 | | | | | | |
| 1.25 | .290 | .420 | .820 | .390 | .540 | .820 | .390 | .540 | 1.240 | .560 | .720 | 1.500 | | | | | | |
| 1.5 | .290 | .420 | .820 | .390 | .540 | .820 | .390 | .540 | 1.240 | .560 | .720 | 1.500 | | | | | | |
| 2.0 | .390 | .540 | .820 | .390 | .540 | 1.240 | .560 | .720 | 1.500 | | | | | | | | | |
| 3.0 | .390 | .540 | 1.040 | .560 | .720 | 1.240 | | | | | | | | | | | | |
| 4.0 | .390 | .540 | 1.040 | .560 | .720 | 1.240 | | | | | | | | | | | | |
| 5.0 | .560 | .720 | 1.240 | .560 | .720 | 1.500 | | | | | | | | | | | | |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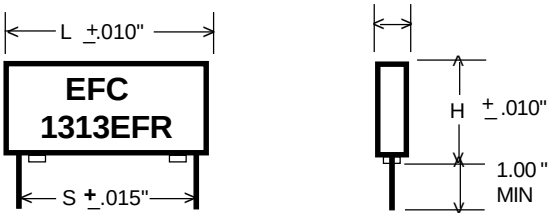
# 1313EFR

## Epoxy Case (Radial Leads)

Lead Specs. - Tinned Copperweld

| L | S | AWG |
|---|---|---|
| .420 | .30 | 22 |
| .550 | .40 | 22 |
| .670 | .50 | 22 |
| .820 | .60 | 22 |
| 1.04 | .80 | 22 |
| 1.24 | 1.10 | 20 |
| 1.75 | 1.60 | 20 |

# Metallized Polyester Capacitors




(All dimensions in inches)

## DIMENSIONS and RATINGS

| Cap. | 1313EFR-1 50 VDC | | | 1313EFR-2 100 VDC | | | 1313EFR-3 200 VDC | | | 1313EFR-3 400 VDC | | | 1313EFR-3 600 VDC | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| µF | T | L | H | T | L | H | T | L | H | T | L | H | T | L | H | |
| .001 | .160 | .420 | .330 | .160 | .420 | .330 | .160 | .420 | .330 | .180 | .420 | .330 | .180 | .550 | .330 | |
| .0012 | .160 | .420 | .330 | .160 | .420 | .330 | .160 | .420 | .330 | .180 | .420 | .330 | .180 | .550 | .330 | |
| .0015 | .160 | .420 | .330 | .160 | .420 | .330 | .160 | .420 | .330 | .180 | .420 | .330 | .180 | .550 | .330 | |
| .0018 | .160 | .420 | .330 | .160 | .420 | .330 | .160 | .420 | .330 | .180 | .420 | .330 | .180 | .550 | .330 | |
| .0022 | .160 | .420 | .330 | .160 | .420 | .330 | .160 | .420 | .330 | .180 | .420 | .330 | .180 | .550 | .330 | |
| .0027 | .160 | .420 | .330 | .160 | .420 | .330 | .160 | .420 | .330 | .180 | .420 | .330 | .180 | .550 | .330 | |
| .0033 | .160 | .420 | .330 | .160 | .420 | .330 | .160 | .420 | .330 | .180 | .420 | .330 | .180 | .550 | .330 | |
| .0039 | .160 | .420 | .330 | .160 | .420 | .330 | .160 | .420 | .330 | .180 | .420 | .330 | .180 | .550 | .330 | |
| .0047 | .160 | .420 | .330 | .160 | .420 | .330 | .160 | .420 | .330 | .180 | .420 | .330 | .180 | .550 | .330 | |
| .0056 | .160 | .420 | .330 | .160 | .420 | .330 | .160 | .420 | .330 | .180 | .420 | .330 | .180 | .550 | .330 | |
| .0068 | .160 | .420 | .330 | .160 | .420 | .330 | .160 | .420 | .330 | .180 | .420 | .330 | .180 | .550 | .330 | |
| .0082 | .160 | .420 | .330 | .160 | .420 | .330 | .160 | .420 | .330 | .180 | .420 | .330 | .180 | .550 | .330 | |
| .01 | .160 | .420 | .330 | .160 | .420 | .330 | .160 | .420 | .330 | .180 | .420 | .330 | .180 | .550 | .330 | |
| .012 | .160 | .420 | .330 | .160 | .420 | .330 | .160 | .420 | .330 | .180 | .420 | .330 | .180 | .550 | .330 | |
| .015 | .160 | .420 | .330 | .160 | .420 | .330 | .160 | .420 | .330 | .180 | .420 | .330 | .180 | .550 | .330 | |
| .018 | .160 | .420 | .330 | .160 | .420 | .330 | .160 | .420 | .330 | .180 | .420 | .330 | .180 | .550 | .330 | |
| .022 | .160 | .420 | .330 | .160 | .420 | .330 | .180 | .420 | .330 | .180 | .550 | .330 | .240 | .550 | .380 | |
| .027 | .160 | .420 | .330 | .160 | .420 | .330 | .180 | .420 | .330 | .180 | .550 | .330 | .240 | .550 | .380 | |
| .033 | .160 | .420 | .330 | .160 | .420 | .330 | .180 | .420 | .330 | .180 | .550 | .330 | .300 | .550 | .430 | |
| .039 | .160 | .420 | .330 | .180 | .420 | .330 | .180 | .550 | .330 | .240 | .550 | .380 | .300 | .670 | .430 | |
| .047 | .160 | .420 | .330 | .180 | .420 | .330 | .180 | .550 | .330 | .240 | .550 | .380 | .300 | .670 | .430 | |
| .056 | .160 | .420 | .330 | .180 | .420 | .330 | .180 | .550 | .330 | .240 | .550 | .380 | .300 | .670 | .430 | |
| .068 | .180 | .420 | .330 | .180 | .420 | .330 | .180 | .550 | .330 | .240 | .550 | .380 | .300 | .820 | .430 | |
| .082 | .180 | .420 | .330 | .180 | .420 | .330 | .240 | .550 | .380 | .300 | .550 | .430 | .300 | .820 | .430 | |
| .1 | .180 | .420 | .330 | .180 | .420 | .330 | .240 | .550 | .380 | .300 | .670 | .430 | .300 | .820 | .430 | |
| .12 | .180 | .420 | .330 | .180 | .550 | .330 | .330 | .570 | .430 | .300 | .670 | .430 | .400 | .820 | .560 | |
| .15 | .180 | .420 | .330 | .180 | .550 | .330 | .300 | .570 | .430 | .300 | .670 | .430 | .400 | .820 | .560 | |
| .18 | .180 | .550 | .330 | .180 | .550 | .330 | .300 | .570 | .430 | .300 | .820 | .430 | .400 | 1.040 | .560 | |
| .22 | .180 | .550 | .330 | .180 | .550 | .330 | .300 | .670 | .430 | .300 | .820 | .430 | .440 | 1.240 | .560 | |
| .27 | .180 | .550 | .330 | .240 | .550 | .380 | .300 | .820 | .430 | .300 | .820 | .430 | .400 | 1.240 | .560 | |
| .33 | .180 | .550 | .330 | .240 | .550 | .380 | .300 | .820 | .430 | .400 | .820 | .560 | .400 | 1.240 | .560 | |
| .39 | .240 | .550 | .380 | .300 | .550 | .430 | .300 | .820 | .430 | .400 | 1.040 | .560 | .400 | 1.240 | .560 | |
| .47 | .240 | .550 | .380 | .300 | .550 | .430 | .400 | .820 | .560 | .400 | 1.040 | .560 | .400 | 1.240 | .560 | |
| .56 | .300 | .550 | .430 | .300 | .550 | .430 | .400 | .820 | .560 | .570 | 1.240 | .730 | .570 | 1.240 | .730 | |
| .68 | .300 | .550 | .430 | .300 | .670 | .430 | .400 | 1.040 | .560 | .570 | 1.240 | .730 | .570 | 1.240 | .730 | |
| .82 | .300 | .550 | .430 | .300 | .820 | .430 | .400 | 1.040 | .560 | .570 | 1.240 | .730 | .570 | 1.750 | .730 | |
| 1.0 | .300 | .670 | .430 | .300 | .820 | .430 | .400 | 1.240 | .560 | .570 | 1.240 | .730 | | | | |
| 1.25 | .300 | .820 | .430 | .400 | .820 | .560 | .400 | 1.240 | .560 | .570 | 1.240 | .730 | | | | |
| 1.5 | .300 | .820 | .430 | .400 | .820 | .560 | .400 | 1.240 | .560 | .570 | 1.240 | .730 | | | | |
| 2.0 | .400 | 1.040 | .560 | .400 | 1.240 | .560 | .570 | 1.500 | .730 | .570 | 1.750 | .730 | | | | |
| 3.0 | .400 | 1.240 | .560 | .400 | 1.240 | .560 | .570 | 1.750 | .730 | | | | | | | |
| 4.0 | .400 | 1.240 | .560 | .570 | 1.240 | .730 | | | | | | | | | | |
| 5.0 | .400 | 1.240 | .560 | .570 | 1.240 | .730 | | | | | | | | | | |
| 6.0 | .570 | 1.240 | .730 | .570 | 1.240 | .730 | | | | | | | | | | |
| 10.0 | .570 | 1.750 | .730 | .570 | 1.750 | .730 | | | | | | | | | | |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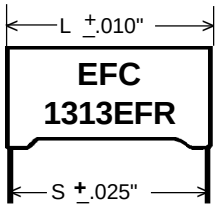
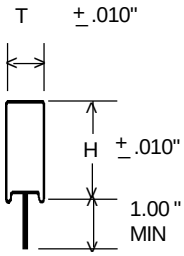
# 1313EFR

## Epoxy Case (Radial Leads)

# Metallized Polyester Capacitors




(All dimensions in inches)

Lead Specs.
Tinned Copperweld
B through E cases: 22 AWG
F through Q cases: 20 AWG

## DIMENSIONS and RATINGS

| Cap. µF | 63/40 VDC/VAC | 160/100 VDC/VAC | 250/160 VDC/VAC | 400/220 VDC/VAC | 630/250 VDC/VAC |
|---|---|---|---|---|---|
| .001 | B | B | B | B | C |
| .0012 | B | B | B | B | C |
| .0015 | B | B | B | B | C |
| .0018 | B | B | B | B | C |
| .0022 | B | B | B | B | C |
| .0027 | B | B | B | B | C |
| .0033 | B | B | B | B | C |
| .0039 | B | B | B | B | C |
| .0047 | B | B | B | B | C |
| .0056 | B | B | B | B | C |
| .0068 | B | B | B | B | C |
| .0082 | B | B | B | B | C |
| .01 | B | B | B | B | C |
| .012 | B | B | B | B | D |
| .015 | B | B | B | C | D |
| .018 | B | B | B | C | E |
| .022 | B | B | B | C | E |
| .027 | B | B | B | C | F |
| .033 | B | B | B | D | F |
| .039 | B | B | C | D | G |
| .047 | B | B | C | D | G |
| .056 | B | B | C | E | H |
| .068 | B | B | C | E | H |
| .082 | B | B | D | F | H |
| .1 | B | C | D | F | J/L |
| .12 | B | C | D | G | J/L |
| .15 | B | C | E | H | J/L |
| .18 | C | D | E | H | K/M |
| .22 | C | D | F | J/L | N |
| .27 | C | D | F | J/L | O |
| .33 | C | E | G | K/M | P |
| .39 | D | E | G | K/M | P |
| .47 | D | F | H | N | Q |
| .56 | E | G | H | O | Q |
| .68 | E | G | J/L | O | |
| .82 | F | H | K/M | P | |
| 1.0 | F | H | N | P | |
| 1.2 | G | H | N | Q | |
| 1.5 | G | K/M | P | | |
| 2.2 | H | N | P | | |
| 3.3 | K/M | O | Q | | |
| 4.7 | N | P | | | |
| 6.8 | O | | | | |
| 10.0 | | | | | |

| CASE SIZE | L mm in. | T mm in. | H mm in. | S mm in. |
|---|---|---|---|---|
| B | 10.5 / .413 | 4 / .157 | 9 / .354 | 7.5 / .295 |
| C | 13 / .512 | 4 / .157 | 9 / .354 | 10 / .394 |
| D | 13 / .512 | 5 / .197 | 11 / .433 | 10 / .394 |
| E | 13 / .512 | 6 / .236 | 12 / .472 | 10 / .394 |
| F | 18 / .709 | 5 / .197 | 11 / .433 | 15 / .591 |
| G | 18 / .709 | 6 / .236 | 12 / .472 | 15 / .591 |
| H | 18 / .709 | 7.5 / .295 | 13.5 / .531 | 15 / .591 |
| J | 26.5 / 1.04 | 6 / .236 | 15 / .591 | 20 / .787 |
| K | 26.5 / 1.04 | 7 / .276 | 16 / .630 | 20 / .787 |
| L | 26.5 / 1.04 | 6 / .236 | 15 / .591 | 22.5 / .886 |
| M | 26.5 / 1.04 | 7 / .276 | 16 / .630 | 22.5 / .886 |
| N | 26.5 / 1.04 | 8.5 / .335 | 16.3 / .642 | 22.5 / .886 |
| O | 26.5 / 1.04 | 10 / .394 | 19 / .748 | 22.5 / .886 |
| P | 32 / 1.26 | 11 / .433 | 20 / .787 | 27.5 / 1.08 |
| Q | 32 / 1.26 | 13 / .512 | 22 / .866 | 27.5 / 1.08 |

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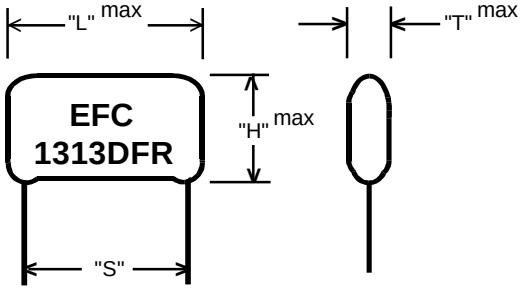
# Standard Metallized Polyester Capacitors




# 1313DFR

## Epoxy Dipped (Radial Leads)

Lead Specs. - Tinned Copperweld

| L | S | DIA. |
|---|---|---|
| 10.0 | 7.5 | 0.6 |
| 12.5 | 10.0 | 0.6 |
| 18.0 | 15.0 | 0.8 |
| 26.0 | 22.5 | 0.8 |
| 31.0 | 27.5 | 0.8 |
| 44.0 | 38.0 | 0.8 |

(All dimensions in millimeters)

## DIMENSIONS and RATINGS

| Cap. | 1313DFR-3 100 VDC | | | 1313DFR-3 160 VDC | | | 1313DFR-3 250 VDC | | | 1313DFR-3 400 VDC | | | 1313DFR-3 630 VDC | | | 1313DFR-3 1000 VDC | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| µF | T | H | L | T | H | L | T | H | L | T | H | L | T | H | L | T | H | L | |
| .001 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 12.5 | |
| .0012 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 8.5 | 12.5 | |
| .0015 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 9.0 | 12.5 | |
| .0022 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.5 | 9.0 | 12.5 | |
| .0027 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.5 | 9.0 | 12.5 | |
| .0039 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.5 | 9.0 | 12.5 | |
| .0047 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.5 | 9.5 | 12.5 | |
| .0056 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 9.0 | 10.0 | 4.5 | 9.5 | 12.5 | |
| .0068 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 9.0 | 12.5 | 5.0 | 10.0 | 12.5 | |
| .0082 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.5 | 9.0 | 12.5 | 5.0 | 10.0 | 12.5 | |
| .01 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.5 | 9.0 | 12.5 | 5.5 | 11.0 | 12.5 | |
| .012 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 8.5 | 10.0 | 5.0 | 10.0 | 12.5 | 6.0 | 12.0 | 12.5 | |
| .015 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.5 | 9.0 | 10.0 | 5.5 | 11.0 | 12.5 | 5.0 | 10.0 | 18.0 | |
| .018 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 9.0 | 12.5 | 6.0 | 11.5 | 12.5 | 5.5 | 11.0 | 18.0 | |
| .022 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.5 | 9.0 | 12.5 | 6.0 | 12.0 | 12.5 | 6.0 | 12.0 | 18.0 | |
| .027 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.5 | 9.5 | 12.5 | 5.0 | 10.0 | 18.0 | 6.5 | 12.5 | 18.0 | |
| .033 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 8.5 | 10.0 | 5.0 | 10.0 | 12.5 | 5.5 | 11.0 | 18.0 | 7.0 | 13.0 | 18.0 | |
| .039 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 9.0 | 10.0 | 6.0 | 11.0 | 12.5 | 6.0 | 11.5 | 18.0 | 7.5 | 13.5 | 18.0 | |
| .047 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.5 | 9.0 | 10.0 | 6.5 | 12.0 | 12.5 | 6.0 | 12.0 | 18.0 | 7.0 | 13.0 | 26.0 | |
| .056 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.0 | 9.0 | 12.5 | 5.0 | 10.0 | 18.0 | 6.5 | 12.5 | 18.0 | 8.0 | 15.0 | 26.0 | |
| .068 | 4.0 | 8.0 | 10.0 | 4.0 | 8.0 | 10.0 | 4.5 | 9.0 | 12.5 | 5.5 | 11.0 | 18.0 | 7.0 | 13.0 | 18.0 | 8.5 | 16.0 | 26.0 | |
| .082 | 4.0 | 8.0 | 10.0 | 4.0 | 8.5 | 10.0 | 4.5 | 9.5 | 12.5 | 5.5 | 11.5 | 18.0 | 7.5 | 13.5 | 18.0 | 9.0 | 16.5 | 26.0 | |
| .1 | 4.0 | 8.0 | 10.0 | 4.0 | 9.0 | 10.0 | 5.0 | 10.0 | 12.5 | 6.5 | 12.5 | 18.0 | 7.0 | 13.0 | 26.0 | 9.5 | 18.0 | 26.0 | |
| .12 | 4.0 | 8.0 | 10.0 | 5.5 | 11.0 | 12.5 | 5.5 | 11.0 | 12.5 | 7.0 | 13.0 | 18.0 | 8.0 | 14.0 | 26.0 | 9.0 | 16.5 | 31.0 | |
| .15 | 4.0 | 8.0 | 10.0 | 4.5 | 9.0 | 12.5 | 6.5 | 12.0 | 12.5 | 7.5 | 13.5 | 18.0 | 8.5 | 15.0 | 26.0 | 10.0 | 19.0 | 31.0 | |
| .18 | 4.0 | 8.5 | 10.0 | 4.5 | 9.5 | 12.5 | 5.0 | 10.0 | 18.0 | 6.5 | 12.5 | 26.0 | 9.0 | 17.0 | 26.0 | 10.5 | 20.0 | 31.0 | |
| .22 | 4.0 | 8.5 | 10.0 | 5.0 | 10.0 | 12.5 | 5.5 | 11.0 | 18.0 | 7.0 | 13.0 | 26.0 | 10.0 | 19.0 | 26.0 | 11.5 | 21.0 | 31.0 | |
| .27 | 4.0 | 8.5 | 10.0 | 5.5 | 11.0 | 12.5 | 6.0 | 12.0 | 18.0 | 8.0 | 14.5 | 26.0 | 9.5 | 17.0 | 31.0 | 12.5 | 23.0 | 31.0 | |
| .33 | 4.0 | 9.0 | 10.0 | 6.0 | 12.0 | 12.5 | 6.5 | 12.5 | 18.0 | 8.5 | 16.0 | 26.0 | 10.0 | 19.0 | 31.0 | 13.5 | 25.0 | 31.0 | |
| .39 | 4.0 | 9.0 | 12.5 | 5.0 | 10.0 | 18.0 | 7.0 | 13.0 | 18.0 | 9.0 | 17.0 | 26.0 | 11.0 | 20.5 | 31.0 | 14.5 | 27.0 | 31.0 | |
| .47 | 4.5 | 9.5 | 12.5 | 5.5 | 11.0 | 18.0 | 7.5 | 13.5 | 18.0 | 9.5 | 18.0 | 26.0 | 12.0 | 22.0 | 31.0 | 16.5 | 30.0 | 31.0 | |
| .56 | 5.0 | 10.0 | 12.5 | 6.0 | 12.0 | 18.0 | 7.0 | 13.0 | 26.0 | 10.0 | 19.0 | 31.0 | 13.0 | 23.0 | 31.0 | 15.0 | 27.0 | 44.0 | |
| .68 | 5.5 | 10.5 | 12.5 | 7.0 | 13.0 | 18.0 | 8.0 | 14.0 | 26.0 | 10.5 | 20.0 | 31.0 | 13.5 | 25.0 | 31.0 | 16.5 | 30.0 | 44.0 | |
| .82 | 6.0 | 11.5 | 12.5 | 7.5 | 13.5 | 18.0 | 8.5 | 15.5 | 26.0 | 11.5 | 22.0 | 31.0 | 14.5 | 27.0 | 31.0 | 17.0 | 32.0 | 44.0 | |
| 1.0 | 6.5 | 12.0 | 12.5 | 8.0 | 14.0 | 18.0 | 9.0 | 16.5 | 26.0 | 13.0 | 24.0 | 31.0 | 16.5 | 30.0 | 31.0 | 20.0 | 35.0 | 44.0 | |
| 1.2 | 6.0 | 12.0 | 18.0 | 7.5 | 13.5 | 26.0 | 9.5 | 17.0 | 26.0 | 14.0 | 25.5 | 31.0 | 15.0 | 27.0 | 44.0 | | | | |
| 1.5 | 6.5 | 12.5 | 18.0 | 8.0 | 14.0 | 26.0 | 10.0 | 19.0 | 26.0 | 15.5 | 27.0 | 31.0 | 16.5 | 30.0 | 44.0 | | | | |
| 1.8 | 7.0 | 13.0 | 18.0 | 8.5 | 15.5 | 26.0 | 9.5 | 17.0 | 31.0 | 16.5 | 30.3 | 31.0 | 18.0 | 33.0 | 44.0 | | | | |
| 2.2 | 7.5 | 13.5 | 18.0 | 9.0 | 17.0 | 26.0 | 10.0 | 19.0 | 31.0 | 17.0 | 32.0 | 31.0 | 20.5 | 36.0 | 44.0 | | | | |
| 2.7 | 7.0 | 13.0 | 26.0 | 9.5 | 18.0 | 26.0 | 11.5 | 21.0 | 31.0 | 15.5 | 28.0 | 44.0 | | | | | | | |
| 3.3 | 7.5 | 13.5 | 26.0 | 10.5 | 20.0 | 26.0 | 15.0 | 26.0 | 31.0 | 17.0 | 32.0 | 44.0 | | | | | | | |
| 3.9 | 8.0 | 14.5 | 26.0 | 10.0 | 19.0 | 31.0 | 13.5 | 25.0 | 31.0 | 18.0 | 33.0 | 44.0 | | | | | | | |
| 4.7 | 8.5 | 16.0 | 26.0 | 11.0 | 21.0 | 31.0 | 15.0 | 26.0 | 31.0 | 20.0 | 35.0 | 44.0 | | | | | | | |
| 5.6 | 9.0 | 17.0 | 26.0 | 12.0 | 22.0 | 31.0 | 14.5 | 25.0 | 44.0 | | | | | | | | | | |
| 6.8 | 9.5 | 18.0 | 26.0 | 13.0 | 24.0 | 31.0 | 16.0 | 30.0 | 44.0 | | | | | | | | | | |

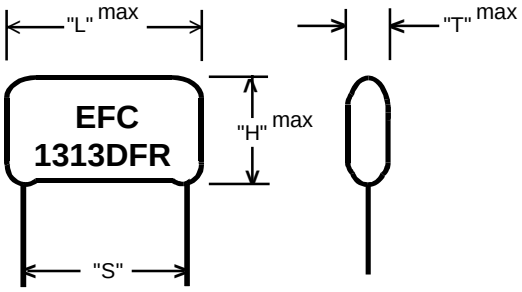
EFC will manufacture to any non-standard value and size. Please consult factory for special requirements.

**ELECTRONIC FILM CAPACITORS, INC.**

Reidville Industrial Park * 41 Interstate Lane * WATERBURY, CONNECTICUT 06705

Phone (203) 755-5629 * E-Mail: efc@filmcapacitors.com * FAX (203) 755-0659

# Miniature Metallized Polyester Capacitors




(All dimensions in millimeters)

# 1313DFR

## Epoxy Dipped (Radial Leads)

Lead Specs. - Tinned Copperweld

| L | S | DIA. |
|---|---|---|
| 7.5 | 5.0 | 0.5 |
| 10.0 | 7.5 | 0.6 |
| 12.5 | 10.0 | 0.6 |
| 18.5 | 15.0 | 0.8 |
| 26.0 | 22.5 | 0.8 |
| 31.0 | 27.5 | 0.8 |

## DIMENSIONS and RATINGS

| Cap. | 1313DFR-2 63 VDC | | | 1313DFR-2 100 VDC | | | 1313DFR-2 250 VDC | | | 1313DFR-2 400 VDC | | | 1313DFR-2 630 VDC | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| µF | T | H | L | T | H | L | T | H | L | T | H | L | T | H | L | | | | |
| .001 | 3.5 | 6.5 | 7.5 | 3.5 | 6.5 | 7.5 | 4.0 | 7.0 | 10.0 | | | | | | | | | | |
| .0012 | 3.5 | 6.5 | 7.5 | 3.5 | 6.5 | 7.5 | 4.0 | 7.0 | 10.0 | | | | | | | | | | |
| .0015 | 3.5 | 6.5 | 7.5 | 3.5 | 6.5 | 7.5 | 4.0 | 7.0 | 10.0 | | | | | | | | | | |
| .0022 | 3.5 | 6.5 | 7.5 | 3.5 | 6.5 | 7.5 | 4.0 | 7.0 | 10.0 | | | | | | | | | | |
| .0027 | 3.5 | 6.5 | 7.5 | 4.0 | 7.0 | 7.5 | 4.0 | 7.5 | 10.0 | | | | | | | | | | |
| .0039 | 3.5 | 6.5 | 7.5 | 4.0 | 7.0 | 7.5 | 4.0 | 7.5 | 10.0 | | | | | | | | | | |
| .0047 | 3.5 | 6.5 | 7.5 | 4.0 | 7.0 | 7.5 | 4.0 | 7.5 | 10.0 | | | | | | | | | | |
| .0056 | 3.5 | 6.5 | 7.5 | 4.0 | 7.0 | 7.5 | 4.0 | 7.5 | 10.0 | | | | | | | | | | |
| .0068 | 3.5 | 6.5 | 7.5 | 4.0 | 7.0 | 7.5 | 4.0 | 7.5 | 10.0 | | | | | | | | | | |
| .0082 | 3.5 | 6.5 | 7.5 | 4.0 | 7.0 | 7.5 | 4.0 | 7.5 | 10.0 | | | | | | | | | | |
| .01 | 3.5 | 6.5 | 7.5 | 4.0 | 7.5 | 7.5 | 4.0 | 7.5 | 10.0 | 4.5 | 7.5 | 10.0 | 4.5 | 7.5 | 12.5 | | | | |
| .012 | 3.5 | 6.5 | 7.5 | 4.0 | 7.5 | 7.5 | 4.0 | 7.5 | 10.0 | 4.5 | 7.5 | 10.0 | 4.5 | 8.0 | 12.5 | | | | |
| .015 | 3.5 | 6.5 | 7.5 | 4.0 | 7.5 | 7.5 | 4.5 | 7.5 | 10.0 | 4.5 | 7.5 | 10.0 | 5.0 | 8.5 | 12.5 | | | | |
| .018 | 3.5 | 6.5 | 7.5 | 4.0 | 7.5 | 7.5 | 4.5 | 7.5 | 10.0 | 4.5 | 7.5 | 10.0 | 5.0 | 9.5 | 12.5 | | | | |
| .022 | 3.5 | 6.5 | 7.5 | 4.0 | 7.5 | 7.5 | 4.5 | 7.5 | 10.0 | 5.0 | 8.5 | 10.0 | 5.5 | 10.0 | 12.5 | | | | |
| .027 | 3.5 | 6.5 | 7.5 | 4.0 | 7.5 | 7.5 | 4.5 | 7.5 | 10.0 | 5.5 | 9.0 | 10.0 | 5.5 | 11.0 | 12.5 | | | | |
| .033 | 3.5 | 6.5 | 7.5 | 4.0 | 7.5 | 7.5 | 4.5 | 7.5 | 10.0 | 6.0 | 9.5 | 10.0 | 6.0 | 12.0 | 12.5 | | | | |
| .039 | 3.5 | 6.5 | 7.5 | 4.5 | 7.5 | 7.5 | 4.5 | 7.5 | 10.0 | 5.0 | 8.0 | 12.5 | 6.0 | 12.5 | 12.5 | | | | |
| .047 | 3.5 | 6.5 | 7.5 | 4.5 | 7.5 | 7.5 | 4.5 | 7.5 | 10.0 | 5.0 | 8.5 | 12.5 | 6.5 | 13.5 | 12.5 | | | | |
| .056 | 3.5 | 6.5 | 7.5 | 4.5 | 8.0 | 7.5 | 4.5 | 8.0 | 10.0 | 5.0 | 9.5 | 12.5 | 5.5 | 10.5 | 18.5 | | | | |
| .068 | 3.5 | 6.5 | 7.5 | 5.0 | 8.5 | 7.5 | 4.5 | 8.0 | 10.0 | 5.5 | 10.5 | 12.5 | 6.0 | 11.0 | 18.5 | | | | |
| .082 | 3.5 | 7.0 | 7.5 | 5.0 | 9.5 | 7.5 | 5.0 | 8.5 | 10.0 | 6.0 | 11.0 | 12.5 | 6.5 | 12.0 | 18.5 | | | | |
| .1 | 4.0 | 7.0 | 7.5 | 5.0 | 10.0 | 7.5 | 6.0 | 8.5 | 10.0 | 6.5 | 12.0 | 12.5 | 6.5 | 13.5 | 18.5 | | | | |
| .12 | 4.0 | 7.0 | 7.5 | 4.5 | 7.5 | 10.0 | 6.0 | 9.0 | 10.0 | 5.0 | 10.0 | 18.5 | 6.5 | 14.5 | 18.5 | | | | |
| .15 | 4.0 | 7.5 | 7.5 | 4.5 | 7.5 | 10.0 | 6.0 | 11.0 | 10.0 | 5.0 | 12.5 | 18.5 | 7.5 | 15.5 | 18.5 | | | | |
| .18 | 4.0 | 8.0 | 7.5 | 5.0 | 10.0 | 12.5 | 5.0 | 10.0 | 12.5 | 5.5 | 12.5 | 18.5 | 8.0 | 16.0 | 18.5 | | | | |
| .22 | 4.0 | 8.5 | 7.5 | 5.0 | 8.5 | 10.0 | 5.5 | 10.5 | 12.5 | 6.0 | 13.0 | 18.5 | 9.0 | 16.5 | 18.5 | | | | |
| .27 | 4.5 | 9.0 | 7.5 | 5.5 | 10.0 | 10.0 | 6.0 | 11.5 | 12.5 | 6.5 | 14.5 | 18.5 | 7.0 | 16.5 | 26.0 | | | | |
| .33 | 4.5 | 8.5 | 10.0 | 6.0 | 10.5 | 10.0 | 6.5 | 12.0 | 12.5 | 7.0 | 15.0 | 18.5 | 8.0 | 17.0 | 26.0 | | | | |
| .39 | 5.0 | 8.5 | 10.0 | 6.0 | 11.0 | 10.0 | 5.0 | 12.0 | 18.5 | 7.5 | 15.5 | 18.5 | 8.5 | 18.0 | 26.0 | | | | |
| .47 | 5.0 | 9.0 | 10.0 | 6.0 | 12.0 | 10.0 | 5.5 | 12.5 | 18.5 | 8.0 | 17.0 | 18.5 | 9.5 | 18.5 | 26.0 | | | | |
| .56 | 5.0 | 10.0 | 10.0 | 5.5 | 11.0 | 12.5 | 5.5 | 13.0 | 18.5 | 6.5 | 16.0 | 26.0 | 10.0 | 20.0 | 26.0 | | | | |
| .68 | 5.5 | 11.0 | 10.0 | 6.0 | 12.0 | 12.5 | 6.0 | 13.5 | 18.5 | 7.0 | 16.5 | 26.0 | 11.5 | 21.0 | 26.0 | | | | |
| .82 | 6.0 | 12.0 | 10.0 | 6.0 | 13.5 | 12.5 | 6.5 | 14.5 | 18.5 | 8.0 | 17.5 | 26.0 | 11.5 | 20.5 | 31.0 | | | | |
| 1.0 | 6.0 | 12.5 | 10.0 | 7.0 | 14.0 | 12.5 | 7.5 | 15.0 | 18.5 | 8.5 | 19.0 | 26.0 | 12.5 | 22.0 | 31.0 | | | | |
| 1.2 | 6.0 | 12.0 | 12.5 | 5.5 | 13.0 | 18.5 | 8.0 | 16.0 | 18.5 | 9.5 | 19.0 | 26.0 | 13.5 | 23.0 | 31.0 | | | | |
| 1.5 | 6.5 | 12.5 | 12.5 | 6.0 | 13.5 | 18.5 | 9.0 | 17.0 | 18.5 | 9.5 | 19.0 | 31.0 | 15.5 | 25.0 | 31.0 | | | | |
| 1.8 | 6.5 | 13.5 | 12.5 | 6.5 | 14.5 | 18.5 | 7.5 | 15.5 | 26.0 | 11.0 | 20.5 | 31.0 | 17.0 | 27.0 | 31.0 | | | | |
| 2.2 | 5.0 | 10.0 | 18.5 | 7.0 | 15.0 | 18.5 | 8.5 | 16.5 | 26.0 | 12.5 | 22.0 | 31.0 | 19.5 | 29.0 | 31.0 | | | | |
| 2.7 | 5.5 | 11.0 | 18.5 | 8.0 | 16.0 | 18.5 | 9.5 | 17.0 | 26.0 | 13.5 | 23.0 | 31.0 | | | | | | | |
| 3.3 | 6.0 | 11.5 | 18.5 | 8.5 | 16.5 | 18.5 | 10.5 | 18.0 | 26.0 | 15.0 | 25.0 | 31.0 | | | | | | | |
| 3.9 | 6.5 | 12.0 | 18.5 | 7.0 | 16.5 | 26.0 | 11.0 | 20.5 | 26.0 | 16.5 | 27.0 | 31.0 | | | | | | | |
| 4.7 | 7.0 | 13.0 | 18.5 | 7.5 | 17.0 | 26.0 | 12.0 | 21.5 | 26.0 | 19.5 | 30.0 | 31.0 | | | | | | | |
| 5.6 | 8.0 | 14.0 | 18.5 | 8.5 | 17.5 | 26.0 | 12.0 | 21.0 | 31.0 | | | | | | | | | | |
| 6.8 | 8.5 | 15.0 | 18.5 | 9.0 | 18.5 | 26.0 | 13.0 | 22.5 | 31.0 | | | | | | | | | | |

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

**ELECTRONIC FILM CAPACITORS, INC.**

Reidville Industrial Park * 41 Interstate Lane * WATERBURY, CONNECTICUT 06705

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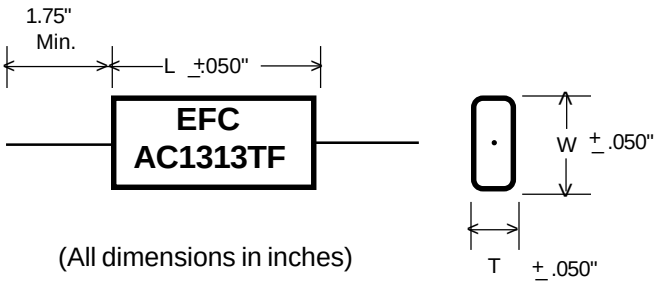
# AC1313TF

**Oval**
**Wrap and Fill**

## Metallized Polyester Capacitors




(All dimensions in inches)

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

## DIMENSIONS and RATINGS

| Cap. | AC1313TF-3 150 VAC 60 HZ | | | AC1313TF-3 250 VAC 60 HZ | | |
|---|---|---|---|---|---|---|
| µF | T | W | L | T | W | L |
| .047 | .125 | .250 | .625 | .140 | ..265 | .625 |
| .056 | .125 | .250 | .625 | .140 | .312 | .625 |
| .068 | .125 | .250 | .625 | .140 | .312 | .625 |
| .082 | .125 | .250 | .625 | .171 | .375 | .625 |
| .1 | .125 | .250 | .625 | .171 | .375 | .625 |
| .12 | .140 | .312 | .625 | .140 | .312 | 1.000 |
| .15 | .156 | .343 | .625 | .140 | .312 | 1.000 |
| .18 | .171 | .343 | .625 | .171 | .343 | 1.000 |
| .22 | .171 | .343 | .625 | .171 | .343 | 1.000 |
| .27 | .140 | .265 | 1.000 | .203 | .406 | 1.000 |
| .33 | .156 | .343 | 1.000 | .203 | .406 | 1.000 |
| .39 | .140 | .312 | 1.000 | .218 | .515 | 1.000 |
| .47 | .156 | .343 | 1.000 | .218 | .515 | 1.000 |
| .56 | .171 | .375 | 1.000 | .265 | .562 | 1.000 |
| .68 | .171 | .375 | 1.000 | .265 | .562 | 1.000 |
| .82 | .187 | .484 | 1.000 | .234 | .531 | 1.500 |
| 1.0 | .187 | .484 | 1.000 | .234 | .531 | 1.500 |
| 1.5 | .234 | .578 | 1.000 | .296 | .593 | 1.500 |
| 2.0 | .281 | .578 | 1.000 | .328 | .718 | 1.500 |
| 2.5 | .296 | .640 | 1.500 | .437 | .921 | 2.000 |
| 3.0 | .328 | .718 | 1.500 | .421 | .906 | 2.500 |
| 4.0 | .312 | .703 | 2.000 | .468 | 1.062 | 2.500 |
| 5.0 | .359 | .750 | 2.000 | .546 | 1.140 | 2.500 |
| 6.0 | .343 | .734 | 2.500 | .578 | 1.265 | 2.500 |
| 7.0 | .375 | .785 | 2.500 | .640 | 1.328 | 2.500 |
| 8.0 | .375 | .859 | 2.500 | .640 | 1.421 | 2.500 |
| 10.0 | .421 | .908 | 2.500 | .765 | 1.546 | 2.500 |
| 12.0 | .488 | 1.062 | 2.500 | | | |

NOTES:

1. EFC Series AC1313TF capacitors are designed for general purpose 60 HZ applications.
2. Quality AC applications are assured through the use of specially metallized dielectrics and end terminations.
3. For 85 $^{O}$C operation, a 75% derating is recommended.

**ELECTRONIC FILM CAPACITORS, INC.**

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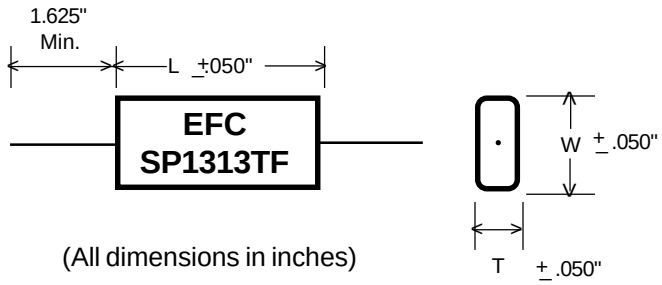
# SP1313TF

**Oval**
**Wrap and Fill**

# Metallized Polyester Capacitors




(All dimensions in inches)

## DIMENSIONS and RATINGS

| Cap. | SP1313TF-3 250 VDC | | | LEAD GAUGE | $I_{RMS}$ AMPS | $I_{PEAK}$ AMPS | 100 kHz ESR (Max.) |
|---|---|---|---|---|---|---|---|
| µF | T | W | L | | | | |
| 1.0 | .360 | .560 | 1.125 | 20 AWG | 2.0 | 7.0 | 41 mΩ |
| 1.5 | .450 | .650 | 1.125 | 20 AWG | 2.0 | 11.0 | 34 mΩ |
| 2.2 | .500 | .800 | 1.125 | 20 AWG | 3.0 | 16.0 | 28 mΩ |
| 3.3 | .550 | .840 | 1.250 | 20 AWG | 4.0 | 19.0 | 23 mΩ |
| 4.7 | .620 | 1.010 | 1.250 | 18 AWG | 4.0 | 26.0 | 19 mΩ |

| Cap. | SP1313TF-3 400 VDC | | | LEAD GAUGE | $I_{RMS}$ AMPS | $I_{PEAK}$ AMPS | 100 kHz ESR (Max.) |
|---|---|---|---|---|---|---|---|
| µF | T | W | L | | | | |
| 1.0 | .550 | .850 | 1.200 | 20 AWG | 2.0 | 10.0 | 41 mΩ |
| 1.5 | .690 | .990 | 1.200 | 18 AWG | 3.0 | 14.0 | 34 mΩ |
| 2.2 | .630 | 1.020 | 1.560 | 18 AWG | 4.0 | 16.0 | 28 mΩ |
| 3.3 | .790 | 1.180 | 1.560 | 18 AWG | 4.0 | 23.0 | 23 mΩ |
| 4.7 | .960 | 1.360 | 1.560 | 18 AWG | 4.0 | 33.0 | 19 mΩ |

| Insulation Resistance (Min.) | +25 °C | +85 °C |
|---|---|---|
| Megohms x Microfarads | 30,000 | 3,000 |
| Need not exceed (Megohms) | 50,000 | 3,000 |

**NOTES:** EFC series SP1313TF capacitors are designed specifically for Switching Power Supply applications, where current and LOW E.S.R. values are important. Capacitance drift over time, due to humidity, temperature cycling or operation life are negligible. Electrical characteristics, such as insulation resistance (I.R.), dissipation factor and dielectric absorption are superior in this Metallized Polyester capacitor as compared to the characteristics displayed by Electrolytic Capacitors. In switching power supply applications requiring medium current, the size and weight savings of the series SP1313TF capacitors coupled with the superior electrical characteristics mentioned above make SP1313TF capacitors the ideal choice in your new or existing switching power supply.

Case is flame retardant - tape wrap construction with epoxy end seals.

Capacitance Tolerance: Standard is +/- 20%. Also available is +/- 10% and +/- 5%. The tolerance applies when measured at 1000 +/- 20 Hz at 25 °C.

Temperature Range: -55 °C to +100 °C.

Humidity Resistance: Tested as outlined in MIL-STD-202C, method 103B, condition A. After final condition IR, no less than 1/2 minimum values listed in table above. Dielectric strength to withstand test as outlined in par. 3.4. One failure allowed of 18 units tested.

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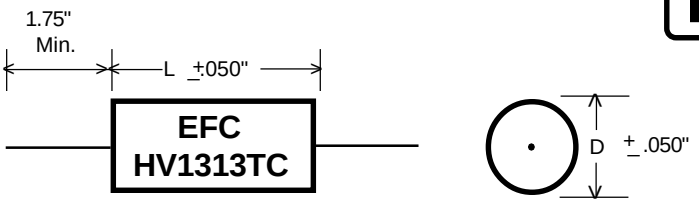
# HV1313TC

**Tubular**
**Wrap and Fill**

# High Voltage Metallized Polyester Capacitors




(All dimensions in inches)

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

## DIMENSIONS and RATINGS

| Cap. | HV1313TC-3 2000 VDC | | HV1313TC-3 3000 VDC | | HV1313TC-3 4000 VDC | | HV1313TC-3 5000 VDC | | HV1313TC-3 6000 VDC | | HV1313TC-3 8000 VDC | | HV1313TC-3 10000 VDC | | HV1313TC-3 15000 VDC | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| µF | D | L | D | L | D | L | D | L | D | L | D | L | D | L | D | L |
| .001 | .218 | 1.25 | .250 | 1.25 | .250 | 1.25 | .250 | 1.312 | .250 | 1.312 | .250 | 1.812 | .281 | 2.00 | .453 | 2.375 |
| .0012 | .218 | 1.25 | .250 | 1.25 | .250 | 1.25 | .250 | 1.312 | .250 | 1.312 | .265 | 1.812 | .312 | 2.00 | .468 | 2.375 |
| .0015 | .218 | 1.25 | .250 | 1.25 | .250 | 1.25 | .250 | 1.312 | .265 | 1.312 | .281 | 1.812 | .328 | 2.00 | .531 | 2.375 |
| .0018 | .218 | 1.25 | .250 | 1.25 | .250 | 1.25 | .250 | 1.312 | .296 | 1.312 | .296 | 1.812 | .359 | 2.00 | .578 | 2.375 |
| .0022 | .218 | 1.25 | .250 | 1.25 | .250 | 1.25 | .250 | 1.312 | .312 | 1.312 | .328 | 1.812 | .387 | 2.00 | .658 | 2.375 |
| .0027 | .218 | 1.25 | .250 | 1.25 | .250 | 1.25 | .282 | 1.312 | .343 | 1.312 | .375 | 1.812 | .437 | 2.00 | .703 | 2.375 |
| .0033 | .218 | 1.25 | .250 | 1.25 | .265 | 1.25 | .296 | 1.312 | .375 | 1.312 | .390 | 1.812 | .468 | 2.00 | .562 | 3.00 |
| .0039 | .218 | 1.25 | .250 | 1.25 | .281 | 1.25 | .312 | 1.312 | .406 | 1.312 | .437 | 1.812 | .515 | 2.00 | .609 | 3.00 |
| .0047 | .218 | 1.25 | .250 | 1.25 | .312 | 1.25 | .343 | 1.312 | .343 | 1.687 | .468 | 1.812 | .562 | 2.00 | .656 | 3.00 |
| .0056 | .218 | 1.25 | .250 | 1.25 | .328 | 1.25 | .375 | 1.312 | .375 | 1.687 | .500 | 1.812 | .608 | 2.00 | .716 | 3.00 |
| .0068 | .218 | 1.25 | .250 | 1.25 | .358 | 1.25 | .406 | 1.312 | .406 | 1.687 | .546 | 1.812 | .671 | 2.00 | .781 | 3.00 |
| .0082 | .218 | 1.25 | .265 | 1.25 | .375 | 1.25 | .343 | 1.687 | .437 | 1.687 | .484 | 2.312 | .734 | 2.00 | .859 | 3.00 |
| .01 | .218 | 1.25 | .286 | 1.25 | .408 | 1.25 | .375 | 1.687 | .484 | 1.687 | .531 | 2.312 | .796 | 2.00 | .937 | 3.00 |
| .012 | .234 | 1.25 | .317 | 1.25 | .445 | 1.25 | .406 | 1.687 | .531 | 1.687 | .562 | 2.312 | .875 | 2.00 | 1.031 | 3.00 |
| .015 | .250 | 1.25 | .343 | 1.25 | .375 | 1.75 | .437 | 1.687 | .578 | 1.687 | .625 | 2.312 | .750 | 2.625 | 1.156 | 3.00 |
| .018 | .265 | 1.25 | .375 | 1.25 | .406 | 1.75 | .500 | 1.687 | .531 | 2.062 | .687 | 2.312 | .796 | 2.625 | | |
| .022 | .296 | 1.25 | .406 | 1.25 | .428 | 1.75 | .531 | 1.687 | .578 | 2.062 | .750 | 2.312 | .875 | 2.625 | | |
| .027 | .312 | 1.25 | .359 | 1.75 | .484 | 1.75 | .578 | 1.687 | .640 | 2.062 | .875 | 2.312 | .968 | 2.625 | | |
| .033 | .343 | 1.25 | .375 | 1.75 | .531 | 1.75 | .531 | 2.062 | .703 | 2.062 | .906 | 2.312 | 1.062 | 2.625 | | |
| .039 | .375 | 1.25 | .437 | 1.75 | .562 | 1.75 | .593 | 2.062 | .796 | 2.062 | .843 | 2.812 | | | | |
| .047 | .359 | 1.50 | .453 | 1.75 | .515 | 2.25 | .625 | 2.062 | .828 | 2.062 | .921 | 2.812 | | | | |
| .056 | .375 | 1.50 | .468 | 1.75 | .562 | 2.25 | .687 | 2.062 | .906 | 2.062 | 1.000 | 2.812 | | | | |
| .068 | .406 | 1.50 | .453 | 2.25 | .608 | 2.25 | .750 | 2.062 | .875 | 2.437 | 1.125 | 2.812 | | | | |
| .082 | .453 | 1.50 | .484 | 2.25 | .671 | 2.25 | .734 | 2.437 | .953 | 2.437 | 1.250 | 2.812 | | | | |
| .1 | .500 | 1.50 | .531 | 2.25 | .734 | 2.25 | .875 | 2.437 | 1.062 | 2.437 | 1.375 | 2.812 | | | | |

NOTES:

1. EFC Series HV1313TC capacitors are designed for use with high voltage rectifiers, power supplies for electrostatic copiers and televisions, etc.
2. Maximum recommended operating temperature is +85 $^{O}$C.

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