

# 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

0.001μF to 20μF

### 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

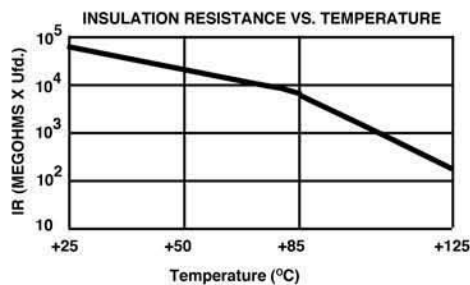
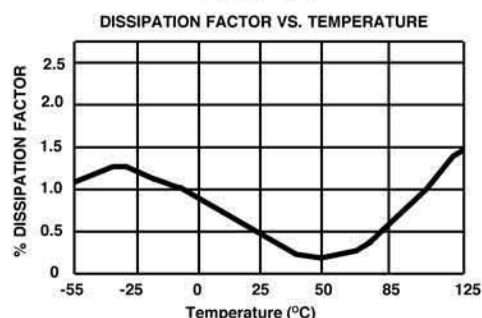
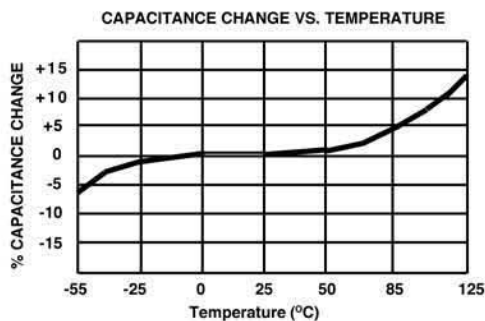
Series 1313 shall meet the requirements of MIL-STD. 202, Method 103B.

### 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 ( $\mu\text{F}$ )

**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





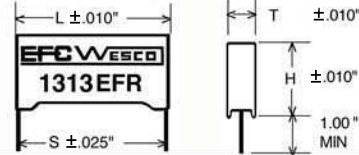
Please consult factory for special requirements, including non-standard values and sizes

**1313EFR**  
Rectangular Plastic Case  
(Radial Leads)

**Metallized  
Polyester Capacitors**

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

## Dimensions and Ratings



| 63 VDC / 40 VAC |                      |             |             |             |             | 160 VDC / 100 VAC |                       |             |             |             |             |
|-----------------|----------------------|-------------|-------------|-------------|-------------|-------------------|-----------------------|-------------|-------------|-------------|-------------|
| Cap.            | Part #               | T           | L           | H           | S           | Cap.              | Part #                | T           | L           | H           | S           |
| μF              |                      | in. (mm)    | in. (mm)    | in. (mm)    | in. (mm)    | μF                |                       | in. (mm)    | in. (mm)    | in. (mm)    | in. (mm)    |
| .001            | 1313EFR-B-.001-63-*  | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  | .001              | 1313EFR-B-.001-1.6-*  | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  |
| .0012           | 1313EFR-B-.0012-63-* | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  | .0012             | 1313EFR-B-.0012-1.6-* | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  |
| .0015           | 1313EFR-B-.0015-63-* | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  | .0015             | 1313EFR-B-.0015-1.6-* | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  |
| .0018           | 1313EFR-B-.0018-63-* | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  | .0018             | 1313EFR-B-.0018-1.6-* | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  |
| .0022           | 1313EFR-B-.0022-63-* | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  | .0022             | 1313EFR-B-.0022-1.6-* | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  |
| .0027           | 1313EFR-B-.0027-63-* | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  | .0027             | 1313EFR-B-.0027-1.6-* | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  |
| .0033           | 1313EFR-B-.0033-63-* | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  | .0033             | 1313EFR-B-.0033-1.6-* | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  |
| .0039           | 1313EFR-B-.0039-63-* | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  | .0039             | 1313EFR-B-.0039-1.6-* | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  |
| .0047           | 1313EFR-B-.0047-63-* | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  | .0047             | 1313EFR-B-.0047-1.6-* | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  |
| .0056           | 1313EFR-B-.0056-63-* | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  | .0056             | 1313EFR-B-.0056-1.6-* | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  |
| .0068           | 1313EFR-B-.0068-63-* | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  | .0068             | 1313EFR-B-.0068-1.6-* | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  |
| .0082           | 1313EFR-B-.0082-63-* | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  | .0082             | 1313EFR-B-.0082-1.6-* | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  |
| .01             | 1313EFR-B-.01-63-*   | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  | .01               | 1313EFR-B-.01-1.6-*   | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  |
| .012            | 1313EFR-B-.012-63-*  | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  | .012              | 1313EFR-B-.012-1.6-*  | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  |
| .015            | 1313EFR-B-.015-63-*  | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  | .015              | 1313EFR-B-.015-1.6-*  | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  |
| .018            | 1313EFR-B-.018-63-*  | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  | .018              | 1313EFR-B-.018-1.6-*  | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  |
| .022            | 1313EFR-B-.022-63-*  | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  | .022              | 1313EFR-B-.022-1.6-*  | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  |
| .027            | 1313EFR-B-.027-63-*  | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  | .027              | 1313EFR-B-.027-1.6-*  | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  |
| .033            | 1313EFR-B-.033-63-*  | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  | .033              | 1313EFR-B-.033-1.6-*  | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  |
| .039            | 1313EFR-B-.039-63-*  | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  | .039              | 1313EFR-B-.039-1.6-*  | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  |
| .047            | 1313EFR-B-.047-63-*  | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  | .047              | 1313EFR-B-.047-1.6-*  | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  |
| .056            | 1313EFR-B-.056-63-*  | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  | .056              | 1313EFR-B-.056-1.6-*  | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  |
| .068            | 1313EFR-B-.068-63-*  | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  | .068              | 1313EFR-B-.068-1.6-*  | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  |
| .082            | 1313EFR-B-.082-63-*  | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  | .082              | 1313EFR-B-.082-1.6-*  | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  |
| .1              | 1313EFR-B-.1-63-*    | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  | .1                | 1313EFR-C-.1-1.6-*    | .157 (4.0)  | .512 (13.0) | .354 (9.0)  | .394 (10.0) |
| .12             | 1313EFR-B-.12-63-*   | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  | .12               | 1313EFR-C-.12-1.6-*   | .157 (4.0)  | .512 (13.0) | .354 (9.0)  | .394 (10.0) |
| .15             | 1313EFR-B-.15-63-*   | .157 (4.0)  | .413 (10.5) | .354 (9.0)  | .295 (7.5)  | .15               | 1313EFR-C-.15-1.6-*   | .157 (4.0)  | .512 (13.0) | .354 (9.0)  | .394 (10.0) |
| .18             | 1313EFR-C-.18-63-*   | .157 (4.0)  | .512 (13.0) | .354 (9.0)  | .394 (10.0) | .18               | 1313EFR-D-.18-1.6-*   | .197 (5.0)  | .512 (13.0) | .433 (11.0) | .394 (10.0) |
| .22             | 1313EFR-C-.22-63-*   | .157 (4.0)  | .512 (13.0) | .354 (9.0)  | .394 (10.0) | .22               | 1313EFR-D-.22-1.6-*   | .197 (5.0)  | .512 (13.0) | .433 (11.0) | .394 (10.0) |
| .27             | 1313EFR-C-.27-63-*   | .157 (4.0)  | .512 (13.0) | .354 (9.0)  | .394 (10.0) | .27               | 1313EFR-D-.27-1.6-*   | .197 (5.0)  | .512 (13.0) | .433 (11.0) | .394 (10.0) |
| .33             | 1313EFR-C-.33-63-*   | .157 (4.0)  | .512 (13.0) | .354 (9.0)  | .394 (10.0) | .33               | 1313EFR-E-.33-1.6-*   | .236 (6.0)  | .512 (13.0) | .472 (12.0) | .394 (10.0) |
| .39             | 1313EFR-D-.39-63-*   | .197 (5.0)  | .512 (13.0) | .433 (11.0) | .394 (10.0) | .39               | 1313EFR-E-.39-1.6-*   | .236 (6.0)  | .512 (13.0) | .472 (12.0) | .394 (10.0) |
| .47             | 1313EFR-D-.47-63-*   | .197 (5.0)  | .512 (13.0) | .433 (11.0) | .394 (10.0) | .47               | 1313EFR-F-.47-1.6-*   | .197 (5.0)  | .709 (18.0) | .433 (11.0) | .591 (15.0) |
| .56             | 1313EFR-E-.56-63-*   | .236 (6.0)  | .512 (13.0) | .472 (12.0) | .394 (10.0) | .56               | 1313EFR-G-.56-1.6-*   | .236 (6.0)  | .709 (18.0) | .472 (12.0) | .591 (15.0) |
| .68             | 1313EFR-E-.68-63-*   | .236 (6.0)  | .512 (13.0) | .472 (12.0) | .394 (10.0) | .68               | 1313EFR-G-.68-1.6-*   | .236 (6.0)  | .709 (18.0) | .472 (12.0) | .591 (15.0) |
| .82             | 1313EFR-F-.82-63-*   | .197 (5.0)  | .709 (18.0) | .433 (11.0) | .591 (15.0) | .82               | 1313EFR-H-.82-1.6-*   | .295 (7.5)  | .709 (18.0) | .531 (13.5) | .591 (15.0) |
| 1.0             | 1313EFR-F-1.0-63-*   | .197 (5.0)  | .709 (18.0) | .433 (11.0) | .591 (15.0) | 1.0               | 1313EFR-H-1.0-1.6-*   | .295 (7.5)  | .709 (18.0) | .531 (13.5) | .591 (15.0) |
| 1.2             | 1313EFR-G-1.2-63-*   | .236 (6.0)  | .709 (18.0) | .472 (12.0) | .591 (15.0) | 1.2               | 1313EFR-H-1.2-1.6-*   | .295 (7.5)  | .709 (18.0) | .531 (13.5) | .591 (15.0) |
| 1.5             | 1313EFR-G-1.5-63-*   | .236 (6.0)  | .709 (18.0) | .472 (12.0) | .591 (15.0) | 1.5               | 1313EFR-K-1.5-1.6-*   | .276 (7.0)  | 1.04 (26.5) | .630 (16.0) | .787 (20.0) |
| 2.2             | 1313EFR-H-2.2-63-*   | .295 (7.5)  | .709 (18.0) | .531 (13.5) | .591 (15.0) | 1.5               | 1313EFR-M-1.5-1.6-*   | .276 (7.0)  | 1.04 (26.5) | .630 (16.0) | .886 (22.5) |
| 3.3             | 1313EFR-K-3.3-63-*   | .276 (7.0)  | 1.04 (26.5) | .630 (16.0) | .787 (20.0) | 2.2               | 1313EFR-N-2.2-1.6-*   | .335 (8.5)  | 1.04 (26.5) | .642 (16.3) | .886 (22.5) |
| 3.3             | 1313EFR-M-3.3-63-*   | .276 (7.0)  | 1.04 (26.5) | .630 (16.0) | .886 (22.5) | 3.3               | 1313EFR-O-3.3-1.6-*   | .394 (10.0) | 1.04 (26.5) | .748 (19.0) | .886 (22.5) |
| 4.7             | 1313EFR-N-4.7-63-*   | .335 (8.5)  | 1.04 (26.5) | .642 (16.3) | .886 (22.5) | 4.7               | 1313EFR-P-4.7-1.6-*   | .433 (11.0) | 1.26 (32.0) | .787 (20.0) | 1.08 (27.5) |
| 5.6             | 1313EFR-O-5.6-63-*   | .394 (10.0) | 1.04 (26.5) | .748 (19.0) | .886 (22.5) |                   |                       |             |             |             |             |

\* - Please insert appropriate tolerance code





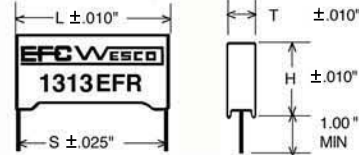
Please consult factory for special requirements, including non-standard values and sizes

**1313EFR**  
Rectangular Plastic Case  
(Radial Leads)

**Metallized  
Polyester Capacitors**

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

## Dimensions and Ratings



| Cap.  | 250 VDC / 160 VAC     |               |               |               |               |
|-------|-----------------------|---------------|---------------|---------------|---------------|
| µF    | Part #                | T<br>in. (mm) | L<br>in. (mm) | H<br>in. (mm) | S<br>in. (mm) |
| .001  | 1313EFR-B-.001-2.5-*  | .157 (4.0)    | .413 (10.5)   | .354 (9.0)    | .295 (7.5)    |
| .0012 | 1313EFR-B-.0012-2.5-* | .157 (4.0)    | .413 (10.5)   | .354 (9.0)    | .295 (7.5)    |
| .0015 | 1313EFR-B-.0015-2.5-* | .157 (4.0)    | .413 (10.5)   | .354 (9.0)    | .295 (7.5)    |
| .0018 | 1313EFR-B-.0018-2.5-* | .157 (4.0)    | .413 (10.5)   | .354 (9.0)    | .295 (7.5)    |
| .0022 | 1313EFR-B-.0022-2.5-* | .157 (4.0)    | .413 (10.5)   | .354 (9.0)    | .295 (7.5)    |
| .0027 | 1313EFR-B-.0027-2.5-* | .157 (4.0)    | .413 (10.5)   | .354 (9.0)    | .295 (7.5)    |
| .0033 | 1313EFR-B-.0033-2.5-* | .157 (4.0)    | .413 (10.5)   | .354 (9.0)    | .295 (7.5)    |
| .0039 | 1313EFR-B-.0039-2.5-* | .157 (4.0)    | .413 (10.5)   | .354 (9.0)    | .295 (7.5)    |
| .0047 | 1313EFR-B-.0047-2.5-* | .157 (4.0)    | .413 (10.5)   | .354 (9.0)    | .295 (7.5)    |
| .0056 | 1313EFR-B-.0056-2.5-* | .157 (4.0)    | .413 (10.5)   | .354 (9.0)    | .295 (7.5)    |
| .0068 | 1313EFR-B-.0068-2.5-* | .157 (4.0)    | .413 (10.5)   | .354 (9.0)    | .295 (7.5)    |
| .0082 | 1313EFR-B-.0082-2.5-* | .157 (4.0)    | .413 (10.5)   | .354 (9.0)    | .295 (7.5)    |
| .01   | 1313EFR-B-.01-2.5-*   | .157 (4.0)    | .413 (10.5)   | .354 (9.0)    | .295 (7.5)    |
| .012  | 1313EFR-B-.012-2.5-*  | .157 (4.0)    | .413 (10.5)   | .354 (9.0)    | .295 (7.5)    |
| .015  | 1313EFR-B-.015-2.5-*  | .157 (4.0)    | .413 (10.5)   | .354 (9.0)    | .295 (7.5)    |
| .018  | 1313EFR-B-.018-2.5-*  | .157 (4.0)    | .413 (10.5)   | .354 (9.0)    | .295 (7.5)    |
| .022  | 1313EFR-B-.022-2.5-*  | .157 (4.0)    | .413 (10.5)   | .354 (9.0)    | .295 (7.5)    |
| .027  | 1313EFR-B-.027-2.5-*  | .157 (4.0)    | .413 (10.5)   | .354 (9.0)    | .295 (7.5)    |
| .033  | 1313EFR-B-.033-2.5-*  | .157 (4.0)    | .413 (10.5)   | .354 (9.0)    | .295 (7.5)    |
| .039  | 1313EFR-C-.039-2.5-*  | .157 (4.0)    | .512 (13.0)   | .354 (9.0)    | .394 (10.0)   |
| .047  | 1313EFR-C-.047-2.5-*  | .157 (4.0)    | .512 (13.0)   | .354 (9.0)    | .394 (10.0)   |
| .056  | 1313EFR-C-.056-2.5-*  | .157 (4.0)    | .512 (13.0)   | .354 (9.0)    | .394 (10.0)   |
| .068  | 1313EFR-C-.068-2.5-*  | .157 (4.0)    | .512 (13.0)   | .354 (9.0)    | .394 (10.0)   |
| .082  | 1313EFR-D-.082-2.5-*  | .197 (5.0)    | .512 (13.0)   | .433 (11.0)   | .394 (10.0)   |
| .1    | 1313EFR-D-.1-2.5-*    | .197 (5.0)    | .512 (13.0)   | .433 (11.0)   | .394 (10.0)   |
| .12   | 1313EFR-D-.12-2.5-*   | .197 (5.0)    | .512 (13.0)   | .433 (11.0)   | .394 (10.0)   |
| .15   | 1313EFR-E-.15-2.5-*   | .236 (6.0)    | .512 (13.0)   | .472 (12.0)   | .394 (10.0)   |
| .18   | 1313EFR-E-.18-2.5-*   | .236 (6.0)    | .512 (13.0)   | .472 (12.0)   | .394 (10.0)   |
| .22   | 1313EFR-F-.22-2.5-*   | .197 (5.0)    | .709 (18.0)   | .433 (11.0)   | .591 (15.0)   |
| .27   | 1313EFR-F-.27-2.5-*   | .197 (5.0)    | .709 (18.0)   | .433 (11.0)   | .591 (15.0)   |
| .33   | 1313EFR-G-.33-2.5-*   | .236 (6.0)    | .709 (18.0)   | .472 (12.0)   | .591 (15.0)   |
| .39   | 1313EFR-G-.39-2.5-*   | .236 (6.0)    | .709 (18.0)   | .472 (12.0)   | .591 (15.0)   |
| .47   | 1313EFR-H-.47-2.5-*   | .295 (7.5)    | .709 (18.0)   | .531 (13.5)   | .591 (15.0)   |
| .56   | 1313EFR-H-.56-2.5-*   | .295 (7.5)    | .709 (18.0)   | .531 (13.5)   | .591 (15.0)   |
| .68   | 1313EFR-J-.68-2.5-*   | .236 (6.0)    | 1.04 (26.5)   | .591 (15.0)   | .787 (20.0)   |
| .68   | 1313EFR-L-.68-2.5-*   | .236 (6.0)    | 1.04 (26.5)   | .591 (15.0)   | .886 (22.5)   |
| .82   | 1313EFR-K-.82-2.5-*   | .276 (7.0)    | 1.04 (26.5)   | .630 (16.0)   | .787 (20.0)   |
| .82   | 1313EFR-M-.82-2.5-*   | .276 (7.0)    | 1.04 (26.5)   | .630 (16.0)   | .886 (22.5)   |
| 1.0   | 1313EFR-N-1.0-2.5-*   | .335 (8.5)    | 1.04 (26.5)   | .642 (16.3)   | .886 (22.5)   |
| 1.2   | 1313EFR-N-1.2-2.5-*   | .335 (8.5)    | 1.04 (26.5)   | .642 (16.3)   | .886 (22.5)   |
| 1.5   | 1313EFR-P-1.5-2.5-*   | .433 (11.0)   | 1.26 (32.0)   | .787 (20.0)   | 1.08 (27.5)   |
| 2.2   | 1313EFR-P-2.2-2.5-*   | .433 (11.0)   | 1.26 (32.0)   | .787 (20.0)   | 1.08 (27.5)   |
| 3.3   | 1313EFR-Q-3.3-2.5-*   | .512 (13.0)   | 1.26 (32.0)   | .866 (22.0)   | 1.08 (27.5)   |

| Cap.  | 400 VDC / 220 VAC   |               |               |               |               |
|-------|---------------------|---------------|---------------|---------------|---------------|
| µF    | Part #              | T<br>in. (mm) | L<br>in. (mm) | H<br>in. (mm) | S<br>in. (mm) |
| .001  | 1313EFR-B-.001-4-*  | .157 (4.0)    | .413 (10.5)   | .354 (9.0)    | .295 (7.5)    |
| .0012 | 1313EFR-B-.0012-4-* | .157 (4.0)    | .413 (10.5)   | .354 (9.0)    | .295 (7.5)    |
| .0015 | 1313EFR-B-.0015-4-* | .157 (4.0)    | .413 (10.5)   | .354 (9.0)    | .295 (7.5)    |
| .0018 | 1313EFR-B-.0018-4-* | .157 (4.0)    | .413 (10.5)   | .354 (9.0)    | .295 (7.5)    |
| .0022 | 1313EFR-B-.0022-4-* | .157 (4.0)    | .413 (10.5)   | .354 (9.0)    | .295 (7.5)    |
| .0027 | 1313EFR-B-.0027-4-* | .157 (4.0)    | .413 (10.5)   | .354 (9.0)    | .295 (7.5)    |
| .0033 | 1313EFR-B-.0033-4-* | .157 (4.0)    | .413 (10.5)   | .354 (9.0)    | .295 (7.5)    |
| .0039 | 1313EFR-B-.0039-4-* | .157 (4.0)    | .413 (10.5)   | .354 (9.0)    | .295 (7.5)    |
| .0047 | 1313EFR-B-.0047-4-* | .157 (4.0)    | .413 (10.5)   | .354 (9.0)    | .295 (7.5)    |
| .0056 | 1313EFR-B-.0056-4-* | .157 (4.0)    | .413 (10.5)   | .354 (9.0)    | .295 (7.5)    |
| .0068 | 1313EFR-B-.0068-4-* | .157 (4.0)    | .413 (10.5)   | .354 (9.0)    | .295 (7.5)    |
| .0082 | 1313EFR-B-.0082-4-* | .157 (4.0)    | .413 (10.5)   | .354 (9.0)    | .295 (7.5)    |
| .01   | 1313EFR-B-.01-4-*   | .157 (4.0)    | .413 (10.5)   | .354 (9.0)    | .295 (7.5)    |
| .012  | 1313EFR-B-.012-4-*  | .157 (4.0)    | .413 (10.5)   | .354 (9.0)    | .295 (7.5)    |
| .015  | 1313EFR-C-.015-4-*  | .157 (4.0)    | .512 (13.0)   | .354 (9.0)    | .394 (10.0)   |
| .018  | 1313EFR-C-.018-4-*  | .157 (4.0)    | .512 (13.0)   | .354 (9.0)    | .394 (10.0)   |
| .022  | 1313EFR-C-.022-4-*  | .157 (4.0)    | .512 (13.0)   | .354 (9.0)    | .394 (10.0)   |
| .027  | 1313EFR-C-.027-4-*  | .157 (4.0)    | .512 (13.0)   | .354 (9.0)    | .394 (10.0)   |
| .033  | 1313EFR-D-.033-4-*  | .197 (5.0)    | .512 (13.0)   | .433 (11.0)   | .394 (10.0)   |
| .039  | 1313EFR-D-.039-4-*  | .197 (5.0)    | .512 (13.0)   | .433 (11.0)   | .394 (10.0)   |
| .047  | 1313EFR-D-.047-4-*  | .197 (5.0)    | .512 (13.0)   | .433 (11.0)   | .394 (10.0)   |
| .056  | 1313EFR-E-.056-4-*  | .236 (6.0)    | .512 (13.0)   | .472 (12.0)   | .394 (10.0)   |
| .068  | 1313EFR-E-.068-4-*  | .236 (6.0)    | .512 (13.0)   | .472 (12.0)   | .394 (10.0)   |
| .082  | 1313EFR-F-.082-4-*  | .197 (5.0)    | .709 (18.0)   | .433 (11.0)   | .591 (15.0)   |
| .1    | 1313EFR-F-.1-4-*    | .197 (5.0)    | .709 (18.0)   | .433 (11.0)   | .591 (15.0)   |
| .12   | 1313EFR-G-.12-4-*   | .236 (6.0)    | .709 (18.0)   | .472 (12.0)   | .591 (15.0)   |
| .15   | 1313EFR-H-.15-4-*   | .295 (7.5)    | .709 (18.0)   | .531 (13.5)   | .591 (15.0)   |
| .18   | 1313EFR-H-.18-4-*   | .295 (7.5)    | .709 (18.0)   | .531 (13.5)   | .591 (15.0)   |
| .22   | 1313EFR-J-.22-4-*   | .236 (6.0)    | 1.04 (26.5)   | .591 (15.0)   | .787 (20.0)   |
| .22   | 1313EFR-L-.22-4-*   | .236 (6.0)    | 1.04 (26.5)   | .591 (15.0)   | .886 (22.5)   |
| .27   | 1313EFR-K-.27-4-*   | .236 (6.0)    | 1.04 (26.5)   | .591 (15.0)   | .787 (20.0)   |
| .27   | 1313EFR-M-.27-4-*   | .236 (6.0)    | 1.04 (26.5)   | .591 (15.0)   | .886 (22.5)   |
| .33   | 1313EFR-K-.33-4-*   | .276 (7.0)    | 1.04 (26.5)   | .630 (16.0)   | .787 (20.0)   |
| .33   | 1313EFR-M-.33-4-*   | .276 (7.0)    | 1.04 (26.5)   | .630 (16.0)   | .886 (22.5)   |
| .39   | 1313EFR-K-.39-4-*   | .276 (7.0)    | 1.04 (26.5)   | .630 (16.0)   | .787 (20.0)   |
| .39   | 1313EFR-M-.39-4-*   | .276 (7.0)    | 1.04 (26.5)   | .630 (16.0)   | .886 (22.5)   |
| .47   | 1313EFR-N-.47-4-*   | .335 (8.5)    | 1.04 (26.5)   | .642 (16.3)   | .886 (22.5)   |
| .56   | 1313EFR-O-.56-4-*   | .394 (10.0)   | 1.04 (26.5)   | .748 (19.0)   | .886 (22.5)   |
| .68   | 1313EFR-O-.68-4-*   | .394 (10.0)   | 1.04 (26.5)   | .748 (19.0)   | .886 (22.5)   |
| .82   | 1313EFR-P-.82-4-*   | .433 (11.0)   | 1.26 (32.0)   | .787 (20.0)   | 1.08 (27.5)   |
| 1.0   | 1313EFR-P-1.0-4-*   | .433 (11.0)   | 1.26 (32.0)   | .787 (20.0)   | 1.08 (27.5)   |
| 1.2   | 1313EFR-Q-1.2-4-*   | .512 (13.0)   | 1.26 (32.0)   | .866 (22.0)   | 1.08 (27.5)   |

\* - Please insert appropriate tolerance code





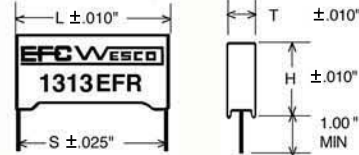
Please consult factory for special requirements, including non-standard values and sizes

**1313EFR**  
Rectangular Plastic Case  
(Radial Leads)

**Metallized  
Polyester Capacitors**

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

## Dimensions and Ratings



| Cap.  | 630 VDC / 250 VAC     |               |               |               |               |
|-------|-----------------------|---------------|---------------|---------------|---------------|
| µF    | Part #                | T<br>in. (mm) | L<br>in. (mm) | H<br>in. (mm) | S<br>in. (mm) |
| .001  | 1313EFR-C-.001-6.3-*  | .157 (4.0)    | .512 (13.0)   | .354 (9.0)    | .394 (10.0)   |
| .0012 | 1313EFR-C-.0012-6.3-* | .157 (4.0)    | .512 (13.0)   | .354 (9.0)    | .394 (10.0)   |
| .0015 | 1313EFR-C-.0015-6.3-* | .157 (4.0)    | .512 (13.0)   | .354 (9.0)    | .394 (10.0)   |
| .0018 | 1313EFR-C-.0018-6.3-* | .157 (4.0)    | .512 (13.0)   | .354 (9.0)    | .394 (10.0)   |
| .0022 | 1313EFR-C-.0022-6.3-* | .157 (4.0)    | .512 (13.0)   | .354 (9.0)    | .394 (10.0)   |
| .0027 | 1313EFR-C-.0027-6.3-* | .157 (4.0)    | .512 (13.0)   | .354 (9.0)    | .394 (10.0)   |
| .0033 | 1313EFR-C-.0033-6.3-* | .157 (4.0)    | .512 (13.0)   | .354 (9.0)    | .394 (10.0)   |
| .0039 | 1313EFR-C-.0039-6.3-* | .157 (4.0)    | .512 (13.0)   | .354 (9.0)    | .394 (10.0)   |
| .0047 | 1313EFR-C-.0047-6.3-* | .157 (4.0)    | .512 (13.0)   | .354 (9.0)    | .394 (10.0)   |
| .0056 | 1313EFR-C-.0056-6.3-* | .157 (4.0)    | .512 (13.0)   | .354 (9.0)    | .394 (10.0)   |
| .0068 | 1313EFR-C-.0068-6.3-* | .157 (4.0)    | .512 (13.0)   | .354 (9.0)    | .394 (10.0)   |
| .0082 | 1313EFR-C-.0082-6.3-* | .157 (4.0)    | .512 (13.0)   | .354 (9.0)    | .394 (10.0)   |
| .01   | 1313EFR-C-.01-6.3-*   | .157 (4.0)    | .512 (13.0)   | .354 (9.0)    | .394 (10.0)   |
| .012  | 1313EFR-D-.012-6.3-*  | .197 (5.0)    | .512 (13.0)   | .433 (11.0)   | .394 (10.0)   |
| .015  | 1313EFR-D-.015-6.3-*  | .197 (5.0)    | .512 (13.0)   | .433 (11.0)   | .394 (10.0)   |
| .018  | 1313EFR-E-.018-6.3-*  | .236 (6.0)    | .512 (13.0)   | .472 (12.0)   | .394 (10.0)   |
| .022  | 1313EFR-E-.022-6.3-*  | .236 (6.0)    | .512 (13.0)   | .472 (12.0)   | .394 (10.0)   |
| .027  | 1313EFR-F-.027-6.3-*  | .197 (5.0)    | .709 (18.0)   | .433 (11.0)   | .591 (15.0)   |
| .033  | 1313EFR-F-.033-6.3-*  | .197 (5.0)    | .709 (18.0)   | .433 (11.0)   | .591 (15.0)   |
| .039  | 1313EFR-G-.039-6.3-*  | .236 (6.0)    | .709 (18.0)   | .472 (12.0)   | .591 (15.0)   |
| .047  | 1313EFR-G-.047-6.3-*  | .236 (6.0)    | .709 (18.0)   | .472 (12.0)   | .591 (15.0)   |
| .056  | 1313EFR-H-.056-6.3-*  | .295 (7.5)    | .709 (18.0)   | .531 (13.5)   | .591 (15.0)   |
| .068  | 1313EFR-H-.068-6.3-*  | .295 (7.5)    | .709 (18.0)   | .531 (13.5)   | .591 (15.0)   |
| .082  | 1313EFR-H-.082-6.3-*  | .295 (7.5)    | .709 (18.0)   | .531 (13.5)   | .591 (15.0)   |
| .1    | 1313EFR-J-.1-6.3-*    | .236 (6.0)    | 1.04 (26.5)   | .591 (15.0)   | .787 (20.0)   |
| .1    | 1313EFR-L-.1-6.3-*    | .236 (6.0)    | 1.04 (26.5)   | .591 (15.0)   | .886 (22.5)   |
| .12   | 1313EFR-J-.12-6.3-*   | .236 (6.0)    | 1.04 (26.5)   | .591 (15.0)   | .787 (20.0)   |
| .12   | 1313EFR-L-.12-6.3-*   | .236 (6.0)    | 1.04 (26.5)   | .591 (15.0)   | .886 (22.5)   |
| .15   | 1313EFR-J-.15-6.3-*   | .236 (6.0)    | 1.04 (26.5)   | .591 (15.0)   | .787 (20.0)   |
| .15   | 1313EFR-L-.15-6.3-*   | .236 (6.0)    | 1.04 (26.5)   | .591 (15.0)   | .886 (22.5)   |
| .18   | 1313EFR-K-.18-6.3-*   | .276 (7.0)    | 1.04 (26.5)   | .630 (16.0)   | .787 (20.0)   |
| .18   | 1313EFR-M-.18-6.3-*   | .276 (7.0)    | 1.04 (26.5)   | .630 (16.0)   | .886 (22.5)   |
| .22   | 1313EFR-N-.22-6.3-*   | .335 (8.5)    | 1.04 (26.5)   | .642 (16.3)   | .886 (22.5)   |
| .27   | 1313EFR-O-.27-6.3-*   | .394 (10.0)   | 1.04 (26.5)   | .748 (19.0)   | .886 (22.5)   |
| .33   | 1313EFR-P-.33-6.3-*   | .433 (11.0)   | 1.26 (32.0)   | .787 (20.0)   | 1.08 (27.5)   |
| .39   | 1313EFR-P-.39-6.3-*   | .433 (11.0)   | 1.26 (32.0)   | .787 (20.0)   | 1.08 (27.5)   |
| .47   | 1313EFR-Q-.47-6.3-*   | .512 (13.0)   | 1.26 (32.0)   | .866 (22.0)   | 1.08 (27.5)   |
| .56   | 1313EFR-Q-.56-6.3-*   | .512 (13.0)   | 1.26 (32.0)   | .866 (22.0)   | 1.08 (27.5)   |

\* - Please insert appropriate tolerance code