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**

**1306EFR-3-.001-1-5**

**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 (μF)

**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
## Dimensions and Ratings

<table>
<thead>
<tr>
<th>Cap.</th>
<th>50 VDC</th>
<th>100 VDC</th>
<th>160 VDC</th>
</tr>
</thead>
<tbody>
<tr>
<td>µF</td>
<td>Part #</td>
<td>T</td>
<td>W</td>
</tr>
<tr>
<td>0.015</td>
<td>1311TF-3-001-0.1*</td>
<td>125</td>
<td>225</td>
</tr>
<tr>
<td>0.025</td>
<td>1311TF-3-002-0.1*</td>
<td>125</td>
<td>225</td>
</tr>
<tr>
<td>0.050</td>
<td>1311TF-3-005-0.1*</td>
<td>125</td>
<td>225</td>
</tr>
<tr>
<td>0.100</td>
<td>1311TF-3-010-0.1*</td>
<td>125</td>
<td>225</td>
</tr>
<tr>
<td>0.220</td>
<td>1311TF-3-022-0.1*</td>
<td>125</td>
<td>225</td>
</tr>
<tr>
<td>0.270</td>
<td>1311TF-3-027-0.1*</td>
<td>125</td>
<td>225</td>
</tr>
<tr>
<td>0.330</td>
<td>1311TF-3-033-0.1*</td>
<td>125</td>
<td>225</td>
</tr>
<tr>
<td>0.390</td>
<td>1311TF-3-039-0.1*</td>
<td>125</td>
<td>225</td>
</tr>
<tr>
<td>0.470</td>
<td>1311TF-3-047-0.1*</td>
<td>125</td>
<td>225</td>
</tr>
<tr>
<td>0.560</td>
<td>1311TF-3-056-0.1*</td>
<td>125</td>
<td>225</td>
</tr>
<tr>
<td>0.680</td>
<td>1311TF-3-068-0.1*</td>
<td>125</td>
<td>225</td>
</tr>
<tr>
<td>0.820</td>
<td>1311TF-3-082-0.1*</td>
<td>125</td>
<td>225</td>
</tr>
<tr>
<td>1.00</td>
<td>1311TF-3-1.0-0.1*</td>
<td>125</td>
<td>225</td>
</tr>
<tr>
<td>1.25</td>
<td>1311TF-3-1.25-0.1*</td>
<td>125</td>
<td>225</td>
</tr>
<tr>
<td>1.50</td>
<td>1311TF-3-1.5-0.1*</td>
<td>125</td>
<td>225</td>
</tr>
<tr>
<td>2.00</td>
<td>1311TF-3-2.0-0.1*</td>
<td>125</td>
<td>225</td>
</tr>
<tr>
<td>3.00</td>
<td>1311TF-3-3.0-0.1*</td>
<td>125</td>
<td>225</td>
</tr>
<tr>
<td>4.00</td>
<td>1311TF-3-4.0-0.1*</td>
<td>125</td>
<td>225</td>
</tr>
<tr>
<td>5.00</td>
<td>1311TF-3-5.0-0.1*</td>
<td>125</td>
<td>225</td>
</tr>
<tr>
<td>6.00</td>
<td>1311TF-3-6.0-0.1*</td>
<td>125</td>
<td>225</td>
</tr>
<tr>
<td>10.0</td>
<td>1311TF-3-10.0-0.1*</td>
<td>125</td>
<td>225</td>
</tr>
<tr>
<td>20.0</td>
<td>1311TF-3-20.0-0.1*</td>
<td>125</td>
<td>225</td>
</tr>
</tbody>
</table>

* - Please insert appropriate tolerance code
<table>
<thead>
<tr>
<th>Cap.</th>
<th>Part #</th>
<th>T</th>
<th>W</th>
<th>L</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.001</td>
<td>1313TF-001-2-**</td>
<td>125</td>
<td>225</td>
<td>406</td>
</tr>
<tr>
<td>0.012</td>
<td>1313TF-0012-2-**</td>
<td>125</td>
<td>225</td>
<td>406</td>
</tr>
<tr>
<td>0.015</td>
<td>1313TF-0015-2-**</td>
<td>125</td>
<td>225</td>
<td>406</td>
</tr>
<tr>
<td>0.018</td>
<td>1313TF-0018-2-**</td>
<td>125</td>
<td>225</td>
<td>406</td>
</tr>
<tr>
<td>0.022</td>
<td>1313TF-0022-2-**</td>
<td>125</td>
<td>225</td>
<td>406</td>
</tr>
<tr>
<td>0.027</td>
<td>1313TF-0027-2-**</td>
<td>125</td>
<td>225</td>
<td>406</td>
</tr>
<tr>
<td>0.033</td>
<td>1313TF-0033-2-**</td>
<td>125</td>
<td>225</td>
<td>406</td>
</tr>
<tr>
<td>0.039</td>
<td>1313TF-0039-2-**</td>
<td>125</td>
<td>225</td>
<td>406</td>
</tr>
<tr>
<td>0.047</td>
<td>1313TF-0047-2-**</td>
<td>125</td>
<td>225</td>
<td>406</td>
</tr>
<tr>
<td>0.056</td>
<td>1313TF-0056-2-**</td>
<td>125</td>
<td>225</td>
<td>406</td>
</tr>
<tr>
<td>0.068</td>
<td>1313TF-0068-2-**</td>
<td>125</td>
<td>225</td>
<td>406</td>
</tr>
<tr>
<td>0.082</td>
<td>1313TF-0082-2-**</td>
<td>125</td>
<td>225</td>
<td>406</td>
</tr>
<tr>
<td>0.1</td>
<td>1313TF-01-2-**</td>
<td>125</td>
<td>225</td>
<td>406</td>
</tr>
<tr>
<td>0.12</td>
<td>1313TF-012-2-**</td>
<td>125</td>
<td>225</td>
<td>406</td>
</tr>
<tr>
<td>0.15</td>
<td>1313TF-015-2-**</td>
<td>125</td>
<td>225</td>
<td>406</td>
</tr>
<tr>
<td>0.18</td>
<td>1313TF-018-2-**</td>
<td>125</td>
<td>225</td>
<td>406</td>
</tr>
<tr>
<td>0.22</td>
<td>1313TF-022-2-**</td>
<td>125</td>
<td>250</td>
<td>406</td>
</tr>
<tr>
<td>0.27</td>
<td>1313TF-027-2-**</td>
<td>125</td>
<td>250</td>
<td>406</td>
</tr>
<tr>
<td>0.33</td>
<td>1313TF-033-2-**</td>
<td>125</td>
<td>280</td>
<td>406</td>
</tr>
<tr>
<td>0.39</td>
<td>1313TF-039-2-**</td>
<td>130</td>
<td>260</td>
<td>406</td>
</tr>
<tr>
<td>0.47</td>
<td>1313TF-047-2-**</td>
<td>140</td>
<td>200</td>
<td>406</td>
</tr>
<tr>
<td>0.56</td>
<td>1313TF-056-2-**</td>
<td>150</td>
<td>250</td>
<td>406</td>
</tr>
<tr>
<td>0.68</td>
<td>1313TF-068-2-**</td>
<td>150</td>
<td>250</td>
<td>406</td>
</tr>
<tr>
<td>0.82</td>
<td>1313TF-082-2-**</td>
<td>160</td>
<td>250</td>
<td>406</td>
</tr>
<tr>
<td>1.1</td>
<td>1313TF-1-2-**</td>
<td>210</td>
<td>310</td>
<td>531</td>
</tr>
<tr>
<td>1.2</td>
<td>1313TF-12-2-**</td>
<td>230</td>
<td>330</td>
<td>531</td>
</tr>
<tr>
<td>1.5</td>
<td>1313TF-15-2-**</td>
<td>250</td>
<td>350</td>
<td>531</td>
</tr>
<tr>
<td>1.8</td>
<td>1313TF-18-2-**</td>
<td>270</td>
<td>370</td>
<td>531</td>
</tr>
<tr>
<td>2.2</td>
<td>1313TF-22-2-**</td>
<td>290</td>
<td>390</td>
<td>531</td>
</tr>
<tr>
<td>2.7</td>
<td>1313TF-27-2-**</td>
<td>310</td>
<td>410</td>
<td>531</td>
</tr>
<tr>
<td>3.3</td>
<td>1313TF-33-2-**</td>
<td>330</td>
<td>430</td>
<td>531</td>
</tr>
<tr>
<td>3.9</td>
<td>1313TF-39-2-**</td>
<td>350</td>
<td>450</td>
<td>531</td>
</tr>
<tr>
<td>4.7</td>
<td>1313TF-47-2-**</td>
<td>370</td>
<td>470</td>
<td>531</td>
</tr>
<tr>
<td>5.6</td>
<td>1313TF-56-2-**</td>
<td>390</td>
<td>490</td>
<td>531</td>
</tr>
<tr>
<td>6.8</td>
<td>1313TF-68-2-**</td>
<td>410</td>
<td>510</td>
<td>531</td>
</tr>
<tr>
<td>8.2</td>
<td>1313TF-82-2-**</td>
<td>430</td>
<td>530</td>
<td>531</td>
</tr>
<tr>
<td>1.0</td>
<td>1313TF-10-2-**</td>
<td>450</td>
<td>550</td>
<td>531</td>
</tr>
<tr>
<td>1.25</td>
<td>1313TF-125-2-**</td>
<td>470</td>
<td>570</td>
<td>531</td>
</tr>
<tr>
<td>1.5</td>
<td>1313TF-15-2-**</td>
<td>490</td>
<td>590</td>
<td>531</td>
</tr>
<tr>
<td>2.0</td>
<td>1313TF-20-2-**</td>
<td>510</td>
<td>610</td>
<td>531</td>
</tr>
<tr>
<td>3.0</td>
<td>1313TF-30-2-**</td>
<td>530</td>
<td>630</td>
<td>531</td>
</tr>
<tr>
<td>4.0</td>
<td>1313TF-40-2-**</td>
<td>550</td>
<td>650</td>
<td>531</td>
</tr>
<tr>
<td>5.0</td>
<td>1313TF-50-2-**</td>
<td>570</td>
<td>650</td>
<td>531</td>
</tr>
<tr>
<td>6.0</td>
<td>1313TF-60-2-**</td>
<td>590</td>
<td>690</td>
<td>531</td>
</tr>
<tr>
<td>8.0</td>
<td>1313TF-80-2-**</td>
<td>610</td>
<td>790</td>
<td>531</td>
</tr>
<tr>
<td>10.0</td>
<td>1313TF-10-2-**</td>
<td>630</td>
<td>790</td>
<td>531</td>
</tr>
</tbody>
</table>

For 1000 VDC rated parts, please consult factory.

* - Please insert appropriate tolerance code