

# Type WMF Polyester Film Capacitors

## Film/Foil, Axial Leads - Commercial, Industrial Applications



Type WMF axial-leaded, polyester film/foil capacitors, available in a wide range of capacitance and voltage ratings, offer excellent moisture resistance capability with extended foil, non-inductive wound sections, epoxy sealed ends and a sealed outer wrapper. Like the Type DMT, Type WMF is an ideal choice for most applications, especially those with high peak currents.

### Highlights

- Very high dV/dt
- Very high peak current
- Low inductance

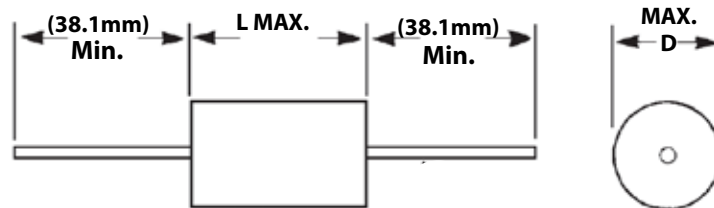
### Specifications

|   |   |
|---|---|
| Capacitance Range                       | .001 to 5 $\mu$ F   |
| Capacitance Tolerance @ 1 kHz/25 °C     | $\pm$ 10% (K) Standard Tolerance, $\pm$ 5% (J)/ $\pm$ 20% (M) (Optional)                    |
| Rated Voltage                           | 50 to 630 Vdc   |
| Operating Temperature Range with Ripple | -55 °C to 125 °C*<br>*Full rated voltage at 85 °C - derated linearly to 50% rated at 105 °C |
| Insulation Resistance                   | 30,000 M $\Omega$ x $\mu$ F, 100,000 M $\Omega$ Min.  |
| Dissipation Factor                      | .75% Max. (25 °C, 1 kHz)  |
| Dielectric Strength                     | 250%  |
| Life Test                               | 500 Hours at 85 °C at 125% Rated Voltage  |
| <b>RoHS Compliant</b>                   |   |

### Construction Details

|                   |                                |
|-------------------|--------------------------------|
| Case Material     | UL510 Polyester Tape Wrap      |
| Resin Material    | UL94V-0 Epoxy Fill             |
| Terminal Material | Tin Plated Copper - Clad Steel |

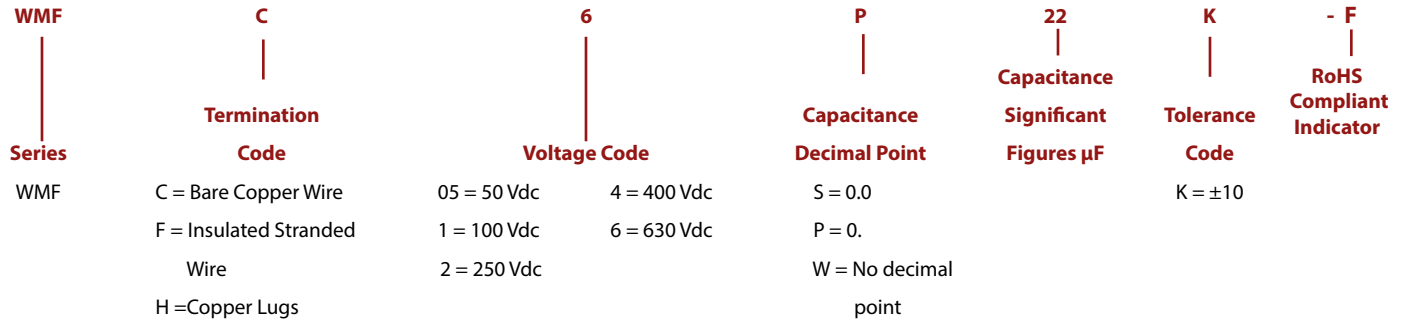
### Dimensions



# Type WMF Polyester Film Capacitors

## Film/Foil, Axial Leads

### Part Numbering System



### Ratings

**NOTE:** Other ratings, sizes and performance specifications are available. Contact us.

| Cap. $\mu\text{F}$ | Catalog Part Number | D mm | L mm | d mm | dV/dt V/ $\mu\text{s}$ |
|--------------------|---------------------|------|------|------|------------------------|
| <b>50 Vdc</b>      |                     |      |      |      |                        |
| 0.0820             | WMF05S82K-F         | 7.1  | 20.6 | 0.5  | 1500                   |
| 0.1000             | WMF05P1K-F          | 7.1  | 20.6 | 0.5  | 1500                   |
| 0.1200             | WMF05P12K-F         | 7.5  | 20.6 | 0.6  | 1500                   |
| 0.1500             | WMF05P15K-F         | 8.0  | 20.6 | 0.6  | 1500                   |
| 0.1800             | WMF05P18K-F         | 8.6  | 20.6 | 0.6  | 1500                   |
| 0.2200             | WMF05P22K-F         | 9.1  | 20.6 | 0.6  | 1500                   |
| 0.2700             | WMF05P27K-F         | 10.7 | 20.6 | 0.6  | 1500                   |
| 0.3300             | WMF05P33K-F         | 10.9 | 20.6 | 0.6  | 1500                   |
| 0.3900             | WMF05P39K-F         | 10.3 | 27.0 | 0.6  | 920                    |
| 0.4700             | WMF05P47K-F         | 10.3 | 27.0 | 0.6  | 920                    |
| 0.5000             | WMF05P5K-F          | 10.8 | 27.0 | 0.6  | 920                    |
| 0.5600             | WMF05P56K-F         | 12.2 | 27.0 | 0.6  | 920                    |
| 0.6800             | WMF05P68K-F         | 13.3 | 27.0 | 0.6  | 920                    |
| 0.8200             | WMF05P82K-F         | 14.4 | 27.0 | 0.6  | 920                    |
| 1.0000             | WMF05W1K-F          | 14.3 | 34.9 | 0.6  | 660                    |
| 1.2500             | WMF05W1P25K-F       | 14.6 | 34.9 | 0.8  | 660                    |
| 1.5000             | WMF05W1P5K-F        | 16.4 | 34.9 | 0.8  | 660                    |
| 2.0000             | WMF05W2K-F          | 16.8 | 41.3 | 0.8  | 660                    |
| 3.0000             | WMF05W3K-F          | 20.1 | 41.3 | 1.0  | 660                    |
| 4.0000             | WMF05W4K-F          | 20.9 | 46.3 | 1.0  | 310                    |
| 5.0000             | WMF05W5K-F          | 23.2 | 46.3 | 1.0  | 310                    |
| <b>100 Vdc</b>     |                     |      |      |      |                        |
| 0.0010             | WMF1D1K-F           | 4.8  | 14.3 | 0.5  | 6300                   |
| 0.0012             | WMF1D12K-F          | 4.8  | 14.3 | 0.5  | 6300                   |
| 0.0015             | WMF1D15K-F          | 4.8  | 14.3 | 0.5  | 6300                   |
| 0.0022             | WMF1D22K-F          | 4.8  | 14.3 | 0.5  | 6300                   |
| 0.0027             | WMF1D27K-F          | 4.8  | 14.3 | 0.5  | 6300                   |
| 0.0033             | WMF1D33K-F          | 4.8  | 14.3 | 0.5  | 6300                   |
| 0.0039             | WMF1D39K-F          | 4.8  | 14.3 | 0.5  | 6300                   |
| 0.0047             | WMF1D47K-F          | 5.0  | 14.3 | 0.5  | 6300                   |
| 0.0050             | WMF1D5K-F           | 4.8  | 14.3 | 0.5  | 6300                   |
| 0.0056             | WMF1D56K-F          | 4.8  | 14.3 | 0.5  | 6300                   |
| 0.0068             | WMF1D68K-F          | 5.1  | 14.3 | 0.5  | 6300                   |
| 0.0082             | WMF1D82K-F          | 5.1  | 14.3 | 0.5  | 6300                   |
| 0.0100             | WMF1S1K-F           | 5.1  | 14.3 | 0.5  | 6300                   |
| 0.0150             | WMF1S15K-F          | 6.2  | 14.3 | 0.5  | 6300                   |
| 0.0180             | WMF1S18K-F          | 6.6  | 14.3 | 0.6  | 3200                   |
| 0.0220             | WMF1S22K-F          | 6.0  | 17.4 | 0.6  | 3200                   |
| 0.0330             | WMF1S33K-F          | 6.5  | 17.4 | 0.6  | 3200                   |
| 0.0390             | WMF1S39K-F          | 6.1  | 20.6 | 0.6  | 2100                   |
| 0.0470             | WMF1S47K-F          | 6.5  | 20.6 | 0.6  | 2100                   |
| 0.0500             | WMF1S5K-F           | 6.6  | 20.6 | 0.6  | 2100                   |
| 0.0560             | WMF1S56K-F          | 6.7  | 20.6 | 0.6  | 2100                   |

# Type WMF Polyester Film Capacitors

## Film/Foil, Axial Leads

| Cap.<br>μF         | Catalog<br>Part Number | D<br>mm | L<br>mm | d<br>mm | dV/dt<br>V/μs | Cap.<br>μF     | Catalog<br>Part Number | D<br>mm | L<br>mm | d<br>mm | dV/dt<br>V/μs |
|--------------------|------------------------|---------|---------|---------|---------------|----------------|------------------------|---------|---------|---------|---------------|
| <b>100 Vdc</b>     |                        |         |         |         |               | 0.2700         | WMF2P27K-F             | 12.7    | 30.1    | 0.6     | 1900          |
| 0.0680             | WMF1S68K-F             | 7.5     | 20.6    | 0.6     | 2100          | 0.3300         | WMF2P33K-F             | 13.8    | 32.0    | 0.6     | 1500          |
| 0.0820             | WMF1S82K-F             | 7.0     | 23.8    | 0.6     | 1600          | 0.3900         | WMF2P39K-F             | 14.3    | 33.3    | 0.8     | 1500          |
| 0.1000             | WMF1P1K-F              | 8.5     | 23.8    | 0.6     | 1600          | 0.4700         | WMF2P47K-F             | 15.5    | 33.3    | 0.8     | 1500          |
| 0.1200             | WMF1P12K-F             | 8.0     | 23.8    | 0.6     | 1600          | 0.5600         | WMF2P56K-F             | 16.8    | 33.3    | 1.0     | 1500          |
| 0.1500             | WMF1P15K-F             | 8.6     | 23.8    | 0.6     | 1600          | 0.6800         | WMF2P68K-F             | 16.8    | 41.3    | 1.0     | 1500          |
| 0.1800             | WMF1P18K-F             | 8.8     | 27.0    | 0.6     | 1600          | 0.8200         | WMF2P82K-F             | 18.2    | 41.3    | 1.0     | 1500          |
| 0.2200             | WMF1P22K-F             | 9.5     | 27.0    | 0.6     | 1600          | 1.0000         | WMF2W1K-F              | 18.8    | 44.4    | 1.0     | 1500          |
| 0.2700             | WMF1P27K-F             | 9.5     | 30.1    | 0.6     | 1600          | 1.2500         | WMF2W1P25K-F           | 20.7    | 44.4    | 1.0     | 1500          |
| 0.3300             | WMF1P33K-F             | 10.5    | 30.1    | 0.6     | 1600          | 1.5000         | WMF2W1P5K-F            | 20.5    | 46.0    | 1.0     | 650           |
| 0.3900             | WMF1P39K-F             | 10.9    | 30.1    | 0.6     | 1600          | 2.0000         | WMF2W2K-F              | 24.5    | 47.6    | 1.0     | 650           |
| 0.4700             | WMF1P47K-F             | 12.5    | 31.7    | 0.6     | 840           | <b>400 Vdc</b> |                        |         |         |         |               |
| 0.5000             | WMF1P5K-F              | 11.7    | 31.7    | 0.6     | 840           | 0.0010         | WMF4D1K-F              | 4.8     | 17.4    | 0.5     | 14400         |
| 0.5600             | WMF1P56K-F             | 12.3    | 31.7    | 0.8     | 840           | 0.0015         | WMF4D15K-F             | 4.8     | 17.4    | 0.5     | 14400         |
| 0.6800             | WMF1P68K-F             | 14.5    | 31.7    | 0.8     | 840           | 0.0018         | WMF4D18K-F             | 4.8     | 17.4    | 0.5     | 14400         |
| 0.8200             | WMF1P82K-F             | 13.7    | 35.9    | 0.8     | 840           | 0.0022         | WMF4D22K-F             | 4.8     | 17.4    | 0.5     | 14400         |
| 1.0000             | WMF1W1K-F              | 17.0    | 38.1    | 1.0     | 840           | 0.0027         | WMF4D27K-F             | 5.3     | 17.4    | 0.5     | 14400         |
| 1.2500             | WMF1W1P25K-F           | 16.4    | 38.1    | 1.0     | 840           | 0.0033         | WMF4D33K-F             | 5.6     | 17.4    | 0.5     | 14400         |
| 1.5000             | WMF1W1P5K-F            | 18.7    | 41.3    | 1.0     | 840           | 0.0039         | WMF4D39K-F             | 5.9     | 17.4    | 0.5     | 14400         |
| 2.0000             | WMF1W2K-F              | 21.2    | 41.3    | 1.0     | 840           | 0.0047         | WMF4D47K-F             | 6.0     | 17.4    | 0.5     | 14400         |
| <b>200/250 Vdc</b> |                        |         |         |         |               | 0.0056         | WMF4D56K-F             | 6.7     | 17.4    | 0.6     | 14400         |
| 0.0010             | WMF2D1K-F              | 4.8     | 14.3    | 0.5     | 7500          | 0.0068         | WMF4D68K-F             | 7.2     | 17.4    | 0.6     | 14400         |
| 0.0015             | WMF2D15K-F             | 4.8     | 14.3    | 0.5     | 7500          | 0.0082         | WMF4D82K-F             | 7.7     | 17.4    | 0.6     | 14400         |
| 0.0022             | WMF2D22K-F             | 4.8     | 14.3    | 0.5     | 7500          | 0.0100         | WMF4S1K-F              | 8.4     | 17.4    | 0.6     | 14400         |
| 0.0027             | WMF2D27K-F             | 4.8     | 14.3    | 0.5     | 7500          | 0.0150         | WMF4S15K-F             | 9.9     | 17.4    | 0.6     | 14400         |
| 0.0033             | WMF2D33K-F             | 4.8     | 14.3    | 0.5     | 7500          | 0.0180         | WMF4S18K-F             | 8.0     | 20.6    | 0.6     | 14400         |
| 0.0039             | WMF2D39K-F             | 4.8     | 14.3    | 0.5     | 7500          | 0.0220         | WMF4S22K-F             | 8.9     | 20.6    | 0.6     | 7200          |
| 0.0047             | WMF2D47K-F             | 5.1     | 14.3    | 0.5     | 7500          | 0.0270         | WMF4S27K-F             | 9.6     | 20.6    | 0.6     | 7200          |
| 0.0050             | WMF2D5K-F              | 5.1     | 14.3    | 0.5     | 7500          | 0.0330         | WMF4S33K-F             | 9.5     | 22.2    | 0.6     | 6500          |
| 0.0056             | WMF2D56K-F             | 5.1     | 14.3    | 0.5     | 7500          | 0.0390         | WMF4S39K-F             | 10.2    | 22.2    | 0.6     | 6500          |
| 0.0068             | WMF2D68K-F             | 5.1     | 14.3    | 0.5     | 7500          | 0.0470         | WMF4S47K-F             | 11.0    | 22.2    | 0.6     | 6500          |
| 0.0082             | WMF2D82K-F             | 5.5     | 14.3    | 0.5     | 7500          | 0.0560         | WMF4S56K-F             | 9.8     | 27.0    | 0.6     | 3600          |
| 0.0100             | WMF2S1K-F              | 5.8     | 14.3    | 0.5     | 7500          | 0.0680         | WMF4S68K-F             | 10.3    | 27.0    | 0.6     | 3600          |
| 0.0150             | WMF2S15K-F             | 6.7     | 14.3    | 0.6     | 7500          | 0.0820         | WMF4S82K-F             | 10.3    | 27.0    | 0.6     | 3600          |
| 0.0180             | WMF2S18K-F             | 7.1     | 14.3    | 0.6     | 7500          | 0.1000         | WMF4P1K-F              | 12.4    | 27.0    | 0.6     | 3600          |
| 0.0220             | WMF2S22K-F             | 6.6     | 17.4    | 0.6     | 3700          | 0.1500         | WMF4P15K-F             | 13.6    | 31.7    | 0.6     | 2400          |
| 0.0270             | WMF2S27K-F             | 6.6     | 17.4    | 0.6     | 3700          | 0.1800         | WMF4P18K-F             | 13.6    | 34.9    | 0.6     | 2400          |
| 0.0330             | WMF2S33K-F             | 7.0     | 20.6    | 0.6     | 2500          | 0.2200         | WMF4P22K-F             | 15.1    | 34.9    | 0.8     | 2400          |
| 0.0390             | WMF2S39K-F             | 7.5     | 20.6    | 0.6     | 2500          | 0.2700         | WMF4P27K-F             | 15.5    | 38.1    | 0.8     | 2400          |
| 0.0470             | WMF2S47K-F             | 7.5     | 20.6    | 0.6     | 2500          | 0.3300         | WMF4P33K-F             | 15.9    | 41.3    | 0.8     | 2400          |
| 0.0560             | WMF2S56K-F             | 7.5     | 20.6    | 0.6     | 2500          | 0.3900         | WMF4P39K-F             | 15.9    | 41.3    | 0.8     | 2400          |
| 0.0680             | WMF2S68K-F             | 8.0     | 20.6    | 0.6     | 2500          | 0.4700         | WMF4P47K-F             | 18.5    | 41.3    | 1.0     | 2400          |
| 0.0820             | WMF2S82K-F             | 7.6     | 23.8    | 0.6     | 1900          | 0.5600         | WMF4P56K-F             | 19.2    | 44.4    | 1.0     | 2400          |
| 0.1000             | WMF2P1K-F              | 8.1     | 23.8    | 0.6     | 1900          | 0.6800         | WMF4P68K-F             | 20.8    | 44.4    | 1.0     | 2400          |
| 0.1500             | WMF2P15K-F             | 9.5     | 23.8    | 0.6     | 1900          | 0.8200         | WMF4P82K-F             | 22.7    | 44.4    | 1.0     | 2400          |
| 0.2200             | WMF2P22K-F             | 10.5    | 30.1    | 0.6     | 1900          | 1.0000         | WMF4W1K-F              | 22.7    | 50.8    | 1.0     | 1300          |

# Type WMF Polyester Film Capacitors

## Film/Foil, Axial Leads

| Cap.<br>$\mu\text{F}$ | Catalog<br>Part Number | D<br>mm | L<br>mm | d<br>mm | dV/dt<br>V/ $\mu\text{s}$ |
|-----------------------|------------------------|---------|---------|---------|---------------------------|
| 1.2500                | WMF4W1P25K-F           | 25.1    | 50.8    | 1.0     | 1300                      |
| 1.5000                | WMF4W1P5K-F            | 25.3    | 58.7    | 1.0     | 1300                      |
| <b>600/630 Vdc</b>    |                        |         |         |         |                           |
| 0.0010                | WMF6D1K-F              | 5.0     | 20.6    | 0.5     | 9000                      |
| 0.0012                | WMF6D12K-F             | 5.1     | 20.6    | 0.5     | 9000                      |
| 0.0015                | WMF6D15K-F             | 5.1     | 20.6    | 0.5     | 9000                      |
| 0.0018                | WMF6D18K-F             | 5.1     | 20.6    | 0.5     | 9000                      |
| 0.0022                | WMF6D22K-F             | 5.5     | 20.6    | 0.5     | 9000                      |
| 0.0027                | WMF6D27K-F             | 5.5     | 20.6    | 0.5     | 9000                      |
| 0.0033                | WMF6D33K-F             | 5.8     | 20.6    | 0.5     | 9000                      |
| 0.0039                | WMF6D39K-F             | 6.1     | 20.6    | 0.5     | 9000                      |
| 0.0047                | WMF6D47K-F             | 6.6     | 20.6    | 0.5     | 9000                      |
| 0.0056                | WMF6D56K-F             | 6.9     | 20.6    | 0.6     | 9000                      |
| 0.0068                | WMF6D68K-F             | 7.4     | 20.6    | 0.6     | 9000                      |
| 0.0082                | WMF6D82K-F             | 7.4     | 20.6    | 0.6     | 9000                      |
| 0.0100                | WMF6S1K-F              | 7.4     | 20.6    | 0.6     | 9000                      |
| 0.0150                | WMF6S15K-F             | 7.5     | 23.8    | 0.6     | 5800                      |
| 0.0180                | WMF6S18K-F             | 8.0     | 23.8    | 0.6     | 5800                      |

| Cap.<br>$\mu\text{F}$ | Catalog<br>Part Number | D<br>mm | L<br>mm | d<br>mm | dV/dt<br>V/ $\mu\text{s}$ |
|-----------------------|------------------------|---------|---------|---------|---------------------------|
| 0.0220                | WMF6S22K-F             | 8.5     | 23.8    | 0.6     | 5800                      |
| 0.0270                | WMF6S27K-F             | 9.3     | 23.8    | 0.6     | 5800                      |
| 0.0330                | WMF6S33K-F             | 10.0    | 25.4    | 0.6     | 5800                      |
| 0.0390                | WMF6S39K-F             | 10.0    | 25.4    | 0.6     | 5800                      |
| 0.0470                | WMF6S47K-F             | 10.9    | 25.4    | 0.6     | 5800                      |
| 0.0560                | WMF6S56K-F             | 11.7    | 25.4    | 0.6     | 5800                      |
| 0.0680                | WMF6S68K-F             | 12.7    | 25.4    | 0.8     | 5800                      |
| 0.0820                | WMF6S82K-F             | 12.9    | 34.9    | 0.8     | 3700                      |
| 0.1000                | WMF6P1K-F              | 14.7    | 34.9    | 0.8     | 3700                      |
| 0.1200                | WMF6P12K-F             | 16.0    | 34.9    | 0.8     | 3700                      |
| 0.1500                | WMF6P15K-F             | 17.4    | 34.9    | 1.0     | 3700                      |
| 0.1800                | WMF6P18K-F             | 16.9    | 41.3    | 1.0     | 3700                      |
| 0.2200                | WMF6P22K-F             | 18.3    | 41.3    | 1.0     | 3700                      |
| 0.2700                | WMF6P27K-F             | 20.1    | 41.3    | 1.0     | 3700                      |
| 0.3300                | WMF6P33K-F             | 19.0    | 50.8    | 1.0     | 1600                      |
| 0.3900                | WMF6P39K-F             | 20.7    | 50.8    | 1.0     | 1600                      |
| 0.4700                | WMF6P47K-F             | 22.5    | 50.8    | 1.0     | 1600                      |
| 0.5600                | WMF6P56K-F             | 24.2    | 50.8    | 1.0     | 1600                      |
| 0.6800                | WMF6P68K-F             | 26.2    | 50.8    | 1.0     | 1600                      |
| 0.8200                | WMF6P82K-F             | 29.5    | 50.8    | 1.0     | 1600                      |
| 1.0000                | WMF6W1K-F              | 30.1    | 65.1    | 1.0     | 1600                      |

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