

Type WPP Film/Foil Polypropylene Capacitors

Axial Leded High Frequency Pulse Capacitors



Type WPP axial-leaded, polypropylene film/foil capacitors incorporate non-inductive extended foil construction with epoxy end seals. Type WPP is rated for continuous-duty operation over the temperature range of $-55\text{ }^{\circ}\text{C}$ to $105\text{ }^{\circ}\text{C}$ without voltage derating. Low ESR, low dissipation factor and the inherent stability make Type WPP ideal for tight tolerance, pulse and high frequency applications

Highlights

- High pulse rating
- High frequency operation
- Low ESR
- Low DF
- Precise values

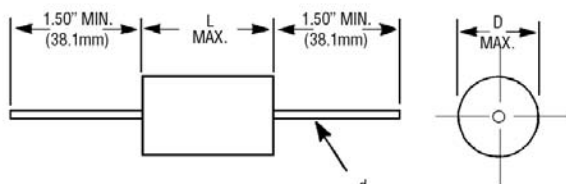
Specifications

| | |
|-------------------------------------|--|
| Capacitance Range: | .001 to 5.0 μF |
| Voltage Range: | 100 to 1000 Vdc (70 to 250 Vac, 60 Hz) |
| Capacitance Tolerance: | $\pm 10\%$ (K) Standard, $\pm 5\%$ (J) Special Order |
| Operating Temperature Range: | -55 to $105\text{ }^{\circ}\text{C}$ |
| Dielectric Strength: | 160% rated voltage for 1 minute |
| Dissipation Factor: | 0.1% Max @ $25\text{ }^{\circ}\text{C}$, 1 kHz |
| Insulation Resistance: | 100,000 $\text{M}\Omega \times \mu\text{F}$ 200,000 $\text{M}\Omega$ Min. |
| Life Test: | 500 h @ $85\text{ }^{\circ}\text{C}$ at 125% rated voltage |

Pulse Capability:

| Rated Voltage | Pulse Capability | | | | | |
|---------------|--|-----------|------------|-------------|-------------|--------------|
| | Body Length | | | | | |
| | 0.625 | .750-.875 | .937-1.125 | 1.250-1.312 | 1.375-1.562 | ≥ 1.750 |
| | dv/dt – volts per microsecond, maximum | | | | | |
| 100 | 4200 | 4000 | 2900 | 1900 | 1600 | 1100 |
| 200 | 6900 | 4100 | 3000 | 2400 | 2000 | 1400 |
| 400 | 19500 | 10000 | 3900 | | 2600 | 2200 |
| 600 | 60000 | 20000 | 12000 | 6700 | | 3000 |
| 1000 | | 37000 | 15000 | 9200 | 7400 | 3400 |

Outline Drawing



Note: Other capacitance values, sizes and performance specifications are available. Contact CDE.

Ratings

| Cap (μF) | Catalog Part Number | D Inches (mm) | L Inches (mm) | d Inches (mm) |
|-------------------------|---------------------|---------------|---------------|---------------|
| 100 Vdc (70 Vac) | | | | |
| 0.0010 | WPP1D1K-F | 0.220 (5.6) | 0.625 (15.9) | 0.020 (0.5) |
| 0.0015 | WPP1D15K-F | 0.220 (5.6) | 0.625 (15.9) | 0.020 (0.5) |
| 0.0022 | WPP1D22K-F | 0.220 (5.6) | 0.625 (15.9) | 0.020 (0.5) |
| 0.0033 | WPP1D33K-F | 0.228 (5.8) | 0.625 (15.9) | 0.020 (0.5) |
| 0.0047 | WPP1D47K-F | 0.240 (6.1) | 0.625 (15.9) | 0.020 (0.5) |
| 0.0068 | WPP1D68K-F | 0.250 (6.3) | 0.625 (15.9) | 0.020 (0.5) |

RoHS Compliant

| Cap (μF) | Catalog Part Number | D Inches (mm) | L Inches (mm) | d Inches (mm) |
|-------------------------|---------------------|---------------|---------------|---------------|
| 100 Vdc (70 Vac) | | | | |
| 0.0100 | WPP1S1K-F | 0.250 (6.3) | 0.625 (15.9) | 0.020 (0.5) |
| 0.0150 | WPP1S15K-F | 0.250 (6.3) | 0.625 (15.9) | 0.020 (0.5) |
| 0.0220 | WPP1S22K-F | 0.270 (6.9) | 0.625 (15.9) | 0.020 (0.5) |
| 0.0330 | WPP1S33K-F | 0.319 (8.1) | 0.625 (15.9) | 0.024 (0.6) |
| 0.0470 | WPP1S47K-F | 0.298 (7.6) | 0.875 (22.2) | 0.024 (0.6) |
| 0.0680 | WPP1S68K-F | 0.350 (8.9) | 0.875 (22.2) | 0.024 (0.6) |

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RoHS Compliant

| Cap (µF) | Catalog Part Number | D Inches (mm) | L Inches (mm) | d Inches (mm) |
|------------------------------|------------------------|------------------|------------------|------------------|
| 100 Vdc (70 Vac) | | | | |
| 0.1000 | WPP1P1K-F | 0.403 (10.2) | 0.906 (23.0) | 0.024 (0.6) |
| 0.1500 | WPP1P15K-F | 0.515 (13.1) | 1.063 (27.0) | 0.024 (0.6) |
| 0.2200 | WPP1P22K-F | 0.529 (13.4) | 1.260 (32.0) | 0.024 (0.6) |
| 0.3300 | WPP1P33K-F | 0.551 (14.0) | 1.250 (31.7) | 0.024 (0.6) |
| 0.4700 | WPP1P47K-F | 0.622 (15.8) | 1.250 (31.7) | 0.032 (0.8) |
| 0.6800 | WPP1P68K-F | 0.684 (17.4) | 1.375 (34.9) | 0.032 (0.8) |
| 1.0000 | WPP1W1K-F | 0.810 (20.6) | 1.375 (34.9) | 0.040 (1.0) |
| 1.5000 | WPP1W1P5K-F | 0.828 (21.0) | 1.750 (44.4) | 0.040 (1.0) |
| 2.0000 | WPP1W2K-F | 0.934 (23.7) | 1.750 (44.4) | 0.040 (1.0) |
| 2.5000 | WPP1W2P5K-F | 0.948 (24.1) | 2.000 (50.8) | 0.040 (1.0) |
| 3.0000 | WPP1W3K-F | 1.030 (26.2) | 2.000 (50.8) | 0.040 (1.0) |
| 3.3000 | WPP1W3P3K-F | 0.925 (23.5) | 2.520 (64.0) | 0.040 (1.0) |
| 3.5000 | WPP1W3P5K-F | 0.965 (24.5) | 2.520 (64.0) | 0.040 (1.0) |
| 4.0000 | WPP1W4K-F | 1.004 (25.5) | 2.520 (64.0) | 0.040 (1.0) |
| 4.5000 | WPP1W4P5K-F | 1.063 (27.0) | 2.520 (64.0) | 0.040 (1.0) |
| 5.0000 | WPP1W5K-F | 1.102 (28.0) | 2.520 (64.0) | 0.040 (1.0) |
| 200/250 Vdc (140 Vac) | | | | |
| 0.0010 | WPP2D1K-F | 0.220 (5.6) | 0.625 (15.9) | 0.020 (0.5) |
| 0.0015 | WPP2D15K-F | 0.220 (5.6) | 0.625 (15.9) | 0.020 (0.5) |
| 0.0022 | WPP2D22K-F | 0.220 (5.6) | 0.625 (15.9) | 0.020 (0.5) |
| 0.0033 | WPP2D33K-F | 0.228 (5.8) | 0.625 (15.9) | 0.020 (0.5) |
| 0.0047 | WPP2D47K-F | 0.240 (6.1) | 0.625 (15.9) | 0.020 (0.5) |
| 0.0068 | WPP2D68K-F | 0.250 (6.3) | 0.625 (15.9) | 0.020 (0.5) |
| 0.0100 | WPP2S1K-F | 0.250 (6.3) | 0.625 (15.9) | 0.020 (0.5) |
| 0.0150 | WPP2S15K-F | 0.276 (7.0) | 0.625 (15.9) | 0.020 (0.5) |
| 0.0220 | WPP2S22K-F | 0.295 (7.5) | 0.625 (15.9) | 0.020 (0.5) |
| 0.0330 | WPP2S33K-F | 0.319 (8.1) | 0.625 (15.9) | 0.024 (0.6) |
| 0.0470 | WPP2S47K-F | 0.335 (8.5) | 0.875 (22.2) | 0.024 (0.6) |
| 0.0680 | WPP2S68K-F | 0.350 (8.9) | 0.906 (23.0) | 0.024 (0.6) |
| 0.1000 | WPP2P1K-F | 0.413 (10.5) | 1.125 (28.6) | 0.024 (0.6) |
| 0.1500 | WPP2P15K-F | 0.492 (12.5) | 1.312 (33.3) | 0.024 (0.6) |
| 0.2200 | WPP2P22K-F | 0.531 (13.5) | 1.312 (33.3) | 0.024 (0.6) |
| 0.3300 | WPP2P33K-F | 0.591 (15.0) | 1.750 (44.4) | 0.024 (0.6) |
| 0.4700 | WPP2P47K-F | 0.581 (14.8) | 1.750 (44.4) | 0.032 (0.8) |
| 0.6800 | WPP2P68K-F | 0.684 (17.4) | 1.750 (44.4) | 0.032 (0.8) |
| 1.0000 | WPP2W1K-F | 0.820 (20.8) | 1.750 (44.4) | 0.040 (1.0) |
| 1.5000 | WPP2W1P5K-F | 0.922 (23.4) | 2.000 (50.8) | 0.040 (1.0) |
| 2.0000 | WPP2W2K-F | 1.052 (26.7) | 2.000 (50.8) | 0.040 (1.0) |
| 2.5000 | WPP2W2P5K-F | 0.965 (24.5) | 2.520 (64.0) | 0.040 (1.0) |
| 3.0000 | WPP2W3K-F | 1.043 (26.5) | 2.520 (64.0) | 0.040 (1.0) |
| 3.5000 | WPP2W3P5K-F | 1.102 (28.0) | 2.520 (64.0) | 0.040 (1.0) |
| 400 Vdc (250 Vac) | | | | |
| 0.0010 | WPP4D1K-F | 0.220 (5.6) | 0.625 (15.9) | 0.020 (0.5) |
| 0.0015 | WPP4D15K-F | 0.220 (5.6) | 0.625 (15.9) | 0.020 (0.5) |
| 0.0022 | WPP4D22K-F | 0.220 (5.6) | 0.625 (15.9) | 0.020 (0.5) |
| 0.0033 | WPP4D33K-F | 0.228 (5.8) | 0.625 (15.9) | 0.020 (0.5) |
| 0.0047 | WPP4D47K-F | 0.256 (6.5) | 0.750 (19.0) | 0.020 (0.5) |
| 0.0068 | WPP4D68K-F | 0.276 (7.0) | 0.750 (19.0) | 0.020 (0.5) |
| 0.0100 | WPP4S1K-F | 0.290 (7.4) | 0.750 (19.0) | 0.024 (0.6) |
| 0.0150 | WPP4S15K-F | 0.352 (8.9) | 0.750 (19.0) | 0.024 (0.6) |

| Cap (µF) | Catalog Part Number | D Inches (mm) | L Inches (mm) | d Inches (mm) |
|------------------------------|------------------------|------------------|------------------|------------------|
| 400 Vdc (250 Vac) | | | | |
| 0.0220 | WPP4S22K-F | 0.374 (9.5) | 0.875 (22.2) | 0.024 (0.6) |
| 0.0330 | WPP4S33K-F | 0.374 (9.5) | 1.062 (27.0) | 0.024 (0.6) |
| 0.0470 | WPP4S47K-F | 0.394 (10.0) | 1.250 (31.7) | 0.024 (0.6) |
| 0.0680 | WPP4S68K-F | 0.415 (10.5) | 1.250 (31.7) | 0.024 (0.6) |
| 0.1000 | WPP4P1K-F | 0.512 (13.0) | 1.250 (31.7) | 0.024 (0.6) |
| 0.1500 | WPP4P15K-F | 0.615 (15.6) | 1.250 (31.7) | 0.032 (0.8) |
| 0.2200 | WPP4P22K-F | 0.595 (15.1) | 1.562 (39.7) | 0.032 (0.8) |
| 0.3300 | WPP4P33K-F | 0.673 (17.1) | 1.750 (44.4) | 0.032 (0.8) |
| 0.4700 | WPP4P47K-F | 0.787 (20.0) | 1.750 (44.4) | 0.040 (1.0) |
| 0.6800 | WPP4P68K-F | 0.852 (21.6) | 2.000 (50.8) | 0.040 (1.0) |
| 1.0000 | WPP4W1K-F | 1.016 (25.8) | 2.000 (50.8) | 0.040 (1.0) |
| 1.5000 | WPP4W1P5K-F | 1.043 (26.5) | 2.520 (64.0) | 0.040 (1.0) |
| 600/630 Vdc (250 Vac) | | | | |
| 0.0010 | WPP6D1K-F | 0.253 (6.4) | 0.625 (15.9) | 0.020 (0.5) |
| 0.0015 | WPP6D15K-F | 0.220 (5.6) | 0.750 (19.0) | 0.020 (0.5) |
| 0.0022 | WPP6D22K-F | 0.226 (5.7) | 0.750 (19.0) | 0.020 (0.5) |
| 0.0033 | WPP6D33K-F | 0.264 (6.7) | 0.750 (19.0) | 0.020 (0.5) |
| 0.0047 | WPP6D47K-F | 0.295 (7.5) | 0.812 (20.6) | 0.020 (0.5) |
| 0.0068 | WPP6D68K-F | 0.311 (7.9) | 0.812 (20.6) | 0.024 (0.6) |
| 0.0100 | WPP6S1K-F | 0.338 (8.6) | 0.937 (23.8) | 0.024 (0.6) |
| 0.0150 | WPP6S15K-F | 0.390 (9.9) | 0.937 (23.8) | 0.024 (0.6) |
| 0.0220 | WPP6S22K-F | 0.424 (10.8) | 1.062 (27.0) | 0.024 (0.6) |
| 0.0330 | WPP6S33K-F | 0.472 (12.0) | 1.260 (32.0) | 0.024 (0.6) |
| 0.0470 | WPP6S47K-F | 0.512 (13.0) | 1.260 (32.0) | 0.024 (0.6) |
| 0.0680 | WPP6S68K-F | 0.605 (15.4) | 1.260 (32.0) | 0.032 (0.8) |
| 0.1000 | WPP6P1K-F | 0.690 (17.5) | 1.125 (28.6) | 0.404 (1.0) |
| 0.1500 | WPP6P15K-F | 0.605 (15.4) | 1.750 (44.4) | 0.404 (1.0) |
| 0.2200 | WPP6P22K-F | 0.715 (18.2) | 1.750 (44.4) | 0.404 (1.0) |
| 0.3300 | WPP6P33K-F | 0.857 (21.8) | 1.750 (44.4) | 0.404 (1.0) |
| 0.4700 | WPP6P47K-F | 0.922 (23.4) | 2.000 (50.8) | 0.404 (1.0) |
| 0.6800 | WPP6P68K-F | 1.004 (25.5) | 2.520 (64.0) | 0.404 (1.0) |
| 0.8200 | WPP6P82K-F | 1.102 (28.0) | 2.520 (64.0) | 0.404 (1.0) |
| 1000 Vdc (250 Vac) | | | | |
| 0.0010 | WPP10D1K-F | 0.295 (7.5) | 0.812 (20.6) | 0.020 (0.5) |
| 0.0015 | WPP10D15K-F | 0.315 (8.0) | 0.812 (20.6) | 0.020 (0.5) |
| 0.0022 | WPP10D22K-F | 0.346 (8.8) | 0.812 (20.6) | 0.024 (0.6) |
| 0.0033 | WPP10D33K-F | 0.374 (9.5) | 0.812 (20.6) | 0.024 (0.6) |
| 0.0047 | WPP10D47K-F | 0.420 (10.7) | 0.812 (20.6) | 0.024 (0.6) |
| 0.0068 | WPP10D68K-F | 0.453 (11.5) | 1.000 (25.4) | 0.024 (0.6) |
| 0.0100 | WPP10S1K-F | 0.453 (11.5) | 1.125 (28.6) | 0.024 (0.6) |
| 0.0150 | WPP10S15K-F | 0.492 (12.5) | 1.125 (28.6) | 0.024 (0.6) |
| 0.0220 | WPP10S22K-F | 0.551 (14.0) | 1.125 (28.6) | 0.024 (0.6) |
| 0.0330 | WPP10S33K-F | 0.575 (14.6) | 1.457 (37.0) | 0.032 (0.8) |
| 0.0470 | WPP10S47K-F | 0.669 (17.0) | 1.457 (37.0) | 0.032 (0.8) |
| 0.0680 | WPP10S68K-F | 0.717 (18.2) | 1.375 (34.9) | 0.040 (1.0) |
| 0.1000 | WPP10P1K-F | 0.850 (21.6) | 1.375 (34.9) | 0.040 (1.0) |
| 0.1500 | WPP10P15K-F | 1.023 (26.0) | 1.375 (34.9) | 0.040 (1.0) |
| 0.2200 | WPP10P22K-F | 0.854 (21.7) | 2.125 (54.0) | 0.040 (1.0) |
| 0.3300 | WPP10P33K-F | 1.025 (26.0) | 2.125 (54.0) | 0.040 (1.0) |
| 0.4700 | WPP10P47K-F | 1.063 (27.0) | 2.520 (64.0) | 0.040 (1.0) |
| 0.5000 | WPP10P50K-F | 1.083 (27.5) | 2.520 (64.0) | 0.040 (1.0) |