



Metallized Polyester Film Capacitors

Axial Leaded, General Purpose

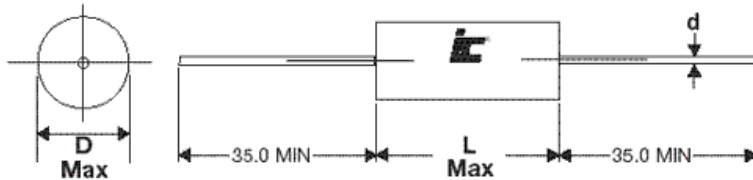
FEATURES

Small Size - Low ESR - General Purpose

APPLICATIONS

General Purpose - Bypass - Coupling - Blocking

| | | | | | | | | | | |
|---|---|--|-----------|------------|------------------------------|------------|------------|-------------------|-------------|--|
| Operating Temperature Range | -40°C to +105°C | | | | | | | | | |
| Capacitance Tolerance | ±10% at 1 kHz, 25°C +5% optional | | | | | | | | | |
| Peak, AC voltage (50/60 Hz) | WVDC | 50 | 63 | 100 | 250 | 400 | 630 | 1000 | 1500 | |
| | VAC | 30 | 40 | 63 | 160 | 200 | 220 | 250 | 300 | |
| For T>+85°C, The voltage must be decreased by 1.25% per °C | | | | | | | | | | |
| Dissipation Factor (MAX) 25°C | Frequency (kHz) | C<0.1uF | | | 0.1uF<C<1.0uF | | | C>1.0uF | | |
| | 1 | 0.80% | | | 1.00% | | | 1.00% | | |
| | 10 | 1.50% | | | 1.50% | | | - | | |
| | 100 | 2.50% | | | - | | | - | | |
| Insulation Resistance @25°C (<70% RH)for 1 minute at 100VDC applied | WVDC | Capacitance | | | Insulation Resistance | | | | | |
| | ≤100WVDC | ≤0.33μF | | | 15000 MΩ | | | | | |
| | >100WVDC | ≤0.33μF | | | 30000 MΩ×μF | | | | | |
| | ≤100WVDC | >0.33μF | | | 15000 MΩ×μF | | | | | |
| | >100WVDC | >0.33μF | | | 10000 MΩ×μF | | | | | |
| Load Life | 2000 Hours, +85C with 125% of rated voltage | | | | | | | | | |
| | Capacitance Change | ≤5% of initially measured value | | | | | | | | |
| | Dissipation Factor | ≤0.005 at 1kHz and 25°C for C≤1uF ≤0.005 at 1kHz and 25°C For C>1uF | | | | | | | | |
| | Insulation Resistance | >50% of maximum specified value | | | | | | | | |
| Damp Heat test | 56 days at40°C with 93%RH(+/-2%), +40°C and no voltage applied | | | | | | | | | |
| | Capacitance Change | ≤5% of initially measured value | | | | | | | | |
| | Dissipation Factor | ≤0.005 at 1kHz and 25°C | | | | | | | | |
| | Insulation Resistance | ≥50% of maximum specified value | | | | | | | | |
| Self Inductance | <1 nano-Henry per mm of body length and lead length | | | | | | | | | |
| Capacitance Drift Factor | <1.0% after 2 years at 40°C | | | | | | | | | |
| Capacitance Temperature Coefficient | +400 ppm/°C, ±200ppm/°C | | | | | | | | | |
| Dielectric Strength | Terminal to Terminal | | | | | | | | | |
| | 160% of VDC applied for 2 Seconds and 25°C | | | | | | | | | |
| Dielectric Construction | Polyester | | | | | | | | | |
| Coating | Metallized film Internal series connected (>1000WVDC) | | | | | | | | | |
| Leads | Flame Retardant Polyester tape wrap (UL 510) with epoxy resin end fills(UL94V0) | | | | | | | | | |
| | Lead free tinned copper leads | | | | | | | | | |



| Lead Diameter | |
|---------------|-----|
| D | d |
| ≤9 | 0.6 |
| 9<D≤20 | 0.8 |
| >20 | 1.0 |

MWR

Metallized Polyester Axial Lead

| Capacitance (µF) | WVDC | IC PART NUMBER | dv/dt (v/µ sec.) | Dims DxL (mm) | d (MM) |
|------------------|------|----------------|------------------|---------------|--------|
| 0.001 | 630 | 102MWR630K | 60 | 5.5x11.5 | 0.6 |
| 0.001 | 1500 | 102MWR152KB | 90 | 5.5x14.5 | 0.6 |
| 0.0015 | 630 | 152MWR630K | 60 | 5.5x11.5 | 0.6 |
| 0.0015 | 1500 | 152MWR152KB | 90 | 5.5x14.5 | 0.6 |
| 0.0022 | 630 | 222MWR630K | 60 | 5.5x11.5 | 0.6 |
| 0.0022 | 1500 | 222MWR152KB | 90 | 6x14.5 | 0.6 |
| 0.0033 | 630 | 332MWR630K | 60 | 5.5x11.5 | 0.6 |
| 0.0033 | 1500 | 332MWR152KB | 90 | 6.5x14.5 | 0.6 |
| 0.0039 | 630 | 392MWR630K | 60 | 5.5x11.5 | 0.6 |
| 0.0047 | 630 | 472MWR630K | 60 | 5.5x11.5 | 0.6 |
| 0.0047 | 1500 | 472MWR152KB | 90 | 7x14.5 | 0.6 |
| 0.0068 | 630 | 682MWR630K | 60 | 5.5x11.5 | 0.6 |
| 0.0068 | 1500 | 682MWR152KB | 90 | 8x14.5 | 0.6 |
| 0.01 | 400 | 103MWR400K | 14 | 5x11.5 | 0.6 |
| 0.01 | 630 | 103MWR630K | 20 | 6x14 | 0.6 |
| 0.01 | 1000 | 103MWR102K | 80 | 7x14.5 | 0.6 |
| 0.01 | 1500 | 103MWR152KB | 90 | 8.5x14.5 | 0.8 |
| 0.015 | 400 | 153MWR400K | 14 | 5.5x14.5 | 0.6 |
| 0.015 | 630 | 153MWR630K | 20 | 6.5x14.5 | 0.6 |
| 0.015 | 1000 | 153MWR102K | 80 | 8x14.5 | 0.6 |
| 0.015 | 1500 | 153MWR152KD | 50 | 8.5x20.5 | 0.8 |
| 0.022 | 250 | 223MWR250K | 10 | 5.5x11.5 | 0.6 |
| 0.022 | 400 | 223MWR400K | 14 | 5.5x14 | 0.6 |
| 0.022 | 630 | 223MWR630K | 20 | 8x14 | 0.6 |
| 0.022 | 1000 | 223MWR102K | 40 | 9.5x20.5 | 0.8 |
| 0.022 | 1500 | 223MWR152KD | 50 | 9.5x20.5 | 0.8 |
| 0.033 | 250 | 333MWR250K | 10 | 6x11.5 | 0.6 |
| 0.033 | 400 | 333MWR400K | 6 | 6x14 | 0.6 |
| 0.033 | 630 | 333MWR630K | 15 | 8x20.5 | 0.6 |
| 0.033 | 1000 | 333MWR102K | 40 | 10.5x20.5 | 0.8 |
| 0.033 | 1500 | 333MWR152KD | 50 | 11x20.5 | 0.8 |
| 0.039 | 250 | 393MWR250K | 10 | 6x11.5 | 0.6 |
| 0.039 | 400 | 393MWR400K | 14 | 7x15.5 | 0.6 |
| 0.039 | 630 | 393MWR630K | 15 | 8x20.5 | 0.6 |
| 0.047 | 250 | 473MWR250K | 10 | 5.5x14 | 0.6 |
| 0.047 | 400 | 473MWR400K | 6 | 7x14 | 0.6 |
| 0.047 | 630 | 473MWR630K | 15 | 7.5x19 | 0.6 |
| 0.047 | 1000 | 473MWR102K | 33 | 11x29 | 0.8 |
| 0.047 | 1500 | 473MWR152KG | 40 | 11x29 | 0.8 |
| 0.068 | 100 | 683MWR100K | 6 | 5.5x11.5 | 0.6 |
| 0.068 | 250 | 683MWR250K | 10 | 6.5x14.5 | 0.6 |
| 0.068 | 400 | 683MWR400K | 10 | 7.5x20.5 | 0.6 |
| 0.068 | 630 | 683MWR630K | 15 | 9x20.5 | 0.8 |
| 0.068 | 1000 | 683MWR102K | 33 | 12.5x29 | 0.8 |
| 0.068 | 1500 | 683MWR152KG | 40 | 12.5x29 | 0.8 |
| 0.1 | 100 | 104MWR100K | 6 | 6x11.5 | 0.6 |
| 0.1 | 250 | 104MWR250K | 10 | 6x14 | 0.6 |
| 0.1 | 400 | 104MWR400K | 10 | 7.5x19 | 0.6 |
| 0.1 | 630 | 104MWR630K | 10 | 9x27 | 0.8 |
| 0.1 | 1000 | 104MWR102K | 33 | 12x29 | 0.8 |
| 0.1 | 1500 | 104MWR152KJ | 25 | 13x34 | 0.8 |
| 0.15 | 63 | 154MWR063K | 11 | 5.5x14 | 0.6 |
| 0.15 | 100 | 154MWR100K | 6 | 6x14 | 0.6 |
| 0.15 | 250 | 154MWR250K | 10 | 7x14 | 0.6 |
| 0.15 | 400 | 154MWR400K | 10 | 8.5x19 | 0.6 |
| 0.15 | 630 | 154MWR630K | 10 | 10.5x29 | 0.8 |
| 0.15 | 1000 | 154MWR102K | 20 | 13x34 | 0.8 |
| 0.15 | 1500 | 154MWR152KJ | 25 | 15x34 | 0.8 |

| Capacitance (µF) | WVDC | IC PART NUMBER | dv/dt (v/µ sec.) | Dims DxL (mm) | d (MM) |
|------------------|------|----------------|------------------|---------------|--------|
| 0.22 | 50 | 224MWR050K | 9 | 6x11.5 | 0.6 |
| 0.22 | 100 | 224MWR100K | 6 | 6.5x14 | 0.6 |
| 0.22 | 250 | 224MWR250K | 7 | 7x19 | 0.6 |
| 0.22 | 400 | 224MWR400K | 6 | 8.5x27 | 0.8 |
| 0.22 | 630 | 224MWR630K | 10 | 12.5x27 | 0.8 |
| 0.22 | 1000 | 224MWR102K | 20 | 14.5x34 | 0.8 |
| 0.22 | 1500 | 224MWR152KJ | 25 | 17.5x34 | 0.8 |
| 0.33 | 50 | 334MWR050K | 9 | 6x11.5 | 0.6 |
| 0.33 | 100 | 334MWR100K | 6 | 7.5x14 | 0.6 |
| 0.33 | 250 | 334MWR250K | 7 | 8x19 | 0.6 |
| 0.33 | 400 | 334MWR400K | 6 | 10x27 | 0.8 |
| 0.33 | 630 | 334MWR630K | 6 | 13.5x34 | 0.8 |
| 0.33 | 1000 | 334MWR102K | 20 | 17x34 | 0.8 |
| 0.33 | 1500 | 334MWR152KJ | 25 | 20.5x34 | 1 |
| 0.47 | 50 | 474MWR050K | 9 | 6x11.5 | 0.6 |
| 0.47 | 100 | 474MWR100K | 6 | 7x15.5 | 0.6 |
| 0.47 | 250 | 474MWR250K | 7 | 9.5x19 | 0.8 |
| 0.47 | 400 | 474MWR400K | 6 | 12.5x27 | 0.8 |
| 0.47 | 630 | 474MWR630K | 6 | 15x34 | 0.8 |
| 0.47 | 1000 | 474MWR102K | 20 | 19.5x34 | 0.8 |
| 0.47 | 1500 | 474MWR152KJ | 25 | 24x34 | 1 |
| 0.68 | 50 | 684MWR050K | 9 | 6x11.5 | 0.6 |
| 0.68 | 63 | 684MWR063K | 7 | 6.5x19 | 0.6 |
| 0.68 | 100 | 684MWR100K | 3 | 8x19 | 0.6 |
| 0.68 | 250 | 684MWR250K | 4 | 9.5x27 | 0.8 |
| 0.68 | 400 | 684MWR400K | 4 | 12.5x34 | 0.8 |
| 0.68 | 630 | 684MWR630K | 6 | 18.5x34 | 0.8 |
| 0.68 | 1500 | 684MWR152KN | 25 | 24.5x46.5 | 1 |
| 1 | 50 | 105MWR050K | 9 | 7.5x11.5 | 0.6 |
| 1 | 63 | 105MWR063K | 7 | 8x20.5 | 0.6 |
| 1 | 100 | 105MWR100K | 3 | 9.5x19 | 0.8 |
| 1 | 250 | 105MWR250K | 4 | 10.5x27 | 0.8 |
| 1 | 400 | 105MWR400K | 4 | 14.5x34 | 0.8 |
| 1 | 630 | 105MWR630K | 6 | 22x34 | 1 |
| 1 | 1500 | 105MWR152KN | 25 | 28.5x46.5 | 1 |
| 1.5 | 50 | 155MWR050K | 9 | 8x14.5 | 0.6 |
| 1.5 | 63 | 155MWR063K | 7 | 9.5x20.5 | 0.8 |
| 1.5 | 100 | 155MWR100K | 2 | 9x27 | 0.8 |
| 1.5 | 250 | 155MWR250K | 4 | 12.5x29 | 0.8 |
| 1.5 | 400 | 155MWR400K | 4 | 17.5x34 | 0.8 |
| 1.5 | 630 | 155MWR630K | 6 | 26.5x34 | 1 |
| 1.5 | 1500 | 155MWR152KN | 25 | 34x46.5 | 1 |
| 2.2 | 50 | 225MWR050K | 9 | 9x14.5 | 0.8 |
| 2.2 | 63 | 225MWR063K | 5 | 10.5x29 | 0.8 |
| 2.2 | 100 | 225MWR100K | 2 | 12x29 | 0.8 |
| 2.2 | 250 | 225MWR250K | 2 | 13.5x34 | 0.8 |
| 2.2 | 400 | 225MWR400K | 2 | 20.5x34 | 0.8 |
| 3.3 | 50 | 335MWR050K | 6 | 10x20.5 | 0.8 |
| 3.3 | 63 | 335MWR063K | 5 | 11x29 | 0.8 |
| 3.3 | 100 | 335MWR100K | 2 | 13x29 | 0.8 |
| 3.3 | 250 | 335MWR250K | 2 | 16x34 | 0.8 |
| 3.3 | 400 | 335MWR400K | 2 | 22.5x47 | 1 |
| 4.7 | 50 | 475MWR050K | 6 | 10.5x20.5 | 0.8 |
| 4.7 | 63 | 475MWR063K | 5 | 12.5x29 | 0.8 |
| 4.7 | 100 | 475MWR100K | 4 | 12.5x34 | 0.8 |
| 4.7 | 250 | 475MWR250K | 2 | 19.5x34 | 0.8 |
| 6.8 | 50 | 685MWR050K | 6 | 11.5x20.5 | 0.8 |
| 6.8 | 100 | 685MWR100K | 2 | 17x34 | 0.8 |

MWR

Metallized Polyester Axial Lead

| Capacitance (μF) | WVDC | IC PART NUMBER | dv/dt (v/μ sec.) | Dims DxL (mm) | d (MM) |
|------------------|------|----------------------------|------------------|---------------|--------|
| 6.8 | 250 | 685MWR250K | 5 | 23x34 | 1 |
| 10 | 50 | 106MWR050K | 6 | 13.5x20.5 | 0.8 |
| 10 | 63 | 106MWR063K | 4 | 14x34 | 0.8 |
| 10 | 100 | 106MWR100K | 2 | 18x34 | 0.8 |

| Capacitance (μF) | WVDC | IC PART NUMBER | dv/dt (v/μ sec.) | Dims DxL (mm) | d (MM) |
|------------------|------|----------------------------|------------------|---------------|--------|
| 10 | 250 | 106MWR250K | 2 | 24.5x46.5 | 1 |
| 15 | 100 | 156MWR100K | 2 | 21x34 | 1 |
| 22 | 100 | 226MWR100K | 2 | 22x46 | 1 |