

# MPW

## Axial leaded metallized polypropylene film capacitors



### Features

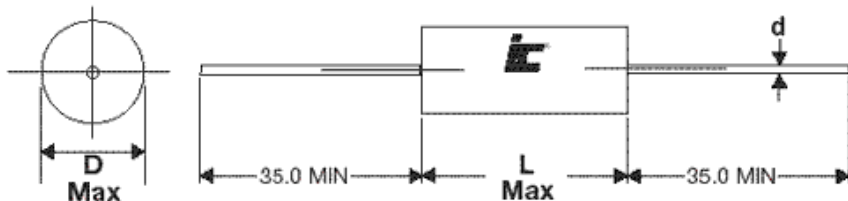
- Self Healing
- Low ESR
- Stable with frequency and temperature
- High ripple current

### Applications

- General Purpose
- AC Applications ( not across the line)
- Switching power supplies
- Ballasts

### Specifications

|                                                                           |                                                                                 |     |                       |                                 |     |  |
|---------------------------------------------------------------------------|---------------------------------------------------------------------------------|-----|-----------------------|---------------------------------|-----|--|
| Operating Temperature Range                                               | <b>-55°C to +105°C</b>                                                          |     |                       |                                 |     |  |
| Capacitance Tolerance                                                     | ±10% at 1 kHz, 25°C<br>±5% optional                                             |     |                       |                                 |     |  |
| AC Voltage                                                                | WVDC                                                                            | 160 | 250                   | 400                             | 630 |  |
|                                                                           | VAC                                                                             | 90  | 200                   | 220                             | 250 |  |
|                                                                           | For T>+85°C , The voltage must be decreased by 1.5% per °C                      |     |                       |                                 |     |  |
| Dissipation Factor (MAX)<br>1 kHz, 25°C                                   | 0.001                                                                           |     |                       |                                 |     |  |
| Insulation Resistance<br>@25°C (<70% RH)for 1 minute at<br>100VDC applied | Capacitance                                                                     |     | Insulation Resistance |                                 |     |  |
|                                                                           | ≤0.33μF                                                                         |     | 30000 MΩ              |                                 |     |  |
|                                                                           | >0.33μF                                                                         |     | 10000 MΩxμF           |                                 |     |  |
| Load Life                                                                 | 2000 Hours, +85C with 125% of rated voltage                                     |     |                       |                                 |     |  |
|                                                                           | Capacitance Change                                                              |     |                       | ≤3% of initially measured value |     |  |
|                                                                           | Dissipation Factor                                                              |     |                       | ≤0.001 at 1kHz and 25°C         |     |  |
|                                                                           | Insulation Resistance                                                           |     |                       | ≥50% of maximum specified value |     |  |
| Damp Heat test                                                            | 56 days at40°C with 90 to 95%RH, +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                                                  | <0.5% after 2 years at 40°C                                                     |     |                       |                                 |     |  |
| Capacitance Temperature Coefficient                                       | -200 ppm/°C, ±100ppm/°C                                                         |     |                       |                                 |     |  |
| Dielectric Strength                                                       | Terminal to Terminal                                                            |     |                       |                                 |     |  |
|                                                                           | 200% of rated VDC or VAC applied for 10 Seconds and 25°C                        |     |                       |                                 |     |  |
| Dielectric                                                                | Polypropylene                                                                   |     |                       |                                 |     |  |
| Construction                                                              | Metallized film                                                                 |     |                       |                                 |     |  |
| Coating                                                                   | Flame Retardant Polyester tape wrap (UL 510) with epoxy resin end fills(UL94V0) |     |                       |                                 |     |  |
| Leads                                                                     | Lead free tinned copper leads                                                   |     |                       |                                 |     |  |



| Lead Diameter |     |
|---------------|-----|
| D             | d   |
| $\leq 9$      | 0.6 |
| $> 9$         | 0.8 |

# MPW

Metallized Polypropylene  
Axial Lead

| Capacitance<br>( $\mu$ F) | WVDC | IC PART NUMBER | dv/dt<br>(v/ $\mu$ sec.) | Dims DxL<br>(mm) | d (MM) |
|---------------------------|------|----------------|--------------------------|------------------|--------|
| 0.001                     | 630  | 102MPW630K     | 22                       | 6.5x14.5         | 0.6    |
| 0.0015                    | 400  | 152MPW400K     | 15                       | 6.5x14.5         | 0.6    |
| 0.0015                    | 630  | 152MPW630K     | 22                       | 6.5x14.5         | 0.6    |
| 0.0022                    | 400  | 222MPW400K     | 15                       | 6.5x14.5         | 0.6    |
| 0.0022                    | 630  | 222MPW630K     | 22                       | 6.5x14.5         | 0.6    |
| 0.0033                    | 400  | 332MPW400K     | 15                       | 6.5x14.5         | 0.6    |
| 0.0033                    | 630  | 332MPW630K     | 22                       | 6.5x14.5         | 0.6    |
| 0.0047                    | 400  | 472MPW400K     | 15                       | 6.5x14.5         | 0.6    |
| 0.0047                    | 630  | 472MPW630K     | 22                       | 6x14.5           | 0.6    |
| 0.0068                    | 400  | 682MPW400K     | 15                       | 5.5x11.5         | 0.6    |
| 0.0068                    | 630  | 682MPW630K     | 22                       | 6x14.5           | 0.6    |
| 0.0082                    | 400  | 822MPW400K     | 15                       | 6.5x14.5         | 0.6    |
| 0.0082                    | 630  | 822MPW630K     | 22                       | 6x14.5           | 0.6    |
| 0.01                      | 400  | 103MPW400K     | 15                       | 6x14.5           | 0.6    |
| 0.01                      | 630  | 103MPW630K     | 22                       | 6.5x14.5         | 0.6    |
| 0.015                     | 250  | 153MPW250K     | 12                       | 5.5x14.5         | 0.6    |
| 0.015                     | 400  | 153MPW400K     | 15                       | 6.5x14.5         | 0.6    |
| 0.015                     | 630  | 153MPW630K     | 22                       | 7.5x14.5         | 0.6    |
| 0.022                     | 160  | 223MPW160K     | 22                       | 5.5x11.5         | 0.6    |
| 0.022                     | 250  | 223MPW250K     | 12                       | 7x14             | 0.6    |
| 0.022                     | 400  | 223MPW400K     | 15                       | 7x14.5           | 0.6    |
| 0.022                     | 630  | 223MPW630K     | 22                       | 8.5x14.5         | 0.8    |
| 0.033                     | 160  | 333MPW160K     | 22                       | 5.5x11.5         | 0.6    |
| 0.033                     | 250  | 333MPW250K     | 12                       | 6.5x14.5         | 0.6    |
| 0.033                     | 400  | 333MPW400K     | 15                       | 7.5x14.5         | 0.6    |
| 0.033                     | 630  | 333MPW630K     | 16                       | 8.5x20.5         | 0.8    |
| 0.047                     | 160  | 473MPW160K     | 22                       | 5.5x11.5         | 0.6    |
| 0.047                     | 250  | 473MPW250K     | 12                       | 6.5x14.5         | 0.6    |
| 0.047                     | 400  | 473MPW400K     | 15                       | 8.5x14.5         | 0.8    |
| 0.047                     | 630  | 473MPW630K     | 16                       | 9x20.5           | 0.8    |
| 0.068                     | 160  | 683MPW160K     | 22                       | 6.5x14.5         | 0.6    |
| 0.068                     | 250  | 683MPW250K     | 12                       | 7.5x14.5         | 0.6    |
| 0.068                     | 400  | 683MPW400K     | 12                       | 8.5x20.5         | 0.8    |
| 0.068                     | 630  | 683MPW630K     | 12                       | 9x29             | 0.8    |
| 0.1                       | 160  | 104MPW160K     | 22                       | 6.5x14.5         | 0.6    |
| 0.1                       | 250  | 104MPW250K     | 12                       | 8.5x14.5         | 0.8    |
| 0.1                       | 400  | 104MPW400K     | 12                       | 8.5x20.5         | 0.8    |
| 0.1                       | 630  | 104MPW630K     | 12                       | 10.5x29          | 0.8    |

| Capacitance<br>( $\mu$ F) | WVDC | IC PART NUMBER | dv/dt<br>(v/ $\mu$ sec.) | Dims DxL<br>(mm) | d (MM) |
|---------------------------|------|----------------|--------------------------|------------------|--------|
| 0.15                      | 160  | 154MPW160K     | 22                       | 7.5x14.5         | 0.6    |
| 0.15                      | 250  | 154MPW250K     | 8                        | 8x20.5           | 0.6    |
| 0.15                      | 400  | 154MPW400K     | 7                        | 9.5x29           | 0.8    |
| 0.15                      | 630  | 154MPW630K     | 12                       | 12x29            | 0.8    |
| 0.22                      | 160  | 224MPW160K     | 22                       | 8x14.5           | 0.6    |
| 0.22                      | 250  | 224MPW250K     | 8                        | 9.5x20.5         | 0.8    |
| 0.22                      | 400  | 224MPW400K     | 7                        | 10.5x29          | 0.8    |
| 0.22                      | 630  | 224MPW630K     | 7                        | 12.5x34          | 0.8    |
| 0.33                      | 160  | 334MPW160K     | 18                       | 8.5x20.5         | 0.8    |
| 0.33                      | 250  | 334MPW250K     | 5                        | 10x29            | 0.8    |
| 0.33                      | 400  | 334MPW400K     | 7                        | 12.5x29          | 0.8    |
| 0.33                      | 630  | 334MPW630K     | 7                        | 15.5x34          | 0.8    |
| 0.47                      | 160  | 474MPW160K     | 18                       | 9.5x20.5         | 0.8    |
| 0.47                      | 250  | 474MPW250K     | 5                        | 11x29            | 0.8    |
| 0.47                      | 400  | 474MPW400K     | 7                        | 14x29            | 0.8    |
| 0.47                      | 630  | 474MPW630K     | 7                        | 18x34            | 0.8    |
| 0.68                      | 160  | 684MPW160K     | 11                       | 10x29            | 0.8    |
| 0.68                      | 250  | 684MPW250K     | 5                        | 12.5x29          | 0.8    |
| 0.68                      | 400  | 684MPW400K     | 5                        | 15x34            | 0.8    |
| 0.68                      | 630  | 684MPW630K     | 7                        | 22x34            | 1      |
| 1                         | 160  | 105MPW160K     | 11                       | 11x29            | 0.8    |
| 1                         | 250  | 105MPW250K     | 3                        | 13x34            | 0.8    |
| 1                         | 400  | 105MPW400K     | 5                        | 17.5x34          | 0.8    |
| 1.5                       | 160  | 155MPW160K     | 11                       | 13x29            | 0.8    |
| 1.5                       | 250  | 155MPW250K     | 8                        | 16x34            | 0.8    |
| 1.5                       | 400  | 155MPW400K     | 5                        | 20.5x34          | 1      |
| 2.2                       | 160  | 225MPW160K     | 8                        | 13.5x34          | 0.8    |
| 2.2                       | 250  | 225MPW250K     | 3                        | 19x34            | 0.8    |
| 2.2                       | 400  | 225MPW400K     | 3                        | 24x46            | 1      |
| 3.3                       | 160  | 335MPW160K     | 8                        | 16x34            | 0.8    |
| 3.3                       | 250  | 335MPW250K     | 2                        | 17x47            | 0.8    |
| 3.3                       | 400  | 335MPW400K     | 3                        | 24x47            | 1      |
| 4.7                       | 160  | 475MPW160K     | 8                        | 18x34            | 0.8    |
| 4.7                       | 250  | 475MPW250K     | 2                        | 22.5x47          | 1      |
| 4.7                       | 400  | 475MPW400K     | 3                        | 28.5x47          | 1      |
| 6.8                       | 160  | 685MPW160K     | 8                        | 18.5x46.5        | 0.8    |
| 10                        | 160  | 106MPW160K     | 8                        | 22.5x46.5        | 1      |

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