



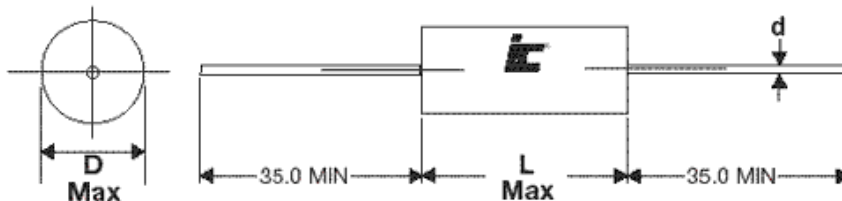
#### FEATURES

Low ESR - High AC/Ripple Current - Stable with frequency and temperature

#### APPLICATIONS

Switching Power Supplies – General Purpose – AC Applications ( Not across the Line)

|                                                                           |                                                                                 |     |                          |                                 |     |  |  |
|---------------------------------------------------------------------------|---------------------------------------------------------------------------------|-----|--------------------------|---------------------------------|-----|--|--|
| Operating Temperature Range                                               | -55°C to +105°C                                                                 |     |                          |                                 |     |  |  |
| 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<br>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   |
| ≤9            | 0.6 |
| >9            | 0.8 |

# MPW

## Metallized Polypropylene Axial Lead

| Capacitance (μF) | WVDC | IC PART NUMBER | dv/dt (v/μ sec.) | Dims DxL (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 (μF) | WVDC | IC PART NUMBER | dv/dt (v/μ sec.) | Dims DxL (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      |