**Mounting Recommendation**

Excessive mechanical strain, e.g. pressure or shock onto the capacitor body, is to be avoided during mounting and usage of the capacitors.

**Electrical Data**

- **Capacitance range**: 16 m\(\mu\)F to 260 m\(\mu\)F
- **Rated voltages**: 500 VDC, 700 VDC, 900 VDC, 1100 VDC, 1300 VDC
- **Capacitance tolerances**: ±20%, ±10% (±5% available subject to special enquiry)
- **Operating temperature range**: -40°C to +85°C
- **Insulation resistance** at +20°C:
  - ≥ 5000 sec (MΩ x μF)
  - (mean value: 20000 sec)
  - Measuring voltage: 100 V/1 min.
- **Dielectric loss factor**\( \tan \delta_d \):
  - \(2 \times 10^{-4}\)
- **Test voltage**: 1.5 \(U_r\), 2sec
- **Dielectric absorption**: 0.05%
- **Reliability**:
  - Operational life > 100,000 hours
  - Failure rate < 50 fit (hot spot ≤ 70°C)

**Typical Applications**

DC capacitors with high capacitances for applications in power electronics also at non-sinusoidal voltages and currents e.g. in:

- Wind power systems
- Inverters

**Construction**

**Dielectric**:
Polypethylene (PP) film

**Capacitor electrodes**:
Vacuum-deposited

**Internal construction**:

- Plastic film
- Vacuum-deposited electrode
- Metal contact layer (schoopage)
- Termination

**Encapsulation**:
Solvent-resistant, flame-retardant plastic case with PU-sealing, UL 94 V-0

**Terminations**:
Tinned wire.

**Marking**:

**Packing**
Transportation-safe packing in cardboard boxes.

For further details and graphs please refer to Technical Information.

The capacitors are non-polarized. The centre termination is designed as one pole whereas the four outer terminations form the other pole. The diameter of the centre termination is virtually identical with the sum of the outer terminations’ diameters.
## General Data

<table>
<thead>
<tr>
<th>$U_d$ (VDC)</th>
<th>$C_N$ (μF)</th>
<th>D x L (mm)</th>
<th>$I_{ms}$ (1 kHz)* (A)</th>
<th>ESR (1 kHz)* (mΩ)</th>
<th>$R_{th}$ (K/W)</th>
<th>$L_e$ (nH)</th>
<th>Approx. weight (g)</th>
<th>Part number</th>
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<tbody>
<tr>
<td>500 VDC</td>
<td>85</td>
<td>50 x 57</td>
<td>35</td>
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<td>120</td>
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<td>195</td>
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<td>6.0</td>
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<td>220</td>
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</tr>
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Contacts can handle: peak currents $I_p$ up to 1.1 kA
surge currents $I_s$ up to 3.5 kA

* General guide

Dims. in mm.

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**WIMA Part Number System**

A WIMA part number consists of 18 digits and is composed as follows:

- **Field 1 - 4**: Type description
- **Field 5 - 6**: Rated voltage
- **Field 7 - 10**: Capacitance
- **Field 11 - 12**: Size and PCM
- **Field 13 - 14**: Special features (e.g., Snubber versions)
- **Field 15**: Capacitance tolerance
- **Field 16**: Packing
- **Field 17 - 18**: Lead length (untaped)

### Type description:

- SMD-PET = SMDE
- SMD-PS = SMDE
- FKP 02 = FKP0
- MKS 02 = MKS0
- FKS 2 = FKS2
- PKP 2 = PKP2
- MKP 2 = MKP2
- FKS 3 = FKS3
- PKP 3 = PKP3
- MKS 4 = MKS4
- MKP 4 = MKP4
- MKP 10 = MKP1
- FKP 4 = FKP4
- FKP 1 = FKP1
- MKP-X2 = MKX2
- MKP-X2 R = MKXR
- MKP-Y2 = MKY2
- MP 3-X2 = MPX2
- MP 3-X1 = MPX1
- MP 3-Y2 = MPY2
- MP 3R-Y2 = MPYR
- Snubber MKP = SNVMP
- Snubber FKP = SNFMP
- GTO MKP = GTOCM
- DC-LINK MKP 4 = DCP4
- DC-LINK MKP 5 = DCP5
- DC-LINK MKP 6 = DCP6
- DC-LINK HC = DCH
- SuperCap C = SCSC
- SuperCap MC = SCM
- SuperCap R = SCSR
- SuperCap MR = SCMR
- MKX2 = MKX2
- MKS 2 = MKS2
- MKP 4 = MKP4
- MKP 10 = MKP1
- FKP 4 = FKP4
- PKP 1 = PKP1
- MKP-X2 = MKX2
- MKP-Y2 = MKY2
- MP 3-X2 = MPX2
- MP 3-X1 = MPX1
- MP 3-Y2 = MPY2
- MP 3R-Y2 = MPYR
- Snubber MKP = SNVMP
- Snubber FKP = SNFMP
- GTO MKP = GTOCM
- DC-LINK MKP 4 = DCP4
- DC-LINK MKP 5 = DCP5
- DC-LINK MKP 6 = DCP6
- DC-LINK HC = DCH
- SuperCap C = SCSC
- SuperCap MC = SCM
- SuperCap R = SCSR
- SuperCap MR = SCMR
- MKX2 = MKX2
- MKS 2 = MKS2
- MKP 4 = MKP4
- MKP 10 = MKP1
- FKP 4 = FKP4
- PKP 1 = PKP1
- MKP-X2 = MKX2
- MKP-Y2 = MKY2
- MP 3-X2 = MPX2
- MP 3-X1 = MPX1
- MP 3-Y2 = MPY2
- MP 3R-Y2 = MPYR
- Snubber MKP = SNVMP
- Snubber FKP = SNFMP
- GTO MKP = GTOCM
- DC-LINK MKP 4 = DCP4
- DC-LINK MKP 5 = DCP5
- DC-LINK MKP 6 = DCP6
- DC-LINK HC = DCH
- SuperCap C = SCSC
- SuperCap MC = SCM
- SuperCap R = SCSR
- SuperCap MR = SCMR
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- MKP 10 = MKP1
- FKP 4 = FKP4
- PKP 1 = PKP1
- MKP-X2 = MKX2
- MKP-Y2 = MKY2
- MP 3-X2 = MPX2
- MP 3-X1 = MPX1
- MP 3-Y2 = MPY2
- MP 3R-Y2 = MPYR
- Snubber MKP = SNVMP
- Snubber FKP = SNFMP
- GTO MKP = GTOCM
- DC-LINK MKP 4 = DCP4
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- DC-LINK MKP 6 = DCP6
- DC-LINK HC = DCH
- SuperCap C = SCSC
- SuperCap MC = SCM
- SuperCap R = SCSR
- SuperCap MR = SCMR
- MKX2 = MKX2
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- MKP 10 = MKP1
- FKP 4 = FKP4
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- MKP-Y2 = MKY2
- MP 3-X2 = MPX2
- MP 3-X1 = MPX1
- MP 3-Y2 = MPY2
- MP 3R-Y2 = MPYR
- Snubber MKP = SNVMP
- Snubber FKP = SNFMP
- GTO MKP = GTOCM
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- DC-LINK MKP 5 = DCP5
- DC-LINK MKP 6 = DCP6
- DC-LINK HC = DCH
- SuperCap C = SCSC
- SuperCap MC = SCM
- SuperCap R = SCSR
- SuperCap MR = SCMR
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- MKP 10 = MKP1
- FKP 4 = FKP4
- PKP 1 = PKP1
- MKP-X2 = MKX2
- MKP-Y2 = MKY2
- MP 3-X2 = MPX2
- MP 3-X1 = MPX1
- MP 3-Y2 = MPY2
- MP 3R-Y2 = MPYR
- Snubber MKP = SNVMP
- Snubber FKP = SNFMP
- GTO MKP = GTOCM
- DC-LINK MKP 4 = DCP4
- DC-LINK MKP 5 = DCP5
- DC-LINK MKP 6 = DCP6
- DC-LINK HC = DCH
- SuperCap C = SCSC
- SuperCap MC = SCM
- SuperCap R = SCSR
- SuperCap MR = SCMR

### Rated voltage:

<table>
<thead>
<tr>
<th>Type description</th>
<th>Rated voltage</th>
<th>Capacitance</th>
<th>Size</th>
<th>Tolerance</th>
<th>Packing</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5 VDC</td>
<td>22 pF ± 0.22</td>
<td>MKS 2</td>
<td>63 DDC</td>
<td>0.01 µF</td>
<td>2.5x6.5x7.2</td>
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<tr>
<td>4.8 VDC</td>
<td>39 pF ± 0.39</td>
<td>MKS 2</td>
<td>63 DDC</td>
<td>0.01 µF</td>
<td>2.5x6.5x7.2</td>
</tr>
<tr>
<td>6.3 VDC</td>
<td>50 pF ± 0.50</td>
<td>MKS 2</td>
<td>63 DDC</td>
<td>0.01 µF</td>
<td>2.5x6.5x7.2</td>
</tr>
<tr>
<td>100 VDC</td>
<td>100 pF ± 1.00</td>
<td>MKS 2</td>
<td>63 DDC</td>
<td>0.01 µF</td>
<td>2.5x6.5x7.2</td>
</tr>
<tr>
<td>150 VDC</td>
<td>150 pF ± 1.50</td>
<td>MKS 2</td>
<td>63 DDC</td>
<td>0.01 µF</td>
<td>2.5x6.5x7.2</td>
</tr>
<tr>
<td>220 VDC</td>
<td>220 pF ± 2.20</td>
<td>MKS 2</td>
<td>63 DDC</td>
<td>0.01 µF</td>
<td>2.5x6.5x7.2</td>
</tr>
<tr>
<td>470 pF ± 4.70</td>
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<td>63 DDC</td>
<td>0.01 µF</td>
<td>2.5x6.5x7.2</td>
<td></td>
</tr>
<tr>
<td>680 pF ± 6.80</td>
<td>MKS 2</td>
<td>63 DDC</td>
<td>0.01 µF</td>
<td>2.5x6.5x7.2</td>
<td></td>
</tr>
<tr>
<td>1100 pF ± 11.00</td>
<td>MKS 2</td>
<td>63 DDC</td>
<td>0.01 µF</td>
<td>2.5x6.5x7.2</td>
<td></td>
</tr>
<tr>
<td>1500 pF ± 15.00</td>
<td>MKS 2</td>
<td>63 DDC</td>
<td>0.01 µF</td>
<td>2.5x6.5x7.2</td>
<td></td>
</tr>
<tr>
<td>2200 pF ± 22.00</td>
<td>MKS 2</td>
<td>63 DDC</td>
<td>0.01 µF</td>
<td>2.5x6.5x7.2</td>
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<tr>
<td>4700 pF ± 47.00</td>
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<td>63 DDC</td>
<td>0.01 µF</td>
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<td>6800 pF ± 68.00</td>
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<tr>
<td>10000 pF ± 100.00</td>
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<td>0.01 µF</td>
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<td>15000 pF ± 150.00</td>
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</table>

### Special features:

- **Standard** = 00
- **Version A1** = 1A
- **Version A1.1.1** = 1B
- **Version A1.2** = 1C

### Lead length (untaped)

- **3.5 ± 0.5** = C9
- **6 ± 2** = SD
- **16 ± 1** = P1

The data on this page is not complete and serves only to explain the part number system. Part number information is listed on the pages of the respective WIMA range.