

## Metallized Polypropylene (PP) - Capacitors in Cylindrical Case for DC-Link Applications

### Special Features

- Very high volume/capacitance ratio
- Self-healing properties
- With cylindrical plastic case for PCB mounting
- Dry construction without electrolyte or oil
- No internal fuse required
- Negative capacitance change versus temperature
- Very low dielectric absorption
- According to RoHS 2011/65/EU
- Customer-specific capacitances or voltages on request

### 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:

Polypropylene (PP) film

#### Capacitor electrodes:

Vacuum-deposited

#### Internal construction:



#### Encapsulation:

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

#### Terminations:

Tinned wire.

#### Marking:

Colour: Grey. Marking: Black on silver label.

### Electrical Data

**Capacitance range:** 16  $\mu\text{F}$  to 260  $\mu\text{F}$

**Rated voltages:** 500 VDC, 700 VDC, 900 VDC, 1100 VDC, 1300 VDC

**Capacitance tolerances:**  $\pm 20\%$ ,  $\pm 10\%$  ( $\pm 5\%$  available subject to special enquiry)

**Operating temperature range:**

$-40^\circ\text{C}$  to  $+85^\circ\text{C}$

**Insulation resistance** at  $+20^\circ\text{C}$ :

$\geq 5000$  sec ( $\text{M}\Omega \times \mu\text{F}$ )

(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  $\leq 70^\circ\text{C}$ )

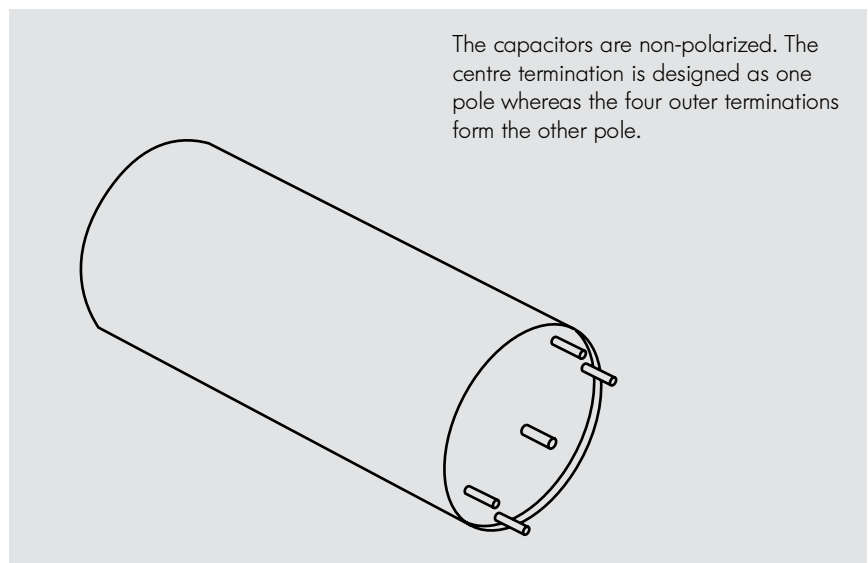
### Mounting Recommendation

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

### Packing

Transportation-safe packing in cardboard boxes.

For further details and graphs please refer to Technical Information.



## Continuation

### General Data

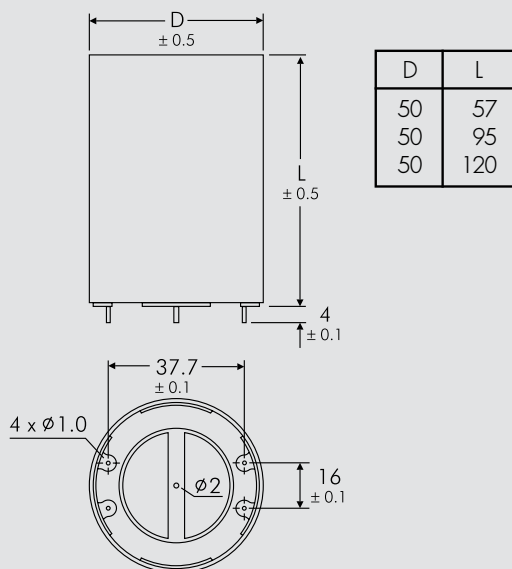
$U_R$	$C_N$	D x L mm	$I_{rms}$ (1 kHz)* A	ESR (1 kHz)* m $\Omega$	$R_{th}$ K/W	$L_e$ nH	Approx. weight g	Part number
500 VDC	85 $\mu$ F	50 x 57	35	2.0	11.0	< 45	120	DCP5H15850D000_
	195 "	50 x 95	32	3.4	7.5	< 65	190	DCP5H16195D100_
	260 "	50 x 120	30	5.2	6.0	< 85	220	DCP5H16260D200_
700 VDC	59 $\mu$ F	50 x 57	30	1.9	11.0	< 45	120	DCP5K05590D000_
	143 "	50 x 95	32	3.5	7.5	< 65	190	DCP5K06143D100_
	190 "	50 x 120	25	4.7	6.0	< 85	220	DCP5K06190D200_
900 VDC	53 $\mu$ F	50 x 57	35	2.3	11.0	< 45	120	DCP5N05530D000_
	114 "	50 x 95	32	4.2	7.5	< 65	190	DCP5N06114D100_
	158 "	50 x 120	30	6.0	6.0	< 85	220	DCP5N06158D200_
1100 VDC	30 $\mu$ F	50 x 57	20	2.8	11.0	< 45	120	DCP5P05300D000_
	72 "	50 x 95	25	4.5	7.5	< 65	190	DCP5P05720D100_
	100 "	50 x 120	25	6.1	6.0	< 85	220	DCP5P06100D200_
1300 VDC	16 $\mu$ F	50 x 57	20	3.0	11.0	< 45	120	DCP5R25160D000_
	40 "	50 x 95	25	5.7	7.5	< 65	190	DCP5R25400D100_
	55 "	50 x 120	25	7.7	6.0	< 85	220	DCP5R25550D200_

Contacts can handle: peak currents  $\hat{I}$  up to 1.1 kA  
surge currents  $I_S$  up to 3.5 kA

Customer-specific capacitances or voltages on request

\* General guide

Dims. in mm.



Part number completion:

Tolerance: 20 % = M  
10 % = K  
5 % = J  
Packing: bulk = S  
Pin length: none = 00

Rights reserved to amend design data without prior notification.



# 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: Version code (e.g. Snubber versions)
- Field 15: Capacitance tolerance
- Field 16: Packing
- Field 17 - 18: Pin length (untaped)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
<b>M</b>	<b>K</b>	<b>S</b>	<b>2</b>	<b>C</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>A</b>	<b>0</b>	<b>0</b>	<b>M</b>	<b>S</b>	<b>S</b>	<b>D</b>
MKS 2				63 VDC		0.01 µF			2.5x6.5x7.2		-		20%	bulk	6-2		

<p><b>Type description:</b></p> <p>SMD-PET = SMDT SMD-PEN = SMDN SMD-PPS = SMDI FKP 02 = FKPO MKS 02 = MKS0 FKS 2 = FKS2 FKP 2 = FKP2 MKS 2 = MKS2 MKP 2 = MKP2 FKS 3 = FKS3 FKP 3 = FKP3 MKS 4 = MKS4 MKP 4 = MKP4 MKP 10 = MKP1 FKP 4 = FKP4 FKP 1 = FKP1 MKP-X2 = MKX2 MKP-X2 R = MKXR MKP-X1 R = MKX1 MKP-Y2 = MKY2 MP 3-X2 = MPX2 MP 3-X1 = MPX1 MP 3-Y2 = MPY2 MP 3R-Y2 = MPRY Snubber MKP = SNMP Snubber FKP = SNFP GTO MKP = GTOM DC-LINK MKP 3 = DCP3 DC-LINK MKP 4 = DCP4 DC-LINK MKP 4S = DCP4S DC-LINK MKP 5 = DCP5 DC-LINK MKP 6 = DCP6 DC-LINK HC = DCHC</p>	<p><b>Rated voltage:</b></p> <p>50 VDC = B0 63 VDC = C0 100 VDC = D0 250 VDC = F0 400 VDC = G0 450 VDC = H0 600 VDC = I0 630 VDC = J0 700 VDC = K0 800 VDC = L0 850 VDC = M0 900 VDC = N0 1000 VDC = O1 1100 VDC = P0 1200 VDC = Q0 1250 VDC = R0 1500 VDC = S0 1600 VDC = T0 2000 VDC = U0 2500 VDC = V0 3000 VDC = W0 4000 VDC = X0 6000 VDC = Y0 250 VAC = 0W 275 VAC = 1W 300 VAC = 2W 305 VAC = AW 400 VAC = 3W 440 VAC = 4W 500 VAC = 5W ...</p>	<p><b>Capacitance:</b></p> <p>22 pF = 0022 47 pF = 0047 100 pF = 0100 150 pF = 0150 220 pF = 0220 330 pF = 0330 470 pF = 0470 680 pF = 0680 1000 pF = 1100 1500 pF = 1150 2200 pF = 1220 3300 pF = 1330 4700 pF = 1470 6800 pF = 1680 0.01 µF = 2100 0.022 µF = 2220 0.047 µF = 2470 0.1 µF = 3100 0.22 µF = 3220 0.47 µF = 3470 1 µF = 4100 2.2 µF = 4220 4.7 µF = 4470 10 µF = 5100 22 µF = 5220 47 µF = 5470 100 µF = 6100 220 µF = 6220 1000 µF = 7100 1500 µF = 7150 ...</p>	<p><b>Size:</b></p> <p>4.8x3.3x3 Size 1812 = KA 4.8x3.3x4 Size 1812 = KB 5.7x5.1x3.5 Size 2220 = QA 5.7x5.1x4.5 Size 2220 = QB 7.2x6.1x3 Size 2824 = TA 7.2x6.1x5 Size 2824 = TB 10.2x7.6x5 Size 4030 = VA 12.7x10.2x6 Size 5040 = XA 15.3x13.7x7 Size 6054 = YA 2.5x7x4.6 PCM 2.5 = 0B 3x7.5x4.6 PCM 2.5 = 0C 2.5x6.5x7.2 PCM 5 = 1A 3x7.5x7.2 PCM 5 = 1B 2.5x7x10 PCM 7.5 = 2A 3x8.5x10 PCM 7.5 = 2B 3x9x13 PCM 10 = 3A 4x9x13 PCM 10 = 3C 5x11x18 PCM 15 = 4B 6x12.5x18 PCM 15 = 4C 5x14x26.5 PCM 22.5 = 5A 6x15x26.5 PCM 22.5 = 5B 9x19x31.5 PCM 27.5 = 6A 11x21x31.5 PCM 27.5 = 6B 9x19x41.5 PCM 37.5 = 7A 11x22x41.5 PCM 37.5 = 7B 19x31x56 PCM 48.5 = 8D 35x50x57 PCM 52.5 = 9F ...</p>	<p><b>Tolerance:</b></p> <p>±20% = M ±10% = K ±5% = J ±2.5% = H ±1% = E ...</p> <p><b>Packing:</b></p> <p>AMMO H16.5 340x340 = A AMMO H16.5 490x370 = B AMMO H18.5 340x340 = C AMMO H18.5 490x370 = D REEL H16.5 360 = F REEL H16.5 500 = H REEL H18.5 360 = I REEL H18.5 500 = J ROLL H16.5 = N ROLL H18.5 = O BLISTER W12 180 = P BLISTER W12 330 = Q BLISTER W16 330 = R BLISTER W24 330 = T Bulk/TPS Standard = S ...</p>													

<p><b>Version code:</b></p> <p>Standard = 00 Version A1 = 1A Version A1.1.1 = 1B Version A2 = 2A ...</p>	<p><b>Pin length (untaped)</b></p> <p>3.5 ±0.5 = C9 6-2 = SD 16 ±1 = P1 ...</p>
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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.