WIMA DC-LINK MKP 5

Metallized Polypropylene (PP) - Capacitors in Cylindrical Case for DC-Link Applications. Capacitances from 16 µF to 260 µF. Rated Voltages from 500 VDC to 1300 VDC.

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**

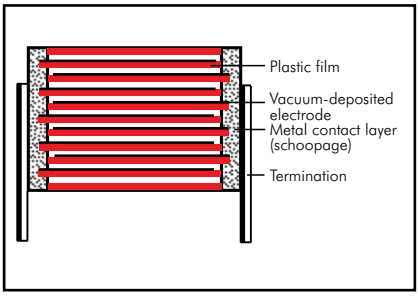
Typical Applications

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 µF to 260 µF
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:
⩾ 5 000 sec (MΩ x µF)
(mean value: 20 000 sec)
Measuring voltage: 100 V/1 min.

Dielectric loss factor tan δ_0:
2×10^{-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)

Mounting Recommendation

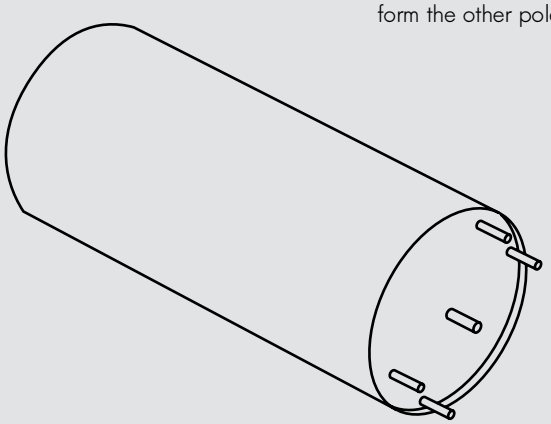
Excessive mechanical strain, e.g. pressure or shock onto the capacitor body, is to be avoided during mounting and usage of the capacitors.

Packing

Transportation-safe packing in cardboard boxes.

For further details and graphs please refer to Technical Information.

The capacitors are non-polarized. The centre termination is designed as one pole whereas the four outer terminations form the other pole.



Continuation

General Data

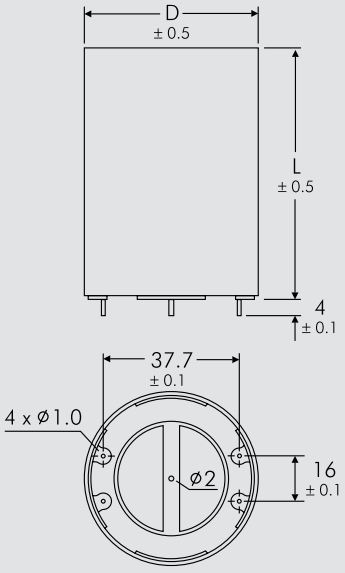
U_R	C_N	D x L mm	I_{rms} (1 kHz)* A	ESR (1 kHz)* mΩ	R_{th} K/W	L_e nH	Approx. weight g	Part number
500 VDC	85 µF	50 x 57	35	2.0	11.0	< 45	120	DCP5H15850D000_ _ _ _
	195 „	50 x 95	32	3.4	7.5	< 65	190	DCP5H16195D100_ _ _ _
	260 „	50 x 120	30	5.2	6.0	< 85	220	DCP5H16260D200_ _ _ _
700 VDC	59 µF	50 x 57	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 µF	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 µF	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 µF	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.



D	L
50	57
50	95
50	120

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

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
M	**K**	**S**	**2**	**C**	**0**	**2**	**1**	**0**	**0**	**1**	**A**	**0**	**0**	**M**	**S**	**S**	**D**
MKS 2				63 VDC		0.01 µF				2.5 x 6.5 x 7.2		-		20%	bulk	6 -2	

Type description:

SMD-PET	= SMDT
SMD-PEN	= SMDN
SMD-PPS	= SMDI
FKP 02	= FKP0
MKS 02	= MKS0
FKS 2	= FKS2
FKP 2	= FKP2
FKS 3	= FKS3
FKP 3	= FKP 3
MKS 2	= MKS2
MKP 2	= MKP2
MKS 4	= MKS4
MKP 4C	= MKPC
MKP 4	= MKP4
MKP 10	= MKP1
FKP 1	= FKP1
MKP-X2	= MKX2
MKP-X1 R	= MKX1
MKP-Y2	= MKY2
MP 3-X2	= MPX2
MP 3-X1	= MPX1
MP 3-Y2	= MPY2
MP 3R-Y2	= MPRY
MKP 4F	= MKPF
Snubber MKP	= SNMP
Snubber FKP	= SNFP
GTO MKP	= GTOM
DC-LINK MKP 3	= DCP3
DC-LINK MKP 4	= DCP4
DC-LINK MKP 4S	= DCPS
DC-LINK MKP 5	= DCP5
DC-LINK MKP 6	= DCP6
DC-LINK HC	= DCHC
DC-LINK HY	= DCHY

Rated voltage:

50 VDC	= B0
63 VDC	= C0
100 VDC	= D0
250 VDC	= F0
400 VDC	= G0
450 VDC	= H0
520 VDC	= H2
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
350 VAC	= BW
440 VAC	= 4W
500 VAC	= 5W
...	

Capacitance:

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
...	

Size:

4.8 x 3.3 x 3 Size 1812	= KA
4.8 x 3.3 x 4 Size 1812	= KB
5.7 x 5.1 x 3.5 Size 2220	= QA
5.7 x 5.1 x 4.5 Size 2220	= QB
7.2 x 6.1 x 3 Size 2824	= TA
7.2 x 6.1 x 5 Size 2824	= TB
10.2 x 7.6 x 5 Size 4030	= VA
12.7 x 10.2 x 6 Size 5040	= XA
15.3 x 13.7 x 7 Size 6054	= YA
2.5 x 7 x 4.6 PCM 2.5	= 0B
3 x 7.5 x 4.6 PCM 2.5	= 0C
2.5 x 6.5 x 7.2 PCM 5	= 1A
3 x 7.5 x 7.2 PCM 5	= 1B
2.5 x 7 x 10 PCM 7.5	= 2A
3 x 8.5 x 10 PCM 7.5	= 2B
3 x 9 x 13 PCM 10	= 3A
4 x 9 x 13 PCM 10	= 3C
5 x 11 x 18 PCM 15	= 4B
6 x 12.5 x 18 PCM 15	= 4C
5 x 14 x 26.5 PCM 22.5	= 5A
6 x 15 x 26.5 PCM 22.5	= 5B
9 x 19 x 31.5 PCM 27.5	= 6A
11 x 21 x 31.5 PCM 27.5	= 6B
9 x 19 x 41.5 PCM 37.5	= 7A
11 x 22 x 41.5 PCM 37.5	= 7B
19 x 31 x 56 PCM 48.5	= 8D
25 x 45 x 57 PCM 52.5	= 9D
...	

Version code:

Standard	= 00
Version A1	= 1A
Version A1.1.1	= 1B
Version A2	= 2A
...	

Tolerance:

±20%	= M
±10%	= K
±5%	= J
±2.5%	= H
±1%	= E
...	

Packing:

AMMO H16.5 340 x 340	= A
AMMO H16.5 490 x 370	= B
AMMO H18.5 340 x 340	= C
AMMO H18.5 490 x 370	= 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
...	

Pin length (untaped)

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

Pin length (taped)

none	= 00

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.