WIMA DC-LINK HC

Metallized Polypropylene (PP) - Capacitors for DC-Link Applications

Special Features

- **Very high volume/capacitance ratio**
- **Self-healing, internal safety disconnector**
- **Safe contact configurations by screwable plates**
- **Dry construction without electrolyte or oil**
- **Very low disipation factor**
- **Negative capacitance change versus temperature**
- **Very low dielectric absorption**
- **According to RoHS 2011/65/EU**
- **Customer-specific tabs, capacitances or voltages on request**
- **105° C version on request**

Typical Applications

As intermediate circuit capacitor e. g. in high power converter technology

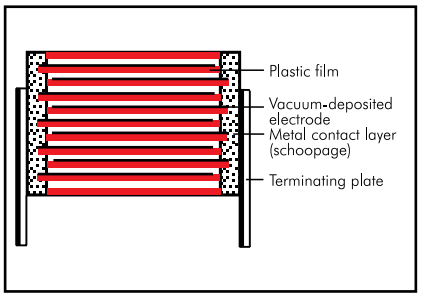
Electrical Data

Capacitance range: 140 µF to 8250 µF
Rated voltages:
450 VDC, 900 VDC, 1500 VDC
Capacitance tolerance: ±10%
Operating temperature:
–55° C to +85° C (+105° C on request)
Insulation resistance at +20° C:
⩾ 30 000 sec (MΩ x µF)
(mean value: 100 000 sec)
Measuring voltage: 100 V/1 min.
Self-inductance: ⩽ 50 nH depending on tab configuration
ESR at +20° C: See General Data.

Test voltage: 1.5 U_r, 10 sec
Dielectric absorption: 0.05 %
Voltage derating:
A derating factor of 1.35% per K must be applied from +70° C for AC currents (I_{rms})
Reliability:
Operational life > 100 000 hours at 70° C hot spot
Failure rate < 50 fit (hot spot ⩽ 70° C)
Specific dissipation:
See General Data.
Standards: in accordance with IEC 61071

Construction

Dielectric:
Polypropylene (PP) film
Capacitor electrodes:
Vacuum-deposited
Internal construction:



Encapsulation:
Solvent resistant, flame-retardant plastic case with PU seal
Terminations:
Tinned plates, customized plate configurations are possible.
Marking:
Colour: Black. Marking: Gold.

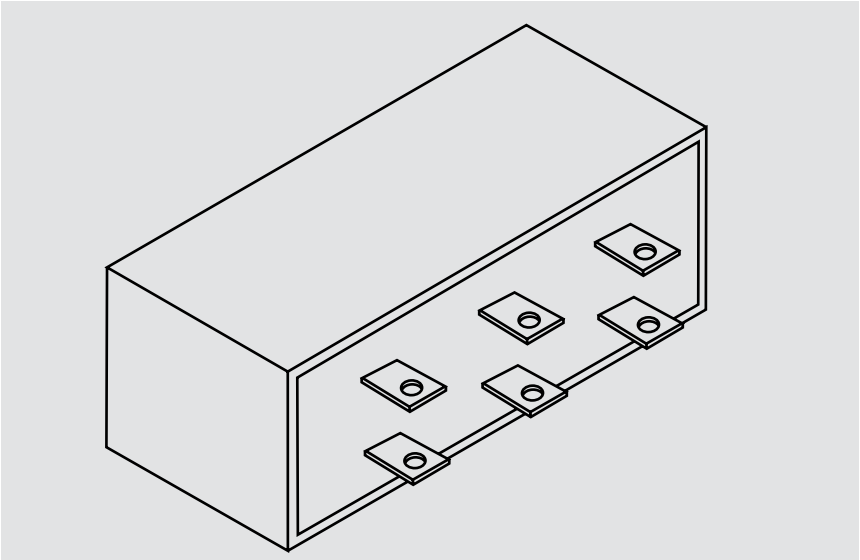
Mounting Recommendation

Excessive mechanical strain, e. g. pressure or shock onto the capacitor body, is to be avoided during mounting and usage of the capacitors. When fixing the capacitor the screw torque is to be limited to max. 5 Nm.

Packing

Transportation-safe packing in cardboard boxes.

For further details and graphs please refer to Technical Information.



Continuation

General Data

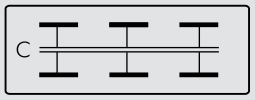
U_R	C_N	E_N W_S	Size (mm) W	H	L	I_{rms} (max.)* A	$\hat{I}$* kA	I_S* kA	ESR (1 kHz)* mΩ	R_{th}* K/W	Approx. weight g	Part number
450 VDC	1440 µF	146	84	66	179	100	4.6	18.6	0.3	2.8	1220	DCHCH07144JB00KS00
	2400 „	243	84	66	291	170	7.7	30.9	0.2	1.8	1985	DCHCH07240JH00KS00
	3000 „	304	107	91	179	120	6.7	26.7	0.3	2.0	2145	DCHCH07300JC00KS00
	4950 „	501	130	114	179	140	8.7	34.9	0.3	1.5	3265	DCHCH07495JE00KS00
	5000 „	506	107	91	291	190	11.1	44.5	0.2	1.3	3485	DCHCH07500JI00KS00
	8250 „	835	130	114	291	210	14.5	58.1	0.2	1.1	5305	DCHCH07825JJ00KS00
900 VDC	450 µF	182	84	66	179	90	2.2	8.8	0.5	2.8	1220	DCHCN06450JB00KS00
	750 „	304	84	66	291	140	3.7	14.6	0.3	1.8	1985	DCHCN06750JH00KS00
	940 „	381	107	91	179	100	2.9	11.6	0.5	2.0	2145	DCHCN06940JC00KS00
	1500 „	608	130	114	179	110	3.5	14.1	0.5	1.5	3265	DCHCN07150JE00KS00
	1560 „	632	107	91	291	160	4.8	19.3	0.3	1.3	3485	DCHCN07156JI00KS00
	2600 „	1053	130	114	291	180	6.1	24.4	0.3	1.1	5305	DCHCN07260JJ00KS00
1500 VDC	140 µF	158	84	66	179	60	1.2	4.9	0.9	2.8	1220	DCHCS06140JB00KS00
	230 „	259	84	66	291	100	2.0	8.1	0.6	1.8	1985	DCHCS06230JH00KS00
	280 „	315	107	91	179	80	1.5	6.1	0.8	2.0	2145	DCHCS06280JC00KS00
	460 „	518	130	114	179	90	1.8	7.3	0.8	1.5	3265	DCHCS06460JE00KS00
	470 „	529	107	91	291	130	2.5	10.2	0.5	1.3	3485	DCHCS06470JI00KS00
	790 „	889	130	114	291	150	3.1	12.5	0.4	1.1	5305	DCHCS06790JJ00KS00

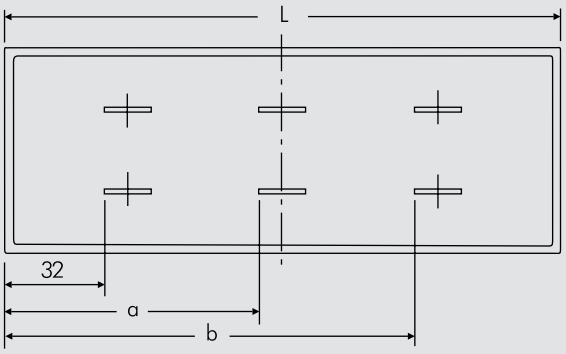
* General guide

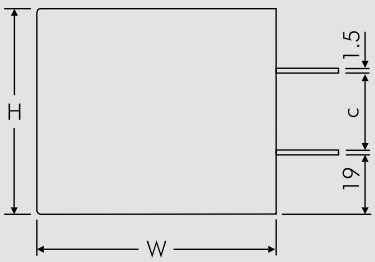
New values and box sizes

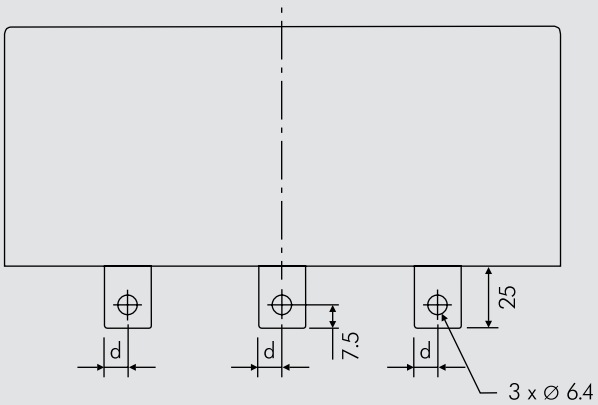
Customer-specific tabs. capacitances or voltages on request

External wiring:









W	H	L	a	b	c	d
84	66	179	82	132	25	7.5
107	91	179	82	132	50	7.5
130	114	179	82	132	73	7.5
84	66	291	135.5	239	25	10
107	91	291	135.5	239	50	10
130	114	291	135.5	239	73	10

Dims. in mm. Case tolerances: general tolerances in accordance with ISO 2768-1 C (approximate)

WIMA Customized Capacitors for Intermediate Circuit Applikations

WIMA DC-LINK HC
WIMA DC-LINK HY

- Size
- Capacitance
- Voltage
- Connection
- Casing

11.14

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
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	= 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
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
...	

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
35 x 50 x 57 PCM 52.5	= 9F
...	

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
...	

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.

11.14