

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

Special Features

- Very high volume/capacitance ratio
- Self-healing, internal safety disconnecter
- Versatile and safe contact configurations by screwable plates
- Dry construction without electrolyte or oil
- Very low dissipation factor
- Negative capacitance change versus temperature
- Very low dielectric absorption
- According to RoHS 2011/65/EC
- Customer-specific capacitances or voltages on request

Typical Applications

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

Construction

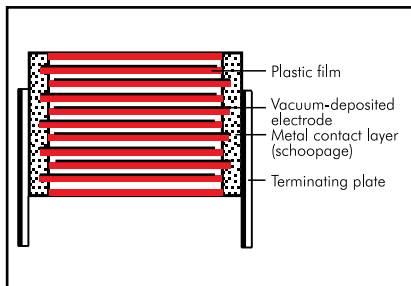
Dielectric:

Polypropylene (PP) film

Capacitor electrodes:

Vacuum-deposited

Internal construction:



Encapsulation:

Solvent resistant, flame-retardant plastic case with resin seal (optional screw fixing) or moulded version (without screw fixing), UL 94 V-0.

Terminations:

Tinned plates, customized plate configurations are possible.

Marking:

Colour: Black. Marking: Gold.

Electrical Data

Capacitance range:

85 μ F to 4500 μ F

Rated voltages:

400 VDC, 800 VDC, 1600 VDC

Capacitance tolerances:

$\pm 20\%$, $\pm 10\%$, ($\pm 5\%$ available subject to special enquiry)

Operating temperature:

-55° C to $+85^{\circ}$ C

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

$\geq 30\,000$ sec ($M\Omega \times \mu$ F)

(mean value: 100 000 sec)

Measuring voltage: 100 V/1 min.

Dissipation factors at $+20^{\circ}$ C:

See General Data.

Test voltage: 1.1 U_r , 2 sec

Dielectric absorption:

0.05 %

Voltage derating:

A voltage derating factor of 1.35 % per K must be applied from $+75^{\circ}$ C for DC voltages.

Reliability:

Operational life > 100 000 hours at 40° C

Failure rate < 36 fit ($10.75 \times U_r$ and 40° C)

Specific dissipation:

See General Data.

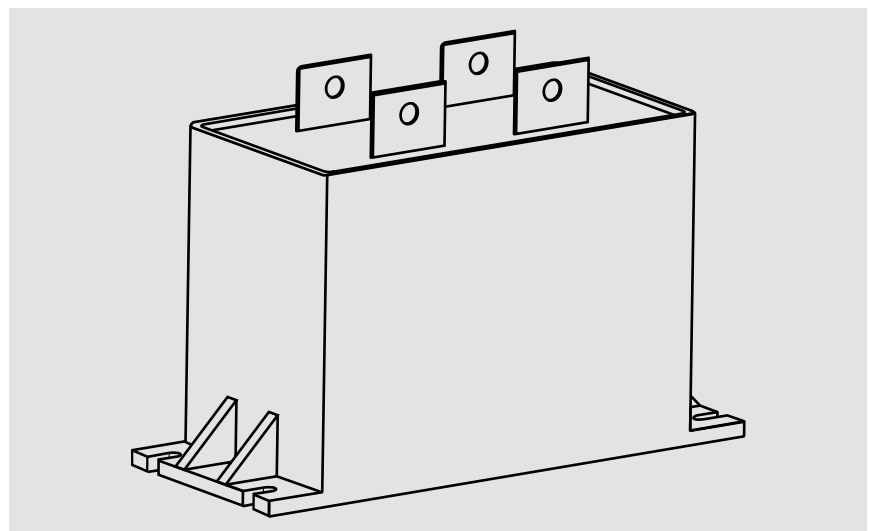
Mounting Recommendation

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

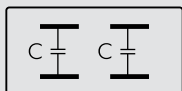
Capacitance			Size	Electrical parameters										Part number
400VDC	400VDC	800VDC	182x94x H in mm	I _{max.} A		I _{rms} (1 kHz)* A		ESR (1 kHz)* mΩ		k _T W/K	tan δ* [x 10 ⁻⁴]			
	V1	V2		V1	V2	V1	V2	V1	V2		100 Hz	1 kHz		
2x 250 µF	500 µF	125 µF	49	5000	1250	65.4	32.7	1.43	5.73	0.613	8	45	DCH3G06250__00_____	
2x 500 „	1000 „	250 „	77	10000	2500	103.5	51.7	0.72	2.87	0.767	8	45	DCH3G06500__00_____	
2x 750 „	1500 „	375 „	105	15000	3750	139.0	69.5	0.48	1.91	0.922	8	45	DCH3G06750__00_____	
2x 1000 „	2000 „	500 „	133	20000	5000	173.3	86.7	0.36	1.43	1.076	8	45	DCH3G07100__00_____	
2x 1250 „	2500 „	625 „	161	25000	6250	196.7	98.3	0.32	1.27	1.231	11	50	DCH3G07125__00_____	
2x 1500 „	3000 „	750 „	189	30000	7500	228.5	114.3	0.27	1.06	1.385	11	50	DCH3G07150__00_____	
2x 1750 „	3500 „	875 „	217	35000	8750	248.1	124.1	0.25	1.00	1.540	11	55	DCH3G07175__00_____	
2x 2000 „	4000 „	1000 „	245	40000	10000	278.3	139.2	0.22	0.88	1.695	14	55	DCH3G07200__00_____	
2x 2250 „	4500 „	1125 „	285	45000	11250	298.7	157.4	0.21	0.76	1.893	14	60	DCH3G07225__00_____	

Capacitance			Size	Electrical parameters										Part number
800VDC	800VDC	1600VDC	182x94x H in mm	I _{max.} A		I _{rms} (1 kHz)* A		ESR (1 kHz)* mΩ		k _T W/K	tan δ* [x 10 ⁻⁴]			
	V1	V2		V1	V2	V1	V2	V1	V2		100 Hz	1 kHz		
2x 170 µF	340 µF	85 µF	49	3740	935	61.2	30.6	1.64	6.55	0.613	7	35	DCH4L06170__00_____	
2x 340 „	680 „	170 „	77	7480	1870	96.8	48.4	0.82	3.28	0.767	7	35	DCH4L06340__00_____	
2x 510 „	1020 „	255 „	105	11220	2805	129.9	65.0	0.55	2.18	0.922	7	35	DCH4L06510__00_____	
2x 680 „	1360 „	340 „	133	14960	3740	162.1	81.0	0.41	1.64	1.076	7	35	DCH4L06680__00_____	
2x 850 „	1700 „	425 „	161	18700	4675	181.3	90.7	0.37	1.50	1.231	10	40	DCH4L06850__00_____	
2x 1020 „	2040 „	510 „	189	22440	5610	210.7	105.3	0.31	1.25	1.385	10	40	DCH4L07102__00_____	
2x 1190 „	2380 „	595 „	217	26180	6545	226.2	113.1	0.30	1.20	1.540	10	45	DCH4L07119__00_____	
2x 1360 „	2720 „	680 „	245	29920	7480	253.7	126.9	0.26	1.05	1.695	12	45	DCH4L07136__00_____	
2x 1530 „	3060 „	765 „	285	33660	8415	269.8	134.9	0.26	1.04	1.893	12	50	DCH4L07153__00_____	

* General guide

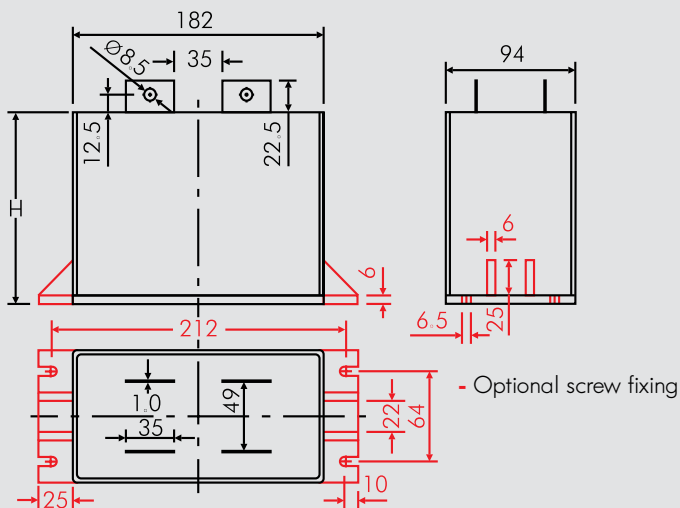
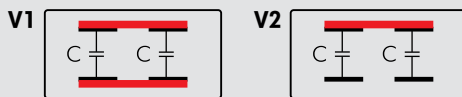
Customized solutions can be realized on request.

The capacitors will be delivered without interconnection.



Insulated in the sense of a breakdown voltage of $2 \times U_r$ between the individual capacitors.

External wiring versions (to be implemented by user):



Part number completion:					
Size			Part number code for digit 11-12		
W	H	L	moulded	boxed	box with screw fixing
94	49	182	H0	I0	J0
94	77	182	H1	I1	J1
94	105	182	H2	I2	J2
94	133	182	H3	I3	J3
94	161	182	H4	I4	J4
94	189	182	H5	I5	J5
94	217	182	H6	I6	J6
94	245	182	H7	I7	J7
94	285	182	H8	I8	J8
Tolerance:			20 % = M		
			10 % = K		
			5 % = J		
Packing:			bulk = S		
Pin length:			none = 00		

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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: 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				2.5×6.5×7.2		-		20%	bulk	6 -2	
Type description:				Rated voltage:		Capacitance:				Size:				Tolerance:			
SMD-PET = SMDT				2.5 VDC = A1		22 pF = 0022				4.8×3.3×3 Size 1812 = KA				20% = M			
SMD-PPS = SMDI				4 VDC = A2		47 pF = 0047				4.8×3.3×4 Size 1812 = KB				10% = K			
FKP 02 = FKP0				14 VDC = A3		100 pF = 0100				5.7×5.1×3.5 Size 2220 = QA				5% = J			
MKS 02 = MKS0				28 VDC = A4		150 pF = 0150				5.7×5.1×4.5 Size 2220 = QB				2.5% = H			
FKS 2 = FKS2				40 VDC = A5		220 pF = 0220				7.2×6.1×3 Size 2824 = TA				1% = E			
FKP 2 = FKP2				5 VDC = A6		330 pF = 0330				7.2×6.1×5 Size 2824 = TB				...			
MKS 2 = MKS2				50 VDC = B0		470 pF = 0470				10.2×7.6×5 Size 4030 = VA				Packing: AMMO H16.5 340×340 = A AMMO H16.5 490×370 = B AMMO H18.5 340×340 = C AMMO H18.5 490×370 = 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 ...			
MKP 2 = MKP2				63 VDC = C0		680 pF = 0680				12.7×10.2×6 Size 5040 = XA							
FKS 3 = FKS3				100 VDC = D0		1000 pF = 1100				15.3×13.7×7 Size 6054 = YA							
FKP 3 = FKP3				160 VDC = E0		1500 pF = 1150				2.5×7×4.6 PCM2.5 = 0B							
MKS 4 = MKS4				250 VDC = F0		2200 pF = 1220				3×7.5×4.6 PCM2.5 = 0C							
MKP 4 = MKP4				400 VDC = G0		3300 pF = 1330				2.5×6.5×7.2 PCM5 = 1A							
MKP 10 = MKP1				450 VDC = H0		4700 pF = 1470				3×7.5×7.2 PCM5 = 1B							
FKP 4 = FKP4				600 VDC = I0		6800 pF = 1680				2.5×7×10 PCM7.5 = 2A							
FKP 1 = FKP1				630 VDC = J0		0.01 μF = 2100				3×8.5×10 PCM7.5 = 2B							
MKP-X2 = MKX2				700 VDC = K0		0.022 μF = 2220				3×9×13 PCM 10 = 3A							
MKP-X2 R = MKXR				800 VDC = L0		0.047 μF = 2470				4×9×13 PCM 10 = 3C							
MKP-Y2 = MKY2				850 VDC = M0		0.1 μF = 3100				5×11×18 PCM 15 = 4B							
MP 3-X2 = MPX2				900 VDC = N0		0.22 μF = 3220				6×12.5×18 PCM 15 = 4C							
MP 3-X1 = MPX1				1000 VDC = O1		0.47 μF = 3470				5×14×26.5 PCM22.5 = 5A							
MP 3-Y2 = MPY2				1100 VDC = P0		1 μF = 4100				6×15×26.5 PCM22.5 = 5B							
MP 3R-Y2 = MPRY				1200 VDC = Q0		2.2 μF = 4220				9×19×31.5 PCM27.5 = 6A							
Snubber MKP = SNMP				1250 VDC = R0		4.7 μF = 4470				11×21×31.5 PCM27.5 = 6B							
Snubber FKP = SNFP				1500 VDC = S0		10 μF = 5100				9×19×41.5 PCM37.5 = 7A							
GTO MKP = GTOM				1600 VDC = T0		22 μF = 5220				11×22×41.5 PCM37.5 = 7B							
DC-LINK MKP 3 = DCP3				2000 VDC = U0		47 μF = 5470				94×49×182 DCH_ = H0							
DC-LINK MKP 4 = DCP4				2500 VDC = V0		100 μF = 6100				94×77×182 DCH_ = H1							
DC-LINK MKP 4S = DCPS				3000 VDC = W0		220 μF = 6220				...							
DC-LINK MKP 5 = DCP5				4000 VDC = X0		1 F = A010				Version code: Standard = 00 Version A1 = 1A Version A1.1.1 = 1B Version A2 = 2A ...							
DC-LINK MKP 6 = DCP6				6000 VDC = Y0		2.5 F = A025											
DC-LINK HC = DCH_				250 VAC = 0W		50 F = A500											
DC-LINK HY = DCHY				275 VAC = 1W		100 F = B100											
SuperCap C = SCSC				300 VAC = 2W		110 F = B110											
SuperCap MC = MC_				400 VAC = 3W		600 F = B600				Pin length (untaped) 3.5 ±0.5 = C9 6 -2 = SD 16 ±1 = P1 ...							
SuperCap C60 = SCSC				440 VAC = 4W		1200 F = C120											
SuperCap R = SCSR				500 VAC = 5W		...											
SuperCap MR = MRPP				...													



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- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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