WIMA GMBH & CO.KG
Besselstr. 2-4
68219 Mannheim
Phone: +49-621-86295-0
E-mail: sales@wima.de
www.wima.com

SMD

metallized

	SMD-PET	SMD-PPS
Dielectric	Polyester film	Polyphenylene-sulphide film
Temperature ranges	-55° C to 125° C	-55° C to 125° C
Capacitance tolerances	±20%, ±10% (±5%*)	±20%, ±10% (±5%*)
Dissipation factor tan δ at 1 kHz and +20° C	⩽ 8x10^{-3}	⩽ 15x10^{-4} > 0.1 µF: ⩽ 20 x10^{-4}
Insulation resistance at +20° C*	⩾3.75 x10^{3} MΩ > 0.33 µF: ⩾1250 sec.	⩾1 x10^{4} MΩ > 0.33 µF: ⩾3000 sec.

Voltage ranges / Capacitances

Capacitance	SMD-PET 63 VDC	100 VDC	250 VDC	400 VDC	630 VDC	1000 VDC	SMD-PPS 63 VDC	100 VDC	250 VDC	400 VDC	630 VDC	1000 VDC
27 pF												
...												
68 pF												
100 pF												
680 pF												
1000 pF												
1500 pF												
2200 pF												
3300 pF												
4700 pF												
6800 pF												
0.01 µF	1812 2220 2824 4030 5040 6054	1812 2220 2824 4030 5040 6054	2824 4030 5040 6054	4030 5040 6054	5040 6054		1812 2220 2824 4030 5040 6054	1812 2220 2824 4030 5040 6054	2220 2824 4030 5040 6054	4030 5040 6054	5040 6054	5040 6054
0.015 µF												
0.022 µF												
0.033 µF												
0.047 µF												
0.068 µF												
0.1 µF												
0.15 µF												
0.22 µF												
0.33 µF												
0.47 µF												
0.68 µF												
1.0 µF												
1.5 µF												
2.2 µF												
3.3 µF												
4.7 µF												
6.8 µF												
10 µF												
15 µF												
22 µF												
33 µF												
47 µF												
68 µF												
100 µF												

* The insulation resistance data refers to the lowest rated voltage of each range. Further details concerning higher rated voltages see main catalogue.

PCM 2.5 mm

	film/foil	metallized
	FKP 02	MKS 02
Dielectric	Polypropylene film	Polyester film
Temperature ranges	-55° C to 100° C	-55° C to 105° C
Capacitance tolerances	±20%, ±10%, ±5% ±2.5%	±20%, ±10% (±5%*)
Dissipation factor tan δ at 1 kHz and +20° C	⩽ 5x10^{-4}	⩽ 8x10^{-3}
Insulation resistance at +20° C*	⩾3x10^{5} MΩ	⩾3.75 x10^{3} MΩ >0.33 µF: ⩾1250 sec.

Capacitance	FKP 02 63 VDC	100 VDC	250 VDC	400 VDC	MKS 02 63 VDC	100 VDC	250 VDC	400 VDC
27 pF								
...								
68 pF								
100 pF								
680 pF								
1000 pF								
1500 pF								
2200 pF								
3300 pF								
4700 pF	2.5	2.5	2.5	2.5				
6800 pF								
0.01 µF								
0.015 µF								
0.022 µF								
0.033 µF								
0.047 µF								
0.068 µF								
0.1 µF								
0.15 µF								
0.22 µF								
0.33 µF								
0.47 µF								
0.68 µF								
1.0 µF								
1.5 µF								
2.2 µF								
3.3 µF								
4.7 µF								
6.8 µF								
10 µF								
15 µF								
22 µF								
33 µF								
47 µF								
68 µF								
100 µF								

PCM 5 - 52.5 mm

film/foil

	FKS 2	FKP 2	FKS 3	FKP 3
Dielectric	Polyester film	Polypropylene film	Polyester film	Polypropylene film
Temperature ranges	-55° C to 105° C	-55° C to 100° C	-55° C to 105° C	-55° C to 105° C
Capacitance tolerances	±20%, ±10%, ±5%	±20%, ±10%, ±5%, 2.5% (±2%, ±1.5%, ±1%*)	±20%, ±10%, ±5%	±20%, ±10%, ±5%
Dissipation factor tan δ at 1 kHz and +20° C	⩽ 7x10^{-3}	⩽ 5x10^{-4}	⩽ 7x10^{-3}	⩽ 5x10^{-4}
Insulation resistance at +20° C*	⩾1x10^{5} MΩ	⩾5x10^{5} MΩ	⩾1x10^{5} MΩ	⩾3x10^{5} MΩ

Capacitance	FKS 2 63 VDC	100 VDC	250 VDC	400 VDC	630 VDC	FKP 2 63 VDC	100 VDC	250 VDC	400 VDC	630 VDC	800 VDC	1000 VDC
27 pF												
...												
68 pF												
100 pF												
680 pF												
1000 pF												
1500 pF												
2200 pF												
3300 pF												
4700 pF	5	5	5	5	5	5	5	5	5	5	5	5
6800 pF												
0.01 µF												
0.015 µF												
0.022 µF												
0.033 µF												
0.047 µF												
0.068 µF												
0.1 µF												
0.15 µF												
0.22 µF												
0.33 µF												
0.47 µF												
0.68 µF												
1.0 µF												
1.5 µF												
2.2 µF												
3.3 µF												
4.7 µF												
6.8 µF												
10 µF												
15 µF												
22 µF												
33 µF												
47 µF												
68 µF												
100 µF												

Capacitance	FKS 3 63 VDC	100 VDC	250 VDC	400 VDC	630 VDC	FKP 3 63 VDC	100 VDC	250 VDC	400 VDC	630 VDC	850 VDC	1000 VDC
27 pF												
...												
68 pF												
100 pF												
680 pF												
1000 pF												
1500 pF												
2200 pF												
3300 pF												
4700 pF												
6800 pF												
0.01 µF												
0.015 µF												
0.022 µF												
0.033 µF												
0.047 µF												
0.068 µF												
0.1 µF												
0.15 µF												
0.22 µF												
0.33 µF												
0.47 µF												
0.68 µF												
1.0 µF												
1.5 µF												
2.2 µF												
3.3 µF												
4.7 µF												
6.8 µF												
10 µF												
15 µF												
22 µF												
33 µF												
47 µF												
68 µF												
100 µF												

metallized

	MKS 2	MKP 2	MKS 4	MKP 4
Dielectric	Polyester film	Polypropylene film	Polyester film	Polypropylene film
Temperature ranges	U_r = 50 VDC: -55° C to 105° C U_r ⩾ 63 VDC: -55° C to 125° C	-55° C to 100° C	-55° C to 125° C	-55° C to 105° C
Capacitance tolerances	±20%, ±10%, ±5%	±20%, ±10%, ±5%	±20%, ±10%, ±5%	±20%, ±10%, ±5%
Dissipation factor tan δ at 1 kHz and +20° C	⩽ 8x10^{-3} >1 µF: ⩽ 10 x10^{-3}	⩽ 5x10^{-4}	⩽ 8x10^{-3} > 1 µF: ⩽ 10 x10^{-3}	⩽ 6 x10^{-4}
Insulation resistance at +20° C*	⩾5x10^{3} MΩ > 0.33 µF: ⩾1000 sec.	⩾1 x10^{5} MΩ	⩾5x10^{3} MΩ > 0.33 µF: ⩾1500 sec.	⩾1 x10^{5} MΩ > 0.33 µF: ⩾3000 sec.

Capacitance	MKS 2 50 VDC	63 VDC	100 VDC	250 VDC	400 VDC	630 VDC	MKP 2 63 VDC	100 VDC	250 VDC	400 VDC	630 VDC	800 VDC	1000 VDC
27 pF													
...													
68 pF													
100 pF													
680 pF													
1000 pF													
1500 pF													
2200 pF													
3300 pF													
4700 pF													
6800 pF													
0.01 µF													
0.015 µF													
0.022 µF													
0.033 µF													
0.047 µF													
0.068 µF													
0.1 µF													
0.15 µF													
0.22 µF													
0.33 µF													
0.47 µF													
0.68 µF													
1.0 µF													
1.5 µF													
2.2 µF													
3.3 µF													
4.7 µF													
6.8 µF													
10 µF													
15 µF													
22 µF													
33 µF													
47 µF													
68 µF													
100 µF													

Capacitance	MKS 4 100 VDC	250 VDC	400 VDC	630 VDC	1000 VDC	1500 VDC	2000 VDC	MKP 4 100 VDC	250 VDC	400 VDC	630 VDC	1000 VDC	1250 VDC
27 pF													
...													
68 pF													
100 pF													
680 pF													
1000 pF													
1500 pF													
2200 pF													
3300 pF													
4700 pF													
6800 pF													
0.01 µF													
0.015 µF													
0.022 µF													
0.033 µF													
0.047 µF													
0.068 µF													
0.1 µF													
0.15 µF													
0.22 µF													
0.33 µF													
0.47 µF													
0.68 µF													
1.0 µF													
1.5 µF													
2.2 µF													
3.3 µF													
4.7 µF													
6.8 µF													
10 µF													
15 µF													
22 µF													
33 µF													
47 µF													
68 µF													
100 µF													

The figures in the tables of capacitances refer to the PCM = Printed Circuit Module (pin spacing at the pin exit points).

pin length = 6 mm

PCM

* Closer tolerances are subject to special enquiry.

WIMA GMBH & CO.KG
Besselstr. 2-4
68219 Mannheim
Phone: +49-621-86295-0
E-mail: sales@wima.de
www.wima.com

Dielectric / Temperature range / Capacitance tolerances / Dissipation factor tan δ at 1 kHz and +20° C / Insulation resistance at +20° C* / Voltage ranges / Capacitances

For high current ratings

with double-metallized film electrodes

	MKP 10	FKP 4	FKP 1
Dielectric	Polypropylene film	Polypropylene film	Polypropylene film
Temperature ranges	-55° C to 105° C	-55° C to 105° C	-55° C to 105° C
Capacitance tolerances	±20%, ±10%, ±5%	±20%, ±10%, ±5%	±20%, ±10%, ±5% (other tolerances*)
Dissipation factor tan δ at 1 kHz and +20° C	⩽ 6x10^{-4}	⩽ 5x10^{-4}	⩽ 5x10^{-4}
Insulation resistance at +20° C*	⩾1x10^{5} MΩ > 0.33 µF: ⩾30000 sec.	⩾1x10^{5} MΩ > 0.1 µF: ⩾10000 sec.	⩾1x10^{5} MΩ > 0.1 µF: ⩾30000 sec.

Capacitance	MKP 10 100 VDC	250 VDC	400 VDC	630 VDC	850 VDC	1000 VDC	1600 VDC	2000 VDC	2500 VDC	3000 VDC	FKP 4 400 VDC	650 VDC	1000 VDC	1250 VDC	1600 VDC	2000 VDC	4000 VDC	6000 VDC
100 pF																		
680 pF																		
1000 pF																		
1500 pF																		
2200 pF																		
3300 pF																		
4700 pF																		
6800 pF																		
0.01 µF																		
0.015 µF																		
0.022 µF																		
0.033 µF																		
0.047 µF																		
0.068 µF																		
0.1 µF																		
0.15 µF																		
0.22 µF																		
0.33 µF																		
0.47 µF																		
0.68 µF																		
1.0 µF																		
1.5 µF																		
2.2 µF																		
3.3 µF																		
4.7 µF																		
6.8 µF																		
10 µF																		
15 µF																		
22 µF																		
33 µF																		
47 µF																		
68 µF																		
100 µF																		
150 µF																		
220 µF																		
330 µF																		
400 µF																		

* The insulation resistance data refers to the lowest rated voltage of each range. Further details concerning higher rated voltages see main catalogue.

RFI capacitors

in accordance with IEC 60384-14

	MKP-X2	MKP-Y2	MKP-X1 R
Dielectric	Polypropylene film	Polypropylene film	Polypropylene film
Temperature ranges	-55° C to 105° C	-55° C to 105° C	-55° C to 105° C
Capacitance tolerances	±20%, ±10%, ±5%	±20%, ±10%, ±5%	±20%, ±10%, ±5%
Dissipation factor tan δ at 1 kHz and +20° C	⩽ 18x10^{-4} > 0.1 µF: ⩽ 20 x10^{-4}	⩽ 18x10^{-4} > 0.1 µF: ⩽ 20 x10^{-4}	⩽ 18x10^{-4} > 0.1 µF: ⩽ 20 x10^{-4} > 1 µF: ⩽ 30 x10^{-4}
Insulation resistance at +20° C*	⩾1.5x10^{4} MΩ > 0.33 µF: ⩾5000 sec.	⩾1.5x10^{4} MΩ > 0.33 µF: ⩾5000 sec.	⩾1.5x10^{4} MΩ > 0.33 µF: ⩾5000 sec.

Capacitance	MKP-X2 305 VAC	MKP-Y2 300 VAC	MKP-X1 R 440 VAC
100 pF			
680 pF			
1000 pF			
1500 pF			
2200 pF			
3300 pF			
4700 pF			
6800 pF			
0.01 µF			
0.015 µF			
0.022 µF			
0.033 µF			
0.047 µF			
0.068 µF			
0.1 µF			
0.15 µF			
0.22 µF			
0.33 µF			
0.47 µF			
0.68 µF			
1.0 µF			
1.5 µF			
2.2 µF			
3.3 µF			
4.7 µF			
6.8 µF			
10 µF			
15 µF			
22 µF			
33 µF			
47 µF			
68 µF			
100 µF			
150 µF			
220 µF			
330 µF			
400 µF			

* Closer tolerances are subject to special enquiry.

Filter capacitors

metallized

	MKP 4F
Dielectric	Polypropylene film
Temperature ranges	-55° C to 105° C
Capacitance tolerances	±20%, ±10%, ±5%
Dissipation factor tan δ at 1 kHz and +20° C	PCM 27.5: ⩽ 5x10^{-4} PCM 37.5: ⩽ 10x10^{-4} PCM 52.5: ⩽ 15x10^{-4}
Insulation resistance at +20° C*	⩾30000 sec.

Capacitance	MKP 4F 230 VAC	275 VAC	305 VAC	330 VAC	440 VAC
100 pF					
680 pF					
1000 pF					
1500 pF					
2200 pF					
3300 pF					
4700 pF					
6800 pF					
0.01 µF					
0.015 µF					
0.022 µF					
0.033 µF					
0.047 µF					
0.068 µF					
0.1 µF					
0.15 µF					
0.22 µF					
0.33 µF					
0.47 µF					
0.68 µF					
1.0 µF					
1.5 µF					
2.2 µF					
3.3 µF					
4.7 µF					
6.8 µF					
10 µF					
15 µF					
22 µF					
33 µF					
47 µF					
68 µF					
100 µF					
150 µF					
220 µF					
330 µF					
400 µF					

Snubber capacitors°

	with double-metallized film electrodes	with metal foil electrodes, internally series-connected
	Snubber MKP	Snubber FKP
Dielectric	Polypropylene film	Polypropylene film
Temperature ranges	-55° C to 105° C	-55° C to 105° C
Capacitance tolerances	±20%, ±10%, ±5% (other tolerances*)	±20%, ±10%, ±5% (other tolerances*)
Dissipation factor tan δ at 1 kHz and +20° C	⩽ 6x10^{-4}	⩽ 5x10^{-4}
Insulation resistance at +20° C*	⩾1x10^{5} MΩ > 0.33 µF: ⩾30000 sec.	⩾1x10^{5} MΩ > 0.33 µF: ⩾30000 sec.

Capacitance	Snubber MKP 700 VDC	850 VDC	1000 VDC	1250 VDC	1700 VDC	2000 VDC	2500 VDC	3000 VDC	Snubber FKP 530 VDC	1000 VDC	1250 VDC	1600 VDC	2000 VDC	3000 VDC	4000 VDC
100 pF															
680 pF															
1000 pF															
1500 pF															
2200 pF															
3300 pF															
4700 pF															
6800 pF															
0.01 µF															
0.015 µF															
0.022 µF															
0.033 µF															
0.047 µF															
0.068 µF															
0.1 µF															
0.15 µF															
0.22 µF															
0.33 µF															
0.47 µF															
0.68 µF															
1.0 µF															
1.5 µF															
2.2 µF															
3.3 µF															
4.7 µF															
6.8 µF															
10 µF															
15 µF															
22 µF															
33 µF															
47 µF															
68 µF															
100 µF															
150 µF															
220 µF															
330 µF															
400 µF															

GTO capacitors

metallized, internally series-connected

	GTO MKP
Dielectric	Polypropylene film
Temperature ranges	-55° C to 85° C
Capacitance tolerances	±20%, ±10%, ±5%
Dissipation factor tan δ at 1 kHz and +20° C	⩽ 3x10^{-4} >20µF: ⩽ 5x10^{-4}/>50µF: ⩽ 8x10^{-4}
Insulation resistance at +20° C*	⩾10000 sec.

Capacitance	GTO MKP 400 VDC	600 VDC	850 VDC	1000 VDC	1200 VDC	1500 VDC	3000 VDC
100 pF							
680 pF							
1000 pF							
1500 pF							
2200 pF							
3300 pF							
4700 pF							
6800 pF							
0.01 µF							
0.015 µF							
0.022 µF							
0.033 µF							
0.047 µF							
0.068 µF							
0.1 µF							
0.15 µF							
0.22 µF							
0.33 µF							
0.47 µF							
0.68 µF							
1.0 µF							
1.5 µF							
2.2 µF							
3.3 µF							
4.7 µF							
6.8 µF							
10 µF							
15 µF							
22 µF							
33 µF							
47 µF							
68 µF							
100 µF							
150 µF							
220 µF							
330 µF							
400 µF							

DC-LINK capacitors°

metallized

	DC-LINK MKP 4
Dielectric	Polypropylene film
Temperature ranges	-55° C to 105° C (hot spot)
Capacitance tolerances	±20%, ±10%, ±5%
Dissipation factor tan δ at 1 kHz and +20° C	see main catalogue
Insulation resistance at +20° C*	⩾30000 sec.

Capacitance	DC-LINK MKP 4 400 VDC	500 VDC	600 VDC	800 VDC	900 VDC	1000 VDC	1100 VDC	1200 VDC	1300 VDC	1500 VDC	1700 VDC
100 pF											
680 pF											
1000 pF											
1500 pF											
2200 pF											
3300 pF											
4700 pF											
6800 pF											
0.01 µF											
0.015 µF											
0.022 µF											
0.033 µF											
0.047 µF											
0.068 µF											
0.1 µF											
0.15 µF											
0.22 µF											
0.33 µF											
0.47 µF											
0.68 µF											
1.0 µF											
1.5 µF											
2.2 µF											
3.3 µF											
4.7 µF											
6.8 µF											
10 µF											
15 µF											
22 µF											
33 µF											
47 µF											
68 µF											
100 µF											
150 µF											
220 µF											
330 µF											
400 µF											

° Available in various contact configurations. Further details see main catalogue.