

Metallized Polyester (PET) Capacitors in PCM 7.5 mm to 52.5 mm. Capacitances from 1000 pF to 680 µF. Rated Voltages from 50 VDC to 2000 VDC.

Special Features

- High volume/capacitance ratio
- Self-healing
- AEC-Q200 qualified for PCM ≤ 37.5 mm (for larger box sizes on request)
- According to RoHS 2011/65/EU

Typical Applications

For general DC-applications e.g.

- By-pass
- Blocking
- Coupling and decoupling
- Smoothing
- Timing

Construction

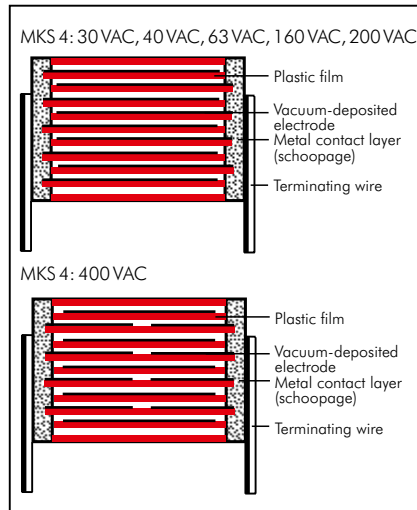
Dielectric:

Polyethylene-terephthalate (PET) film

Capacitor electrodes:

Vacuum-deposited

Internal construction:



Encapsulation:

Solvent-resistant, flame-retardant plastic case with epoxy resin seal, UL 94 V-0

Terminations:

Tinned wire.

Marking:

Colour: Red. Marking: Black.

Electrical Data

Capacitance range:

1000 pF to 680 µF

Rated voltages:

50 VDC, 63 VDC, 100 VDC, 250 VDC, 400 VDC, 630 VDC, 1000 VDC, 1500 VDC, 2000 VDC

Capacitance tolerances:

±20%, ±10% ±5%

Operating temperature range:

$U_r = 50$ VDC: -55° C to +105° C

$U_r \geq 63$ VDC: -55° C to +125° C

Climatic test category:

55/100/56 in accordance with IEC

Insulation resistance at +20° C:

U_r	U_{test}	$C \leq 0.33 \mu F$	$0.33 \mu F < C \leq 680 \mu F$
50 VDC	10 V	$\geq 5 \times 10^3 M\Omega$	$\geq 1500 \text{ sec } (M\Omega \times \mu F)$
63 VDC	50 V	$\geq 1 \times 10^4 M\Omega$	$\geq 3000 \text{ sec } (M\Omega \times \mu F)$
100 VDC	100 V	$\geq 1.5 \times 10^4 M\Omega$	$\geq 5000 \text{ sec } (M\Omega \times \mu F)$
≥ 250 VDC	100 V	$\geq 3 \times 10^4 M\Omega$	$\geq 10000 \text{ sec } (M\Omega \times \mu F)$

Test voltage: 1.6 U_r , 2 sec.

Test specifications:

In accordance with IEC 60384-2

Voltage derating:

A voltage derating factor of 1.25 % per K must be applied from +85° C for DC voltages and from +75° C for AC voltages.

Reliability:

Operational life > 300 000 hours (+125° C permitted for 1000 hours max. distributed over the entire operating life)

Failure rate < 2 fit ($0.5 \times U_r$ and 40° C)

Measuring time: 1 min.

Dissipation factors at +20° C: $\tan \delta$

at f	$C \leq 0.1 \mu F$	$0.1 \mu F < C \leq 1.0 \mu F$	$C > 1.0 \mu F$
1 kHz	$\leq 8 \times 10^{-3}$	$\leq 8 \times 10^{-3}$	$\leq 10 \times 10^{-3}$
10 kHz	$\leq 15 \times 10^{-3}$	$\leq 15 \times 10^{-3}$	-
100 kHz	$\leq 30 \times 10^{-3}$	-	-

Maximum pulse rise time:

Capacitance pF/µF	max. pulse rise time V/µsec								
	50VDC	63VDC	100VDC	250VDC	400VDC	630VDC	1000VDC	1500VDC	2000VDC
1000 ... 6800	-	-	-	-	-	-	70	90	100
0.01 ... 0.022	-	-	30	35	38	40	50	50	60
0.033 ... 0.068	-	-	15	20	25	32	26	35	40
0.1 ... 0.22	10	10	12	15	15	17	20	35	40
0.33 ... 0.68	9	9	9	10	10	13	20	20	38
1.0 ... 2.2	6	6	5	6	9	13	14	15	15
3.3 ... 6.8	2.5	3	3	6	6	9	12	12	12
10 ... 22	2.5	2.5	2.5	3	6	6	6	-	-
33 ... 68	2.5	2.5	2.5	3	3	-	-	-	-
100 ... 220	2.5	2.5	2.5	0.9	-	-	-	-	-
330 ... 680	0.2	0.2	0.3	-	-	-	-	-	-

Mechanical Tests

Pull test on pins:

$d \leq 0.8 \phi$: 10 N in direction of pins

$d > 0.8 \phi$: 20 N in direction of pins

according to IEC 60068-2-21

Vibration: 6 hours at 10...2000 Hz and 0.75 mm displacement amplitude or 10 g in accordance with IEC 60068-2-6

Low air density: 1kPa = 10 mbar in accordance with IEC 60068-2-13

Bump test: 4000 bumps at 390 m/sec² in accordance with IEC 60068-2-29

Packing

Available taped and reeled up to and including case size 15 x 26 x 31.5 / PCM 27.5 mm.

Detailed taping information and graphs at the end of the catalogue.

For further details and graphs please refer to Technical Information.

Continuation

General Data

Capacitance	50 VDC/30 VAC*					63 VDC/40 VAC*				
	W	H	L	PCM**	Part number	W	H	L	PCM**	Part number
0.1 µF	2.5	7	10	7.5	MKS4B031002A	2.5	7	10	7.5	MKS4C031002A
0.15 "	2.5	7	10	7.5	MKS4B031502A	4	9	13	10	MKS4C031003C
0.22 "	2.5	7	10	7.5	MKS4B032202A	2.5	7	10	7.5	MKS4C031502A
0.33 "	2.5	7	10	7.5	MKS4B033302A	4	9	13	10	MKS4C031503C
0.47 "	3	8.5	10	7.5	MKS4B034702B	3	8.5	10	7.5	MKS4C032202B
0.68 "	4	9	10	7.5	MKS4B036802C	4	9	13	10	MKS4C032203C
1.0 µF	4	9	10	7.5	MKS4B041002C	4	9	13	10	MKS4C033302C
1.5 "	5	10.5	10.3	7.5	MKS4B041502E	4	9	13	10	MKS4C033303C
2.2 "	5.7	12.5	10.3	7.5	MKS4B042202F	4	9	13	10	MKS4C034702C
3.3 "	5.7	12.5	10.3	7.5	MKS4B043302F	4	9	13	10	MKS4C034703C
4.7 "	7.2	12.5	10.3	7.5	MKS4B044702G	5	10.5	10.3	7.5	MKS4C036802E
6.8 "	6	12	13	10	MKS4B044703G	4	9	13	10	MKS4C036803C
	7.2	12.5	10.3	7.5	MKS4B046802G	5	10.5	10.3	7.5	MKS4C041002E
	6	12	13	10	MKS4B046803G	4	9	13	10	MKS4C041003C
10 µF	9	16	18	15	MKS4B051004J	5.7	12.5	10.3	7.5	MKS4C041502F
15 "	11	21	26.5	22.5	MKS4B051505I	5	11	13	10	MKS4C041503F
18 "	9	19	31.5	27.5	MKS4B051806A	5	11	13	10	MKS4C042203F
22 "	11	21	31.5	27.5	MKS4B052206B	6	12.5	13	15	MKS4C042204C
27 "	11	21	31.5	27.5	MKS4B052706B	6	12	13	10	MKS4C043303G
33 "	13	24	31.5	27.5	MKS4B053306D	7	14	18	15	MKS4C043304D
39 "	15	26	31.5	27.5	MKS4B053906F	7	14	18	15	MKS4C044704D
47 "	15	26	31.5	27.5	MKS4B054706F	6	15	26.5	22.5	MKS4C044705B
56 "	17	29	31.5	27.5	MKS4B055606G	8	15	18	15	MKS4C046804F
68 "	20	39.5	31.5	27.5	MKS4B056806J	7	16.5	26.5	22.5	MKS4C046805D
82 "	17	34.5	31.5	27.5	MKS4B058206I	8.5	18.5	26.5	22.5	MKS4C051005F
100 µF	19	32	41.5	37.5	MKS4B061007F	9	19	31.5	27.5	MKS4C051006A
120 "	20	39.5	41.5	37.5	MKS4B061207G	11	21	26.5	22.5	MKS4C051505I
150 "	20	39.5	41.5	37.5	MKS4B061507G	9	19	31.5	27.5	MKS4C051506A
180 "	24	45.5	41.5	37.5	MKS4B061807H	9	19	31.5	27.5	MKS4C051806A
220 "	24	45.5	41.5	37.5	MKS4B062207H	11	21	31.5	27.5	MKS4C052206B
270 "	31	46	41.5	37.5	MKS4B062707I	13	24	31.5	27.5	MKS4C052706B
330 "	35	50	41.5	37.5	MKS4B063307J	13	24	31.5	27.5	MKS4C053306D
390 "	40	55	41.5	37.5	MKS4B063907K	15	26	31.5	27.5	MKS4C053906F
470 "	35	50	57	52.5	MKS4B064709F	15	26	31.5	27.5	MKS4C054706F
560 "	45	55	57	52.5	MKS4B065609H	13	24	41.5	37.5	MKS4C054707C
680 "	45	55	57	52.5	MKS4B066809H	17	29	31.5	27.5	MKS4C055606G
						15	26	41.5	37.5	MKS4C055607D
						17	34.5	31.5	27.5	MKS4C056806I
						15	26	41.5	37.5	MKS4C056807D
						17	34.5	31.5	27.5	MKS4C058206I
						17	29	41.5	37.5	MKS4C058207E
						20	39.5	31.5	27.5	MKS4C061006J
						19	32	41.5	37.5	MKS4C061007F
						20	39.5	41.5	37.5	MKS4C061207G
						20	39.5	41.5	37.5	MKS4C061507G
						24	45.5	41.5	37.5	MKS4C061807H
						28	38	41.5	37.5	MKS4C061807L
						31	46	41.5	37.5	MKS4C062207I
						25	45	57	52.5	MKS4C062209D
						31	46	41.5	37.5	MKS4C062707I
						25	45	57	52.5	MKS4C062709D
						35	50	41.5	37.5	MKS4C063307J
						30	45	57	52.5	MKS4C063309E
						40	55	41.5	37.5	MKS4C063907K
						30	45	57	52.5	MKS4C063909E
						35	50	57	52.5	MKS4C064709F
						45	55	57	52.5	MKS4C065609H
						45	65	57	52.5	MKS4C066809J

* AC voltages: $f = 50 \text{ Hz}$; $1.4 \times U_{\text{rms}} + \text{UDC} \leq U_r$

■ New values and box sizes. Box sizes according to main catalogue 2019 are still available on request.

** PCM = printed circuit module = pin spacing

Dims. in mm.

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General Data

Capacitance	100 VDC/63 VAC*					250 VDC/160 VAC*				
	W	H	L	PCM**	Part number	W	H	L	PCM**	Part number
0.01 μ F	2.5	7	10	7.5	MKS4D021002A	3	8.5	10	7.5	MKS4F021002B
	4	9	13	10	MKS4D021003C	4	9	13	10	MKS4F021003C
0.015 "	2.5	7	10	7.5	MKS4D021502A	3	8.5	10	7.5	MKS4F021502B
	4	9	13	10	MKS4D021503C	4	9	13	10	MKS4F021503C
0.022 "	2.5	7	10	7.5	MKS4D022202A	3	8.5	10	7.5	MKS4F022202B
	4	9	13	10	MKS4D022203C	4	9	13	10	MKS4F022203C
0.033 "	2.5	7	10	7.5	MKS4D023302A	3	8.5	10	7.5	MKS4F023302B
	4	9	13	10	MKS4D023303C	4	9	13	10	MKS4F023303C
0.047 "	2.5	7	10	7.5	MKS4D024702A	3	8.5	10	7.5	MKS4F024702B
	4	9	13	10	MKS4D024703C	4	9	13	10	MKS4F024703C
0.068 "	2.5	7	10	7.5	MKS4D026802A	4	9	10	7.5	MKS4F026802C
	4	9	13	10	MKS4D026803C	4	9	13	10	MKS4F026803C
0.1 μ F	2.5	7	10	7.5	MKS4D031002A	4	9	10	7.5	MKS4F031002C
	4	9	13	10	MKS4D031003C	4	9	13	10	MKS4F031003C
0.15 "	3	8.5	10	7.5	MKS4D031502B	5	10.5	10.3	7.5	MKS4F031502E
	4	9	13	10	MKS4D031503C	4	9	13	10	MKS4F031503C
0.22 "	3	8.5	10	7.5	MKS4D032202B	5	10.5	10.3	7.5	MKS4F032202E
	4	9	13	10	MKS4D032203C	5	11	13	10	MKS4F032203F
0.33 "	4	9	10	7.5	MKS4D033302C	5.7	12.5	10.3	7.5	MKS4F033302F
	4	9	13	10	MKS4D033303C	5	11	13	10	MKS4F033303F
0.47 "	4.5	9.5	10.3	7.5	MKS4D034702D	6	12	13	10	MKS4F034703G
	4	9	13	10	MKS4D034703C	6	12.5	18	15	MKS4F034704C
0.68 "	5	10.5	10.3	7.5	MKS4D036802E	7	14	18	15	MKS4F036804D
	4	9	13	10	MKS4D036803C					
1.0 μ F	5.7	12.5	10.3	7.5	MKS4D041002F	8	15	18	15	MKS4F041004F
	5	11	13	10	MKS4D041003F	6	15	26.5	22.5	MKS4F041005B
1.5 "	6	12	13	10	MKS4D041503G	9	16	18	15	MKS4F041504J
	7	14	18	15	MKS4D041504D	7	16.5	26.5	22.5	MKS4F041505D
2.2 "	8	15	18	15	MKS4D042204F	10.5	19	26.5	22.5	MKS4F042205G
	6	15	26.5	22.5	MKS4D042205B	9	19	31.5	27.5	MKS4F042206A
3.3 "	9	16	18	15	MKS4D043304J	11	21	26.5	22.5	MKS4F043305I
	7	16.5	26.5	22.5	MKS4D043305D	11	21	31.5	27.5	MKS4F043306B
4.7 "	10.5	19	26.5	22.5	MKS4D044705G	11	21	31.5	27.5	MKS4F044706B
	9	19	31.5	27.5	MKS4D044706A					
6.8 "	10.5	19	26.5	22.5	MKS4D046805G	13	24	31.5	27.5	MKS4F046806D
	11	21	31.5	27.5	MKS4D046806B					
10 μ F	9	19	31.5	27.5	MKS4D051006A	17	29	31.5	27.5	MKS4F051006G
						15	26	41.5	37.5	MKS4F051007D
15 "	11	21	31.5	27.5	MKS4D051506B	17	34.5	31.5	27.5	MKS4F051506I
						17	29	41.5	37.5	MKS4F051507E
18 "	11	21	31.5	27.5	MKS4D051806B	20	39.5	31.5	27.5	MKS4F051806J
						19	32	41.5	37.5	MKS4F051807F
22 "	13	24	31.5	27.5	MKS4D052206D	20	39.5	41.5	37.5	MKS4F052207G
	15	26	31.5	27.5	MKS4D052706F	20	39.5	41.5	37.5	MKS4F052707G
27 "	15	26	31.5	27.5	MKS4D053306F	24	45.5	41.5	37.5	MKS4F053307H
	13	24	41.5	37.5	MKS4D053307C					
33 "	17	29	31.5	27.5	MKS4D053906G	24	45.5	41.5	37.5	MKS4F053907H
	15	26	41.5	37.5	MKS4D053907D					
39 "	17	34.5	31.5	27.5	MKS4D054706I	28	38	41.5	37.5	MKS4F054707L
	17	29	41.5	37.5	MKS4D054707E					
56 "	20	39.5	31.5	27.5	MKS4D055606J	35	50	41.5	37.5	MKS4F055607J
	17	29	41.5	37.5	MKS4D055607E	25	45	57	52.5	MKS4F055609D
68 "	20	39.5	31.5	27.5	MKS4D056806J	35	50	41.5	37.5	MKS4F056807J
	19	32	41.5	37.5	MKS4D056807F	30	45	57	52.5	MKS4F056809E
82 "	20	39.5	41.5	37.5	MKS4D058207G	40	55	41.5	37.5	MKS4F058207K
						35	50	57	52.5	MKS4F058209F
100 μ F	20	39.5	41.5	37.5	MKS4D061007G	45	55	57	52.5	MKS4F061009H
120 "	24	45.5	41.5	37.5	MKS4D061207H	45	55	57	52.5	MKS4F061209H
150 "	31	46	41.5	37.5	MKS4D061507I	45	65	57	52.5	MKS4F061509J
180 "	31	46	41.5	37.5	MKS4D061807I					
	25	45	57	52.5	MKS4D061809H					
220 "	35	50	41.5	37.5	MKS4D062207J					
	30	45	57	52.5	MKS4D062209E					
270 "	40	55	41.5	37.5	MKS4D062707K					
	35	50	57	52.5	MKS4D062709F					
330 "	45	55	57	52.5	MKS4D063309H					
390 "	45	55	57	52.5	MKS4D063909H					
470 "	45	65	57	52.5	MKS4D064709J					

* AC voltage: $f = 50 \text{ Hz}$; $1.4 \times U_{\text{rms}} + \text{UDC} \leq U_r$

■ New values and box sizes.

**PCM = Printed circuit module = pin spacing

Dims. in mm.

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Continuation

General Data

Capacitance	400 VDC/200 VAC*					630 VDC/400 VAC*				
	W	H	L	PCM**	Part number	W	H	L	PCM**	Part number
0.01 µF	3	8.5	10	7.5	MKS4G021002B	3	8.5	10	7.5*	MKS4J021002B
	4	9	13	10	MKS4G021003C	4	9	13	10	MKS4J021003C
0.015 "	3	8.5	10	7.5	MKS4G021502B	4	9	10	7.5*	MKS4J021502C
	4	9	13	10	MKS4G021503C	4	9	13	10	MKS4J021503C
0.022 "	4	9	10	7.5	MKS4G022202C	4.5	9.5	10.3	7.5*	MKS4J022202D
	4	9	13	10	MKS4G022203C	4	9	13	10	MKS4J022203C
0.033 "	4	9	10	7.5	MKS4G023302C	5	10.5	10.3	7.5*	MKS4J023302E
	4	9	13	10	MKS4G023303C	5	11	13	10	MKS4J023303F
0.047 "	5	10.5	10.3	7.5	MKS4G024702E	5.7	12.5	10.3	7.5*	MKS4J024702F
	4	9	13	10	MKS4G024703C	6	12	13	10	MKS4J024703G
0.068 "	5	10.5	10.3	7.5	MKS4G026802E	6	12	13	10	MKS4J026803G
	4	9	13	10	MKS4G026803C	5	11	18	15	MKS4J026804B
0.1 µF	5	10.5	10.3	7.5	MKS4G031002E	6	12.5	18	15	MKS4J031004C
	5	11	13	10	MKS4G031003F	6	15	26.5	22.5	MKS4J031005B
0.15 "	5.7	12.5	10.3	7.5	MKS4G031502F	7	14	18	15	MKS4J031504D
	6	12	13	10	MKS4G031503G	6	15	26.5	22.5	MKS4J031505B
0.22 "	6	12	13	10	MKS4G032203G	8	15	18	15	MKS4J032204F
	6	12.5	18	15	MKS4G032204C	6	15	26.5	22.5	MKS4J032205B
0.33 "	8	15	18	15	MKS4G033304F	7	16.5	26.5	22.5	MKS4J033305D
						9	19	31.5	27.5	MKS4J033306A
0.47 "	8	15	18	15	MKS4G034704F	10.5	19	26.5	22.5	MKS4J034705G
	6	15	26.5	22.5	MKS4G034705B	9	19	31.5	27.5	MKS4J034706A
0.68 "	7	16.5	26.5	22.5	MKS4G036805D	11	21	26.5	22.5	MKS4J036805I
						11	21	31.5	27.5	MKS4J036806B
1.0 µF	10.5	19	26.5	22.5	MKS4G041005G	11	21	31.5	27.5	MKS4J041006B
	11	21	31.5	27.5	MKS4G041006B					
1.5 "	11	21	26.5	22.5	MKS4G041505I	15	26	31.5	27.5	MKS4J041506F
	11	21	31.5	27.5	MKS4G041506B					
2.2 "	11	21	31.5	27.5	MKS4G042206B	17	34.5	31.5	27.5	MKS4J042206I
						15	26	41.5	37.5	MKS4J042207D
3.3 "	13	24	31.5	27.5	MKS4G043306D	20	39.5	31.5	27.5	MKS4J043306J
						19	32	41.5	37.5	MKS4J043307F
4.7 "	17	29	31.5	27.5	MKS4G044706G	20	39.5	41.5	37.5	MKS4J044707G
6.8 "	17	34.5	31.5	27.5	MKS4G046806I	24	45.5	41.5	37.5	MKS4J046807H
	15	26	41.5	37.5	MKS4G046807D					
10 µF	19	32	41.5	37.5	MKS4G051007F	35	50	41.5	37.5	MKS4J051007J
15 "	20	39.5	41.5	37.5	MKS4G051507G	40	55	41.5	37.5	MKS4J051507K
18 "	31	46	41.5	37.5	MKS4G051807L	45	55	57	52.5	MKS4J051809H
22 "	31	46	41.5	37.5	MKS4G052207I	45	55	57	52.5	MKS4J052209H
27 "	35	50	41.4	37.5	MKS4G052707J					
33 "	35	50	41.5	37.5	MKS4G053307J					
39 "	35	50	57	52.5	MKS4G053909F					
47 "	35	50	57	52.5	MKS4G054709F					
56 "	45	65	57	52.5	MKS4G055609J					
68 "	45	65	57	52.5	MKS4G056809J					

* AC voltages: $f = 50 \text{ Hz}$; $1.4 \times U_{\text{rms}} + \text{UDC} \leq U_r$

■ New values

**PCM = printed circuit module = pin spacing

* Admissible AC voltage 250 VAC max.

Dims. in mm.

Part number completion:

Version code: 2-pin = 00
4-pin = D4

Tolerance: 20 % = M
10 % = K
5 % = J

Packing: bulk = S

Pin length: 6-2 = SD

Taped version see page 161.

Rights reserved to amend design data without prior notification.

Continuation page 55

Continuation

General Data

Capacitance	1000 VDC/400 VAC*					1500 VDC/400 VAC*				
	W	H	L	PCM**	Part number	W	H	L	PCM**	Part number
1000 pF	3	8.5	10	7.5	MKS4O111002B	4	9	13	10	MKS4S011003C
	4	9	13	10	MKS4O111003C					
1500 "	3	8.5	10	7.5	MKS4O111502B	4	9	13	10	MKS4S011503C
	4	9	13	10	MKS4O111503C					
2200 "	3	8.5	10	7.5	MKS4O112202B	4	9	13	10	MKS4S012203C
	4	9	13	10	MKS4O112203C					
3300 "	4	9	10	7.5	MKS4O113302C	4	9	13	10	MKS4S013303C
	4	9	13	10	MKS4O113303C					
4700 "	4	9	10	7.5	MKS4O114702C	4	9	13	10	MKS4S014703C
	4	9	13	10	MKS4O114703C					
6800 "	4.5	9.5	10.3	7.5	MKS4O116802D	5	11	13	10	MKS4S016803F
	4	9	13	10	MKS4O116803C					
0.01 µF	5	10.5	10.3	7.5	MKS4O121002E	6	12	13	10	MKS4S021003G
	5	11	13	10	MKS4O121003F					
0.015 "	5.7	12.5	10.3	7.5	MKS4O121502F	6	12.5	18	15	MKS4S021504C
	6	12	13	10	MKS4O121503G					
0.022 "	5	11	18	15	MKS4O122204B	7	14	18	15	MKS4S022204D
0.033 "	6	12.5	18	15	MKS4O123304C	8	15	18	15	MKS4S023304F
	6	15	26.5	22.5	MKS4O123305B					
0.047 "	7	14	18	15	MKS4O124704D	7	16.5	26.5	22.5	MKS4S024705D
	6	15	26.5	22.5	MKS4O124705B					
0.068 "	8	15	18	15	MKS4O126804F	8.5	18.5	26.5	22.5	MKS4S026805F
	6	15	26.5	22.5	MKS4O126805B					
0.1 µF	9	16	18	15	MKS4O131004J	10.5	19	26.5	22.5	MKS4S031005G
	7	16.5	26.5	22.5	MKS4O131005D					
0.15 "	8.5	18.5	26.5	22.5	MKS4O131505F	11	21	31.5	27.5	MKS4S031506B
0.22 "	10.5	19	26.5	22.5	MKS4O132205G					
0.33 "	11	21	26.5	22.5	MKS4O133305I	17	34.5	31.5	27.5	MKS4S033306I
	11	21	31.5	27.5	MKS4O133306B					
0.47 "	13	24	31.5	27.5	MKS4O134706D	20	39.5	31.5	27.5	MKS4S034706J
0.68 "	15	26	31.5	27.5	MKS4O136806F	20	39.5	41.5	37.5	MKS4S036807G
1.0 µF	17	29	31.5	27.5	MKS4O141006G	24	45.5	41.5	37.5	MKS4S041007H
	17	29	41.5	37.5	MKS4O141007E					
1.5 "	19	32	41.5	37.5	MKS4O141507F	31	46	41.5	37.5	MKS4S041507I
2.2 "	20	39.5	41.5	37.5	MKS4O142207G					
3.3 "	24	45.5	41.5	37.5	MKS4O143307H	35	50	41.5	37.5	MKS4S042207J
	4.7 "	35	50	41.5	37.5					
6.8 "	40	55	41.5	37.5	MKS4O146807K	45	65	57	52.5	MKS4S044709J
	35	50	57	52.5	MKS4O146809F					
10 µF	45	55	57	52.5	MKS4O151009H					

* AC voltages: $f = 50 \text{ Hz}$; $1.4 \times U_{\text{rms}} + U_{\text{DC}} \leq U_r$

** PCM = printed circuit module = pin spacing

Dims. in mm.

Part number completion:

Version code:	2-pin	= 00
	4-pin	= D4
Tolerance:	20 %	= M
	10 %	= K
	5 %	= J
Packing:	bulk	= S
Pin length:	6-2	= SD
Taped version see page 161.		

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Continuation page 56

Continuation

General Data

Capacitance	2000 VDC/400 VAC*				
	W	H	L	PCM**	Part number
1000 pF	4	9	13	10	MKS4U011003C
1500 "	4	9	13	10	MKS4U011503C
2200 "	5	11	13	10	MKS4U012203F
3300 "	6	12	13	10	MKS4U013303G
4700 "	5	11	18	15	MKS4U013304B
6800 "	6	12.5	18	15	MKS4U014704B
6800 "	6	12.5	18	15	MKS4U016804C
0.01 µF	7	14	18	15	MKS4U021004D
	6	15	26.5	22.5	MKS4U021005B
0.015 "	6	15	26.5	22.5	MKS4U021505B
0.022 "	7	16.5	26.5	22.5	MKS4U022205D
0.033 "	10.5	19	26.5	22.5	MKS4U023305G
0.047 "	11	21	26.5	22.5	MKS4U024705I
	11	21	31.5	27.5	MKS4U024706B
0.068 "	11	21	31.5	27.5	MKS4U026806B
0.1 µF	13	24	31.5	27.5	MKS4U031006D
0.15 "	17	29	31.5	27.5	MKS4U031506G
	13	24	41.5	37.5	MKS4U031507C
0.22 "	17	29	41.5	37.5	MKS4U032207E
0.33 "	20	39.5	41.5	37.5	MKS4U033307G
0.47 "	24	45.5	41.5	37.5	MKS4U034707H
0.68 "	31	46	41.5	37.5	MKS4U036807I
1.0 µF	40	55	41.5	37.5	MKS4U041007K
	25	45	57	52.5	MKS4U041009D
1.5 "	30	45	57	52.5	MKS4U041509E
2.2 "	45	55	57	52.5	MKS4U042209H
3.3 "	45	65	57	52.5	MKS4U043309J

* AC voltage: $f = 50 \text{ Hz}; 1.4 \times U_{\text{rms}} + \text{UDC} \leq U_r$

** PCM = Printed circuit module = pin spacing

New value and box sizes.

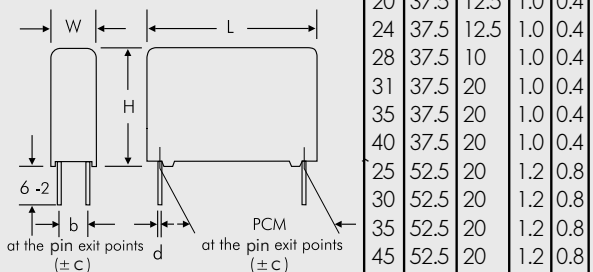
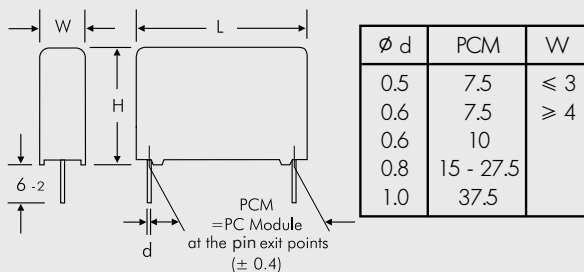
Dims. in mm.

The values of the WIMA MKM 4 ranges according to the main catalogue 2009 are still available on request.

Part number completion:

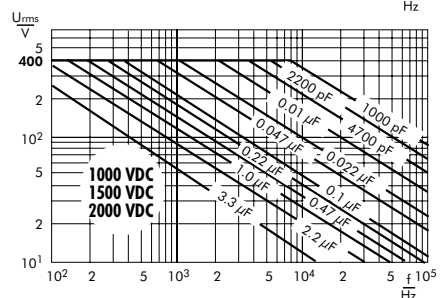
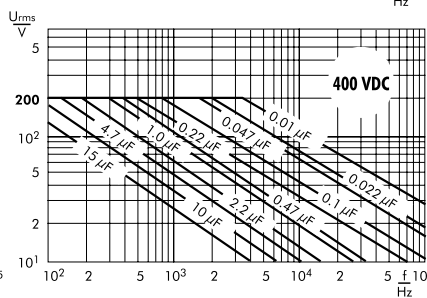
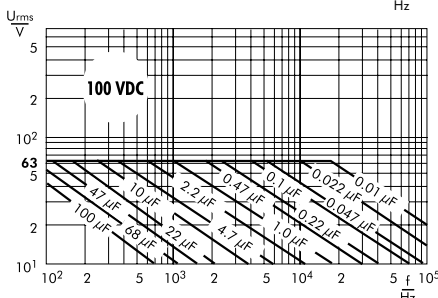
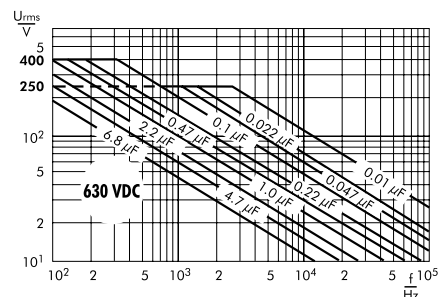
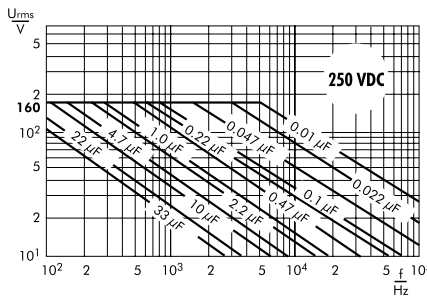
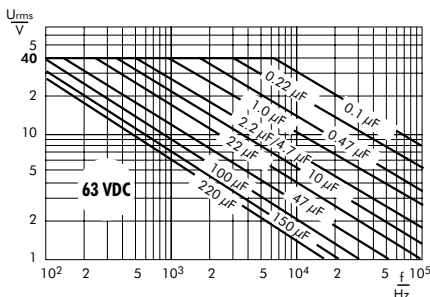
Version code:	2-pin	= 00
	4-pin	= D4
Tolerance:	20 %	= M
	10 %	= K
	5 %	= J
Packing:	bulk	= S
Pin length:	6-2	= SD
Taped version see page 161.		

W	PCM	b	∅ d	c
17	37.5	10	1.0	0.4
19	37.5	10	1.0	0.4
20	37.5	12.5	1.0	0.4
24	37.5	12.5	1.0	0.4
28	37.5	10	1.0	0.4
31	37.5	20	1.0	0.4
35	37.5	20	1.0	0.4
40	37.5	20	1.0	0.4
25	52.5	20	1.2	0.8
30	52.5	20	1.2	0.8
35	52.5	20	1.2	0.8
45	52.5	20	1.2	0.8



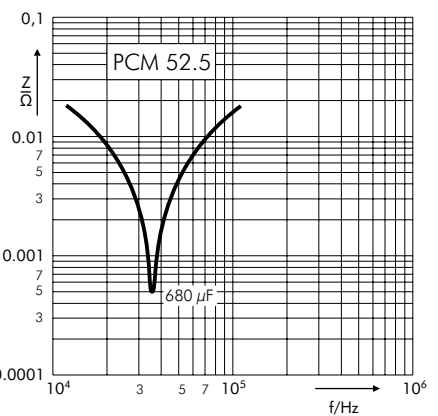
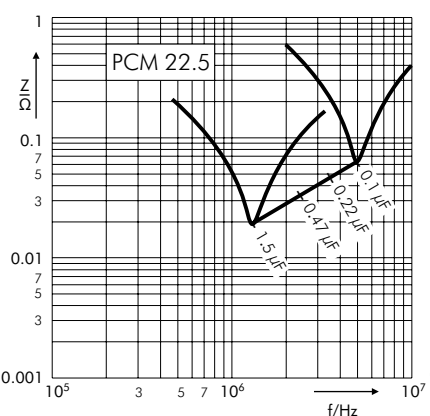
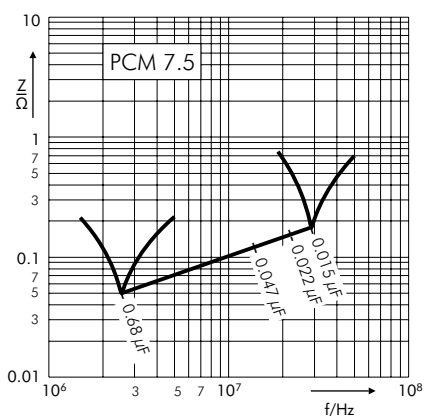
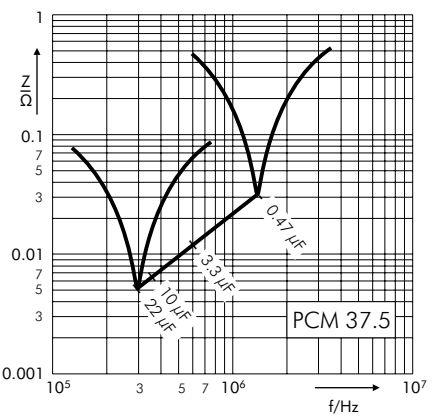
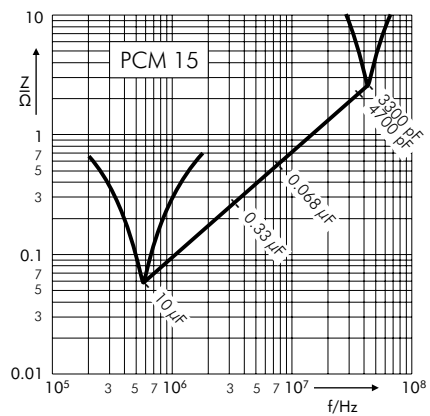
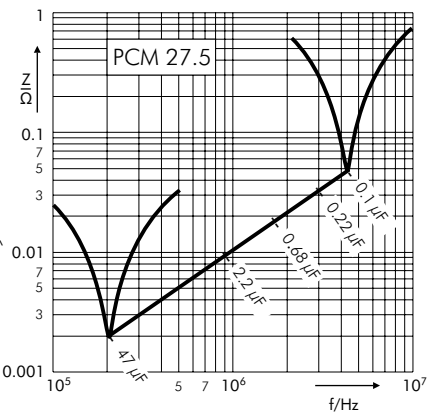
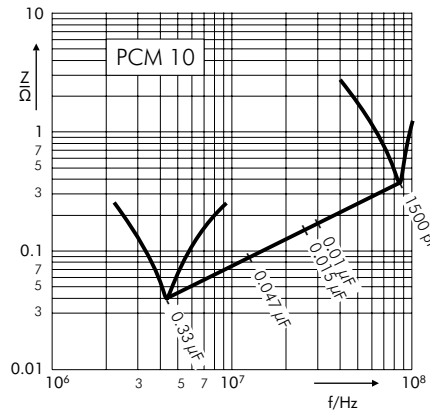
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Permissible AC voltage in relation to frequency at 10° C internal temperature rise (general guide).



Continuation

Impedance change with frequency
(general guide).



Recommendation for Processing and Application of Through-Hole Capacitors

Soldering Process

Internal temperature of the capacitor must be kept as follows:

Polyester: preheating: $T_{max.} \leq 125^{\circ}C$
soldering: $T_{max.} \leq 135^{\circ}C$

Polypropylene: preheating: $T_{max.} \leq 100^{\circ}C$
soldering: $T_{max.} \leq 110^{\circ}C$

Single wave soldering

Soldering bath temperature: $T < 260^{\circ}C$

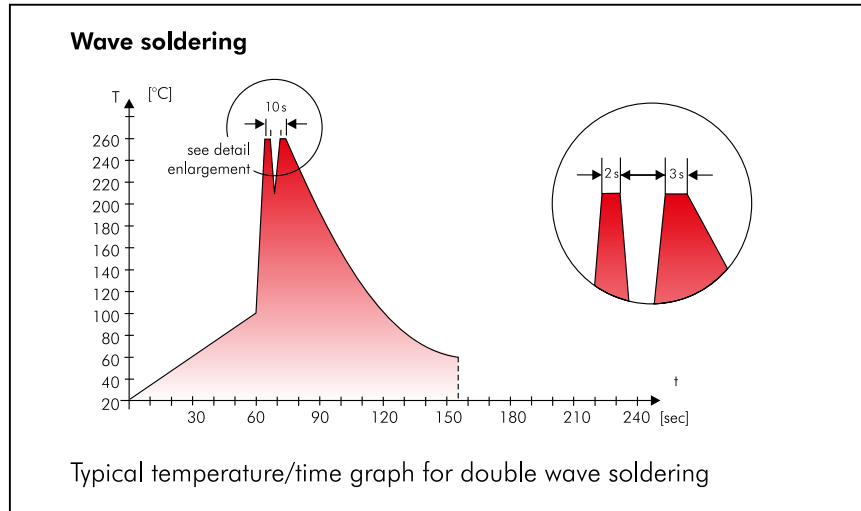
Dwell time: $t < 5 \text{ sec}$

Double wave soldering

Soldering bath temperature: $T < 260^{\circ}C$

Dwell time: $\Sigma t < 5 \text{ sec}$

Due to different soldering processes and heat requirements the graphs are to be regarded as a recommendation only.



WIMA Quality and Environmental Philosophy

ISO 9001:2015 Certification

ISO 9001:2015 is an international basic standard of quality assurance systems for all branches of industry. The approval according to ISO 9001:2015 of our factories by the infaz (Institut für Auditierung und Zertifizierung) certifies that organisation, equipment and monitoring of quality assurance in our factories correspond to internationally recognized standards.

WIMA WPCS

The WIMA Process Control System (WPCS) is a quality surveillance and optimization system developed by WIMA. WPCS is a major part of the quality-oriented WIMA production. Points of application during production process:

- incoming material inspection
- metallization
- film inspection
- schoopage
- pre-healing
- pin attachment
- cast resin preparation/encapsulation
- 100% final inspection
- Testing as per customer requirements

WIMA Environmental Policy

All WIMA capacitors, irrespective of whether through-hole devices or SMD, are made of environmentally friendly materials. Neither during manufacture nor in the product itself any toxic substances are used, e.g.

- Lead
- PCB
- CFC
- Hydrocarbon chloride
- Chromium 6+
- PBB/PBDE
- Arsenic
- Cadmium
- Mercury
- etc.

We merely use pure, recyclable materials for packing our components, such as:

- carton
- cardboard
- adhesive tape made of paper
- polystyrene

We almost completely refrain from using packing materials such as:

- adhesive tapes made of plastic
- metal clips

RoHS Compliance

According to the RoHS Directive 2011/65/EU as amended from time to time certain hazardous substances like e.g. lead, cadmium, mercury must not be used any longer in electronic equipment as of July 1st, 2006. For the sake of the environment WIMA has refrained from using such substances since years already.



WIMA Kondensatoren sind bleifrei konform RoHS 2011/65/EU

WIMA capacitors are lead free in accordance with RoHS 2011/65/EU

Tape for lead-free WIMA capacitors

DIN EN ISO 14001:2004

WIMA's environmental management has been established in accordance with the guidelines of DIN EN ISO 14001:2004 to optimize the production processes with regard to energy and resources.

Typical Dimensions for Taping Configuration

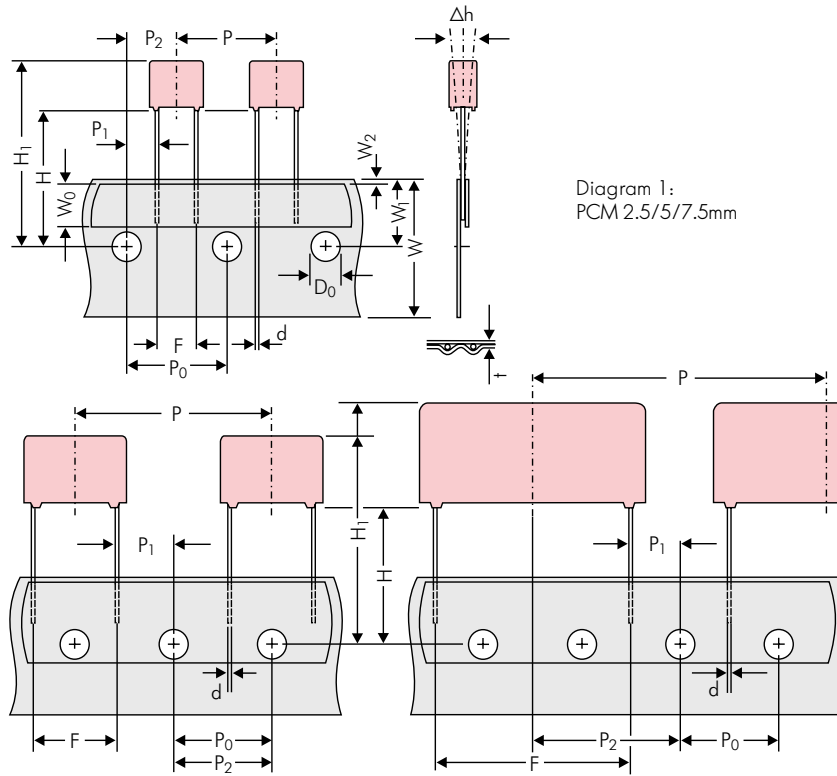


Diagram 1:
PCM 2.5/5/7.5mm

Diagram 2: PCM 10/15 mm

Diagram 3: PCM 22.5 and 27.5*mm

*PCM 27.5 taping possible with two feed holes between components

Designation	Symbol	Dimensions for Radial Taping						
		PCM 2.5 taping	PCM 5 taping	PCM 7.5 taping	PCM 10 taping*	PCM 15 taping*	PCM 22.5 taping	PCM 27.5 taping
Carrier tape width	W	18.0 ±0.5	18.0 ±0.5	18.0 ±0.5	18.0 ±0.5	18.0 ±0.5	18.0 ±0.5	18.0 ±0.5
Hold-down tape width	W ₀	6.0 for hot-sealing adhesive tape	6.0 for hot-sealing adhesive tape	12.0 for hot-sealing adhesive tape	12.0 for hot-sealing adhesive tape	12.0 for hot-sealing adhesive tape	12.0 for hot-sealing adhesive tape	12.0 for hot-sealing adhesive tape
Hole position	W ₁	9.0 ±0.5	9.0 ±0.5	9.0 ±0.5	9.0 ±0.5	9.0 ±0.5	9.0 ±0.5	9.0 ±0.5
Hold-down tape position	W ₂	0.5 to 3.0 max.	0.5 to 3.0 max.	0.5 to 3.0 max.	0.5 to 3.0 max.	0.5 to 3.0 max.	0.5 to 3.0 max.	0.5 to 3.0 max.
Feed hole diameter	D ₀	4.0 ±0.2	4.0 ±0.2	4.0 ±0.2	4.0 ±0.2	4.0 ±0.2	4.0 ±0.2	4.0 ±0.2
Pitch of component	P	12.7 ±1.0	12.7 ±1.0	12.7 ±1.0	25.4 ±1.0	25.4 ±1.0	38.1 ±1.5	38.1 ±1.5 or 50.8 ±1.5
Feed hole pitch	P ₀	12.7 ±0.3 cumulative pitch error max. 1.0 mm/20 pitch	12.7 ±0.3 cumulative pitch error max. 1.0 mm/20 pitch	12.7 ±0.3 cumulative pitch error max. 1.0 mm/20 pitch	12.7 ±0.3 cumulative pitch error max. 1.0 mm/20 pitch	12.7 ±0.3 cumulative pitch error max. 1.0 mm/20 pitch	12.7 ±0.3 cumulative pitch error max. 1.0 mm/20 pitch	12.7 ±0.3 cumulative pitch error max. 1.0 mm/20 pitch
Feed hole centre to pin	P ₁	5.1 ±0.5	3.85 ±0.7	2.6 ±0.7	7.7 ±0.7	5.2 ±0.7	7.8 ±0.7	5.3 ±0.7
Hole centre to component centre	P ₂	6.35 ±1.3	6.35 ±1.3	6.35 ±1.3	12.7 ±1.3	12.7 ±1.3	19.05 ±1.3	19.05 ±1.3
Feed hole centre to bottom edge of the component	H	16.5 ±0.3 18.5 ±0.5	16.5 ±0.3 18.5 ±0.5	16.5 ±0.5 18.5 ±0.5	16.5 ±0.5 18.5 ±0.5	16.5 ±0.5 18.5 ±0.5	16.5 ±0.5 18.5 ±0.5	16.5 ±0.5 18.5 ±0.5
Feed hole centre to top edge of the component	H ₁	H+H _{component} < H ₁ 32.25 max.	H+H _{component} < H ₁ 32.25 max.	H+H _{component} < H ₁ 24.5 to 31.5	H+H _{component} < H ₁ 25.0 to 31.5	H+H _{component} < H ₁ 26.0 to 37.0	H+H _{component} < H ₁ 30.0 to 43.0	H+H _{component} < H ₁ 35.0 to 45.0
Pin spacing at upper edge of carrier tape	F	2.5 ±0.5	5.0 ^{+0.8} _{-0.2}	7.5 ±0.8	10.0 ±0.8	15 ±0.8	22.5 ±0.8	27.5 ±0.8
Pin diameter	d	0.4 ±0.05	0.5 ±0.05	0.5 ±0.05 or 0.6 ^{+0.06} _{-0.05}	0.5 ±0.05 or 0.6 ^{+0.06} _{-0.05}	0.8 ^{+0.08} _{-0.05}	0.8 ^{+0.08} _{-0.05}	0.8 ^{+0.08} _{-0.05}
Component alignment	Δh	± 2.0 max.	± 2.0 max.	± 3.0 max.	± 3.0 max.	± 3.0 max.	± 3.0 max.	± 3.0 max.
Total tape thickness	t	0.6 ±0.2	0.6 ±0.2	0.6 ±0.2	0.6 ±0.2	0.6 ±0.2	0.6 ±0.2	0.6 ±0.2
Package (see also page 162)	ROLL/AMMO			AMMO				
	REEL	φ 360 max. φ 30 ±1	B 52 ±2 58 ±2 } depending on comp. dimensions	REEL	φ 360 max. φ 30 ±1	52 ±2 58 ±2 or 66 ±2	REEL	φ 500 max. φ 25 ±1
Unit	see details page 163.							

Dims in mm.

* Diameter of pins see General Data.

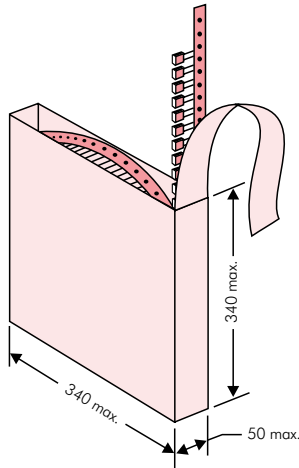
* PCM 10 and PCM 15 can be crimped to PCM 7.5.

Position of components according to PCM 7.5 (sketch 11). P₀ = 12.7 or 15.0 is possible

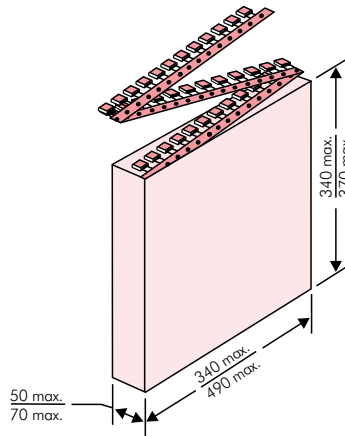
Please clarify customer-specific deviations with the manufacturer.

Types of Tape Packaging of Capacitors for Automatic Radial Insertion

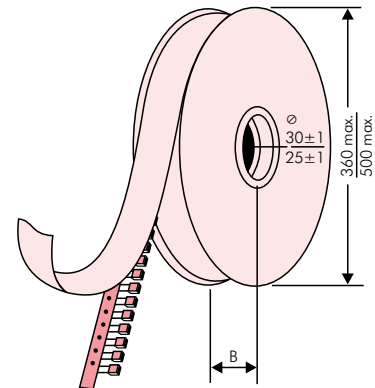
■ ROLL Packaging



■ AMMO Packaging



■ REEL Packaging



BAR CODE (Labelling)

Labelling of package units in plain text and with alphanumerical Bar Code

- WIMA supplier number
- Date code
- Customer's P/O number
- P/O line
- Customer's part number
- WIMA part number
- Quantity
- WIMA confirmation number
- Country of origin
- Customer name
- Handling unit number
- Week of delivery.

In addition part description of

- article
- capacitance value
- rated voltage
- dimensions
- technical note
- capacitance tolerance
- packing
- connecting information

BARCODE PDF417
BARCODE 2D Datamatrix

WIMA Best Capacitors Made in Germany	
Werk Aurich	
Supplier-ID: LIEF.NR.	Date Code: 20210419
Purchase Order No. (P/O): Bestellung xyz	P/O line: 100
Customer Part No.: KUNDENTEILENUMMER	
WIMA Part No.: MKP1F041006B00KSSD	Quantity: 459
WIMA Confirmation No.: 0001105072000100	RoHS 2011/65/EU
	COO: DE
Customer No.: 0000100002	
Gross Weight [g]: 4557	
WIMA - MKP 10	WIMA Part No.: MKP1F041006B00KSSD
MKP 10 1.0 µF 250 VDC 11x21x31.5 RM27.5	
Standard 10% Lose - Standard Drähte 6-2	
Vorlage Debitor Inland	
	0001105072000100
1002021443	QTY: 459 Week 19/2021

Packing Quantities for Capacitors with Radial Pins in PCM 2.5 mm to 22.5 mm



PCM	Size				bulk	pcs. per packing unit								
						ROLL		REEL				AMMO		
	W	H	L	Codes		S	H16.5	H18.5	ø 360	ø 500	340 x 340	490 x 370		
					N	O	F	I	H	J	A	C	B	D
2.5 mm	2.5	7	4.6	0B	5000		2200		2500			2800		
	3	7.5	4.6	0C	5000		2000		2300			2300		
	3.8	8.5	4.6	0D	5000		1500		1800			1800		
	4.6	9	4.6	0E	5000		1200		1500			1500		
	5.5	10	4.6	0F	5000		900		1200			1200		
5 mm	2.5	6.5	7.2	1A	5000		2200		2500			2800		
	3	7.5	7.2	1B	5000		2000		2300			2300		
	3.5	8.5	7.2	1C	5000		1600		2000			2000		
	4.5	6	7.2	1D	6000		1300		1500			1500		
	4.5	9.5	7.2	1E	4000		1300		1500			1500		
	5	10	7.2	1F	3500		1100		1400			1400		
	5.5	7	7.2	1G	4000		1000		1200			1200		
	5.5	11.5	7.2	1H	2500		1000		1200			1200		
	6.5	8	7.2	1I	2500		800		1000			1000		
	7.2	8.5	7.2	1J	2500		700		1000			1000		
	7.2	13	7.2	1K	2000		700		950			1000		
	8.5	10	7.2	1L	2000		600		800			800		
8.5	14	7.2	1M	1500		600		800			800			
11	16	7.2	1N	1000		500		600			640			
7.5 mm	2.5	7	10	2A	5000				2500		4400	2500		
	3	8.5	10	2B	5000				2200		4300	2300		4150
	4	9	10	2C	4000				1700		3200	1700		3000
	4.5	9.5	10.3	2D	3500				1500		2900	1400		2700
	5	10.5	10.3	2E	3000				1300		2500	1300		
	5.7	12.5	10.3	2F	2000				1000		2200	1100		
	7.2	12.5	10.3	2G	1500				900		1800	1000		
10 mm	3	9	13	3A	3000				1100		2200			1900
	4	8.5	13.5	FA	3000				900		1600			1450
	4	9	13	3C	3000				900		1600			1450
	4	9.5	13	3D	3000				900		1600			1400
	5	10	13.5	FB	2000				700		1300			1200
	5	11	13	3F	3000				700		1300			1100
	6	12	13	3G	2400				550		1100			1000
	6	12.5	13	3H	2400				550		1100			1000
8	12	13	3I	2000				400		800			740	
15 mm	5	11	18	4B	2400				600		1200			1150
	5	13	19	FC	1000				600		1200			1200
	6	12.5	18	4C	2000				500		1000			1000
	6	14	19	FD	1000				500		1000			1000
	7	14	18	4D	1600				450		900			850
	7	15	19	FE	1000				450		900			850
	8	15	18	4F	1200				400		800			740
	8	17	19	FF	500				400		800			740
	9	14	18	4H	1200				350		700			650
	9	16	18	4J	900				350		700			650
22.5 mm	5	14	26.5	5A	1200						800			770
	6	15	26.5	5B	1000						700			640
	7	16.5	26.5	5D	760						600			550
	8	20	28	FH	500						500			480
	8.5	18.5	26.5	5F	500						480			450
	10	22	28	FI	570*						420			380
	10.5	19	26.5	5G	594*						400			360
	10.5	20.5	26.5	5H	594*						400			360
11	21	26.5	5I	561*						380			350	
12	24	28	FJ	480*						350			310	

* TPS (Tray-Packing-System). Plate versions may have different packing units. Samples and pre-production needs on request.

■ Moulded versions.

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Packing Quantities for Capacitors with Radial Pins in PCM 27.5 mm to 52.5 mm

PCM	Size				bulk	pcs. per packing unit											
						ROLL		REEL				AMMO					
	W	H	L	Codes		S	N	O	ø 360		ø 500		340 x 340		490 x 370		
								H16.5	H18.5	H16.5	H18.5	H16.5	H18.5	H16.5	H18.5	H16.5	H18.5
								F	I	H	J	A	C	B	D		
27.5 mm	9	19	31.5	6A	567*	-	-	-	-	460/340*		-	-	-	-	-	-
	11	21	31.5	6B	459*	-	-	-	-	380/280*		-	-	-	-	-	-
	13	24	31.5	6D	378*	-	-	-	-	300		-	-	-	-	-	-
	13	25	33	FK	405*	-	-	-	-	-		-	-	-	-	-	-
	15	26	31.5	6F	324*	-	-	-	-	270		-	-	-	-	-	-
	15	26	33	FL	324*	-	-	-	-	-		-	-	-	-	-	-
	17	29	31.5	6G	198*	-	-	-	-	-		-	-	-	-	-	-
	17	34.5	31.5	6I	198*	-	-	-	-	-		-	-	-	-	-	-
	20	32	33	FM	162*	-	-	-	-	-		-	-	-	-	-	-
	20	39.5	31.5	6J	162*	-	-	-	-	-		-	-	-	-	-	-
37.5 mm	9	19	41.5	7A	441*	-	-	-	-	-	-	-	-	-	-	-	-
	11	22	41.5	7B	357*	-	-	-	-	-	-	-	-	-	-	-	-
	13	24	41.5	7C	294*	-	-	-	-	-	-	-	-	-	-	-	-
	15	26	41.5	7D	252*	-	-	-	-	-	-	-	-	-	-	-	-
	17	29	41.5	7E	154*	-	-	-	-	-	-	-	-	-	-	-	-
	19	32	41.5	7F	140*	-	-	-	-	-	-	-	-	-	-	-	-
	20	39.5	41.5	7G	126*	-	-	-	-	-	-	-	-	-	-	-	-
	24	45.5	41.5	7H	112*	-	-	-	-	-	-	-	-	-	-	-	-
	28	38	41.5	7L	84*	-	-	-	-	-	-	-	-	-	-	-	-
	31	46	41.5	7I	84*	-	-	-	-	-	-	-	-	-	-	-	-
	35	50	41.5	7J	35*	-	-	-	-	-	-	-	-	-	-	-	-
	40	55	41.5	7K	28*	-	-	-	-	-	-	-	-	-	-	-	-
48.5 mm	19	31	56	8D	120*	-	-	-	-	-	-	-	-	-	-	-	
	23	34	56	8E	80*	-	-	-	-	-	-	-	-	-	-	-	
	27	37.5	56	8H	84*	-	-	-	-	-	-	-	-	-	-	-	
	33	48	56	8J	25*	-	-	-	-	-	-	-	-	-	-	-	
	37	54	56	8L	25*	-	-	-	-	-	-	-	-	-	-	-	
52.5 mm	25	45	57	9D	70*	-	-	-	-	-	-	-	-	-	-	-	
	30	45	57	9E	60*	-	-	-	-	-	-	-	-	-	-	-	
	35	50	57	9F	25*	-	-	-	-	-	-	-	-	-	-	-	
	45	55	57	9H	20*	-	-	-	-	-	-	-	-	-	-	-	
	45	65	57	9J	20*	-	-	-	-	-	-	-	-	-	-	-	

* for 2-inch transport pitches.

* TPS (Tray-Packing-System). Plate versions may have different packing units. Samples and pre-production needs on request.

■ Moulded versions. Rights reserved to amend design data without prior notification.

Updated data on www.wima.com



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 μ F			2.5x6.5x7.2		-		20%	bulk	6 -2		

<p>Type description:</p> <p>SMD-PET = SMDT SMD-PEN = SMDN SMD-PPS = SMDI FKP 02 = FKPO 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 4 = MKP4 MKP 10 = MKP1 FKP 4 = FKP4 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 4 = DCP4 DC-LINK MKP 6 = DCP6 DC-LINK HC = DCHC</p>	<p>Rated voltage:</p> <p>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 1700 VDC = TA 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 ...</p>	<p>Capacitance:</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>Size:</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 25x45x57 PCM 52.5 = 9D ...</p> <p>Version code:</p> <p>Standard = 00 Version A1 = 1A Version A1.1.1 = 1B Version A2 = 2A ...</p>	<p>Tolerance:</p> <p>\pm20% = M \pm10% = K \pm5% = J \pm2.5% = H \pm1% = E ...</p> <p>Packing:</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>Pin length (untaped)</p> <p>3.5 \pm0.5 = C9 6 -2 = SD 16 \pm1 = P1 ...</p> <p>Pin length (taped)</p> <p>none = 00</p>
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