

**Metallized Polypropylene (PP) Capacitors in PCM 5 mm.**  
**Capacitances from 1000 pF to 1.0 μF. Rated Voltages from 63 VDC to 1000 VDC.**

## Special Features

- High volume/capacitance ratio
- Self-healing
- Increased pulse duty from 250 VDC rated voltage
- Very low dissipation factor
- Negative capacitance change versus temperature
- Very low dielectric absorption
- AEC-Q200 qualified AEC-Q200
- According to RoHS 2015/863/EU

## Typical Applications

For high frequency applications e.g.

- Sample and hold
- Timing
- Oscillating circuits
- High frequency coupling and decoupling

## Construction

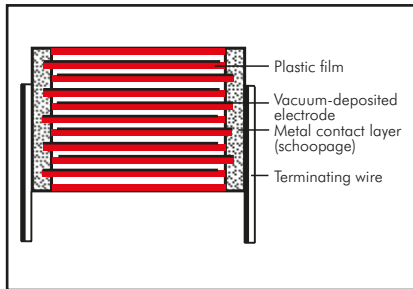
### Dielectric:

Polypropylene (PP) 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 1.0 μF (E12-values on request)

### Rated voltages:

63 VDC, 100 VDC, 250 VDC, 400 VDC, 630 VDC, 800 VDC, 1000 VDC

### Capacitance tolerances:

± 20%, ± 10%, ± 5%

### Operating temperature range:

-55° C to +100° C

### Test specifications:

In accordance with IEC 60384-16

### Climatic test category:

55/100/56 in accordance with IEC

### Insulation resistance at +20° C:

≥ 1 x 10<sup>5</sup> MΩ

Measuring voltage:

U<sub>r</sub> = 63 V: U<sub>test</sub> = 50 V/1 min.

U<sub>r</sub> ≥ 100 V: U<sub>test</sub> = 100 V/1 min.

### Test voltage:

1.6 U<sub>r</sub>, 2 sec.

### Maximum pulse rise time:

Capacitance pF/μF	max. pulse rise time V/μsec						
	63 VDC	100 VDC	250 VDC	400 VDC	630 VDC	800 VDC	1000 VDC
1000 ... 2200	–	–	–	300	400	450	500
3300 ... 6800	–	–	–	300	400	450	500
0.01 ... 0.022	100	100	250	300	400	450	500
0.033 ... 0.068	100	100	250	300	400	450	–
0.1 ... 0.22	100	100	250	250	–	–	–
0,33 ... 0.68	100	100	250	–	–	–	–
1.0	70	70	–	–	–	–	–

### Dielectric absorption:

0.05 %

### Dissipation factors at +20° C: tan δ

at f	C ≤ 0.1 μF	0.1 μF < C ≤ 1.0 μF
1 kHz	≤ 5 x 10 <sup>-4</sup>	≤ 5 x 10 <sup>-4</sup>
10 kHz	≤ 8 x 10 <sup>-4</sup>	≤ 8 x 10 <sup>-4</sup>
100 kHz	≤ 25 x 10 <sup>-4</sup>	–

### Voltage derating:

A voltage derating factor of 1.35 % per K must be applied from +85° C for DC voltages and from +75° C for AC voltages

### Reliability:

Operational life > 300 000 hours

Failure rate < 2 fit (0.5 x U<sub>r</sub> and 40° C)

## Mechanical Tests

### Pull test on pins:

10 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:

1 kPa = 10 mbar in accordance with IEC 60068-2-13

### Bump test:

4000 bumps at 390 m/sec<sup>2</sup> in accordance with IEC 60068-2-29

## Packing

Available taped and reeled.

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

For further details and graphs please refer to Technical Information.

## Continuation

### General Data

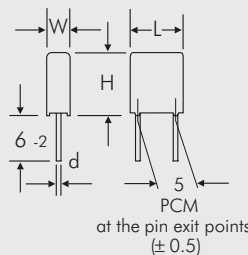
Capacitance	63 VDC/40 VAC*					100 VDC/63 VAC*				
	W	H	L	PCM**	Part number	W	H	L	PCM**	Part number
0.01 µF	3	7.5	7.2	5	MKP2C021001B00	3	7.5	7.2	5	MKP2D021001B00
0.015 "	3	7.5	7.2	5	MKP2C021501B00	3	7.5	7.2	5	MKP2D021501B00
0.022 "	3	7.5	7.2	5	MKP2C022201B00	3	7.5	7.2	5	MKP2D022201B00
0.033 "	3	7.5	7.2	5	MKP2C023301B00	3	7.5	7.2	5	MKP2D023301B00
0.047 "	3.5	8.5	7.2	5	MKP2C024701C00	3.5	8.5	7.2	5	MKP2D024701C00
0.068 "	4.5	9.5	7.2	5	MKP2C026801E00	4.5	9.5	7.2	5	MKP2D026801E00
0.1 µF	5	10	7.2	5	MKP2C031001F00	5	10	7.2	5	MKP2D031001F00
0.15 "	5.5	11.5	7.2	5	MKP2C031501H00	5.5	11.5	7.2	5	MKP2D031501H00
0.22 "	7.2	13	7.2	5	MKP2C032201K00	7.2	13	7.2	5	MKP2D032201K00
0.33 "	8.5	14	7.2	5	MKP2C033301M00	8.5	14	7.2	5	MKP2D033301M00
0.47 "	8.5	14	7.2	5	MKP2C034701M00	8.5	14	7.2	5	MKP2D034701M00
0.68 "	8.5	14	7.2	5	MKP2C036801M00	8.5	14	7.2	5	MKP2D036801M00
1.0 µF	11	16	7.2	5	MKP2C041001N00	11	16	7.2	5	MKP2D041001N00

Capacitance	250 VDC/160 VAC*					400 VDC/200 VAC*				
	W	H	L	PCM**	Part number	W	H	L	PCM**	Part number
1000 pF						3	7.5	7.2	5	MKP2G011001B00
1500 "						3	7.5	7.2	5	MKP2G011501B00
2200 "						3	7.5	7.2	5	MKP2G012201B00
3300 "						3	7.5	7.2	5	MKP2G013301B00
4700 "						3	7.5	7.2	5	MKP2G014701B00
6800 "						3	7.5	7.2	5	MKP2G016801B00
0.01 µF	3	7.5	7.2	5	MKP2F021001B00	3.5	8.5	7.2	5	MKP2G021001C00
0.015 "	3	7.5	7.2	5	MKP2F021501B00	3.5	8.5	7.2	5	MKP2G021501C00
0.022 "	3	7.5	7.2	5	MKP2F022201B00	4.5	9.5	7.2	5	MKP2G022201E00
0.033 "	3	7.5	7.2	5	MKP2F023301B00	5.5	11.5	7.2	5	MKP2G023301H00
0.047 "	3.5	8.5	7.2	5	MKP2F024701C00	7.2	13	7.2	5	MKP2G024701K00
0.068 "	4.5	9.5	7.2	5	MKP2F026801E00	7.2	13	7.2	5	MKP2G026801K00
0.1 µF	5	10	7.2	5	MKP2F031001F00	8.5	14	7.2	5	MKP2G031001M00
0.15 "	7.2	13	7.2	5	MKP2F031501K00	11	16	7.2	5	MKP2G031501N00
0.22 "	7.2	13	7.2	5	MKP2F032201K00					
0.33 "	8.5	14	7.2	5	MKP2F033301M00					
0.47 "	11	16	7.2	5	MKP2F034701N00					

Capacitance	630 VDC/250 VAC*				
	W	H	L	PCM**	Part number
1000 pF	3	7.5	7.2	5	MKP2J011001B00
1500 "	3	7.5	7.2	5	MKP2J011501B00
2200 "	3	7.5	7.2	5	MKP2J012201B00
3300 "	3	7.5	7.2	5	MKP2J013301B00
4700 "	3	7.5	7.2	5	MKP2J014701B00
6800 "	3.5	8.5	7.2	5	MKP2J016801C00
0.01 µF	4.5	9.5	7.2	5	MKP2J021001E00
0.015 "	5	10	7.2	5	MKP2J021501F00
0.022 "	5.5	11.5	7.2	5	MKP2J022201H00
0.033 "	7.2	13	7.2	5	MKP2J023301K00
0.047 "	8.5	14	7.2	5	MKP2J024701M00
0.068 "	11	16	7.2	5	MKP2J026801N00

\*\* PCM = Printed circuit module = pin spacing.

Dims. in mm.



Part number completion:	
Tolerance:	20 % = M
	10 % = K
	5 % = J
Packing:	bulk = S
Pin length:	6-2 = SD
Taped version see page 157.	

$$d = 0.5 \varnothing$$

\* AC voltage:  $f \leq 400 \text{ Hz}$ ;  $1.4 \times U_{\text{rms}} + U_{\text{DC}} \leq U_{\text{r}}$

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## Continuation

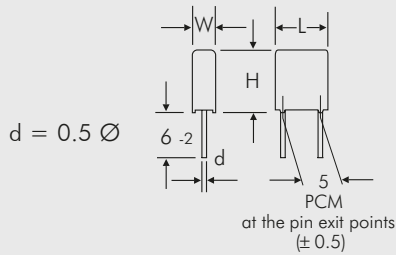
### General Data

Capacitance	800 VDC/250 VAC*					1000 VDC/250 VAC*				
	W	H	L	PCM**	Part number	W	H	L	PCM**	Part number
1000 pF	3	7.5	7.2	5	MKP2L011001B00	3	7.5	7.2	5	MKP2O111001B00
1500 "	3	7.5	7.2	5	MKP2L011501B00	3	7.5	7.2	5	MKP2O111501B00
2200 "	3	7.5	7.2	5	MKP2L012201B00	3	7.5	7.2	5	MKP2O112201B00
3300 "	3	7.5	7.2	5	MKP2L013301B00	3.5	8.5	7.2	5	MKP2O113301C00
4700 "	3.5	8.5	7.2	5	MKP2L014701C00	4.5	9.5	7.2	5	MKP2O114701E00
6800 "	4.5	9.5	7.2	5	MKP2L016801E00	5	10	7.2	5	MKP2O116801F00
0.01 μF	5	10	7.2	5	MKP2L021001F00	7.2	13	7.2	5	MKP2O121001K00
0.015 "	5.5	11.5	7.2	5	MKP2L021501H00	8.5	14	7.2	5	MKP2O121501M00
0.022 "	7.2	13	7.2	5	MKP2L022201K00	11	16	7.2	5	MKP2O122201N00
0.033 "	8.5	14	7.2	5	MKP2L023301M00					
0.047 "	11	16	7.2	5	MKP2L024701N00					

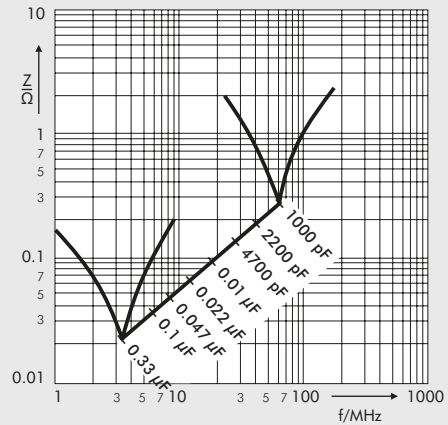
\* AC voltage:  $f \leq 400 \text{ Hz}$ ;  $1.4 \times U_{\text{rms}} + \text{UDC} \leq U_r$

\*\* PCM = printed circuit module = pin spacing.

Dims. in mm.



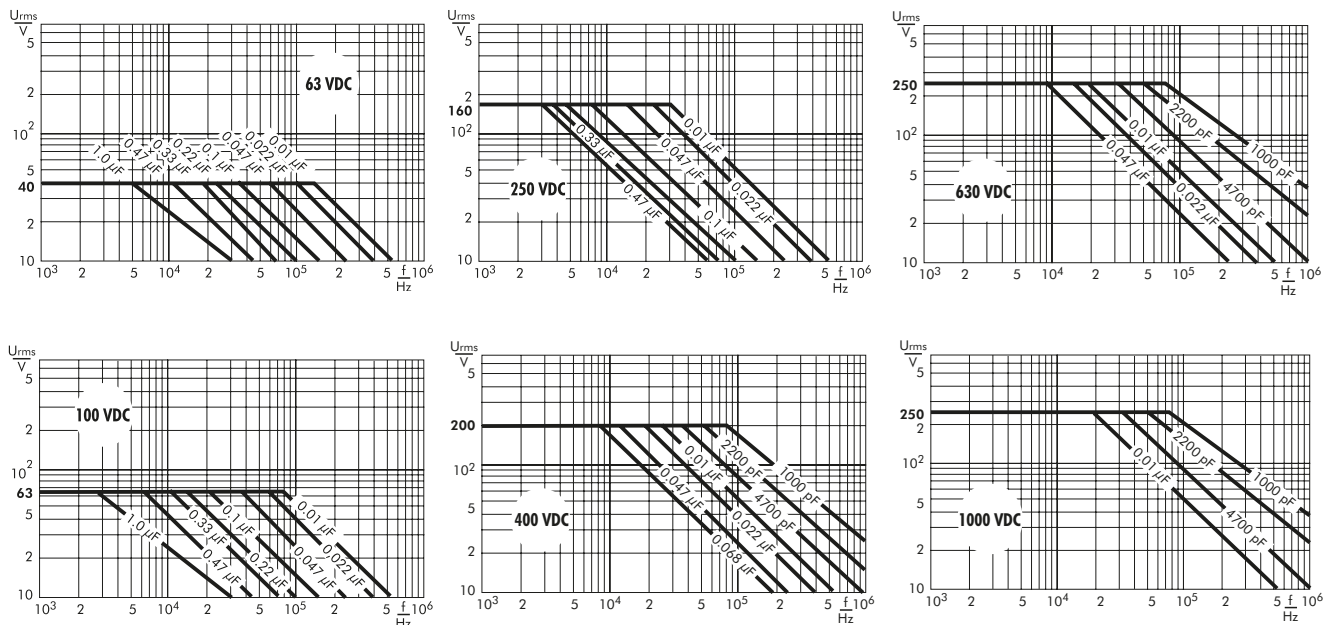
Part number completion:  
 Tolerance: 20 % = M  
 10 % = K  
 5 % = J  
 Packing: bulk = S  
 Pin length: 6-2 = SD  
 Taped version see page 157.



Impedance change with frequency (general guide).

Rights reserved to amend design data without prior notification.

Permissible AC voltage in relation to frequency at 10° C internal temperature rise (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:  $T_{max.} \leq 110^{\circ}C$

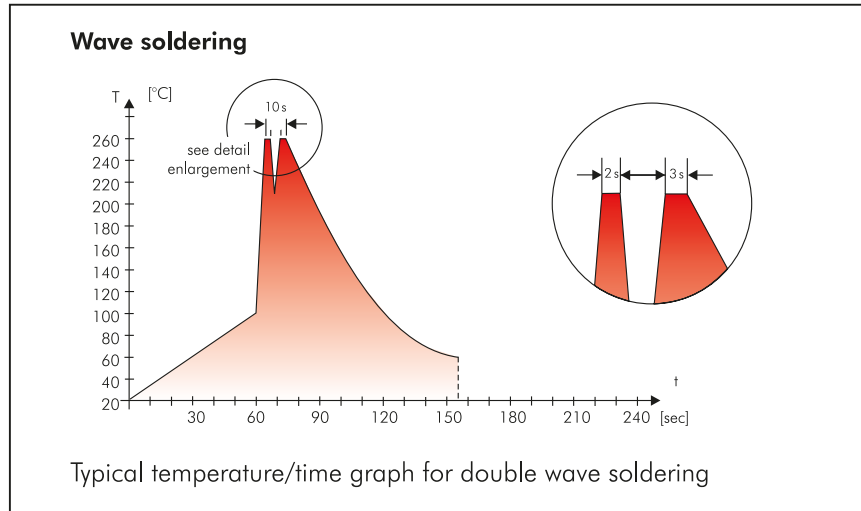
#### Single wave soldering

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:  $\sum t < 5 \text{ sec}$

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 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 2015/863/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 re-frained from using such substances since years already.



WIMA Kondensatoren sind bleifrei konform RoHS 2015/863/EU

WIMA capacitors are lead free in accordance with RoHS 2015/863/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

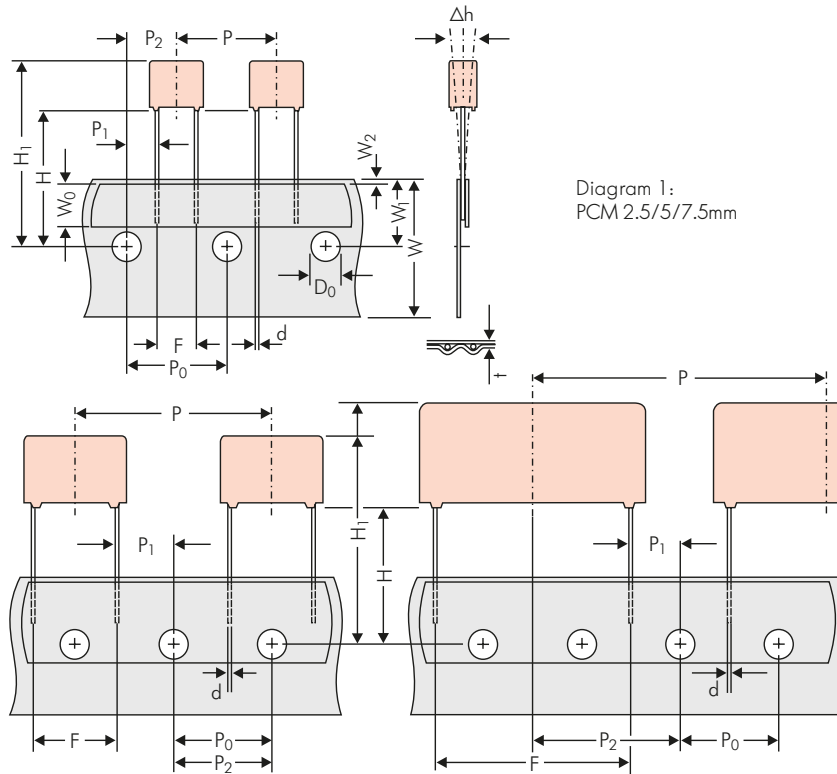


Diagram 1:  
PCM 2.5/5/7.5mm

Diagram 2: PCM 10/15 mm

Diagram 3: PCM 22.5 and 27.5\*mm

\*PCM 27.5 tapping possible with two feed holes between components

Designation	Symbol	Dimensions for Radial Taping							
		PCM 2.5 tapping	PCM 5 tapping	PCM 7.5 tapping	PCM 10 tapping*	PCM 15 tapping*	PCM 22.5 tapping	PCM 27.5 tapping	
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 <sub>0</sub>	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 <sub>1</sub>	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 <sub>2</sub>	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 <sub>0</sub>	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 <sub>0</sub>	12.7 ±0.3 error max. 1.0 mm/20 pitch	12.7 ±0.3 error max. 1.0 mm/20 pitch	12.7 ±0.3 error max. 1.0 mm/20 pitch	12.7 ±0.3 error max. 1.0 mm/20 pitch	12.7 ±0.3 error max. 1.0 mm/20 pitch	12.7 ±0.3 error max. 1.0 mm/20 pitch	12.7 ±0.3 error max. 1.0 mm/20 pitch	
Feed hole centre to pin	P <sub>1</sub>	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 <sub>2</sub>	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 <sub>▲</sub>	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 <sub>1</sub>	H+H <sub>component</sub> < H <sub>1</sub> 32.25 max.	H+H <sub>component</sub> < H <sub>1</sub> 32.25 max.	H+H <sub>component</sub> < H <sub>1</sub> 24.5 to 31.5	H+H <sub>component</sub> < H <sub>1</sub> 25.0 to 31.5	H+H <sub>component</sub> < H <sub>1</sub> 26.0 to 37.0	H+H <sub>component</sub> < H <sub>1</sub> 30.0 to 43.0	H+H <sub>component</sub> < H <sub>1</sub> 35.0 to 45.0	
Pin spacing at upper edge of carrier tape	F	2.5 ±0.5	5.0 <sup>+0.8</sup> <sub>-0.2</sub>	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 <sup>+0.06</sup> <sub>-0.05</sub>	*0.5 ±0.05 or 0.6 <sup>+0.06</sup> <sub>-0.05</sub>	0.8 <sup>+0.08</sup> <sub>-0.05</sub>	0.8 <sup>+0.08</sup> <sub>-0.05</sub>	0.8 <sup>+0.08</sup> <sub>-0.05</sub>	
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 158)	▲	ROLL/AMMO			AMMO				
		REEL Ø 360 max. Ø 30 ±1	B 52 ±2 58 ±2	depending on comp. dimensions	REEL Ø 360 max. Ø 30 ±1	B 52 ±2 58 ±2 66 ±2	or REEL Ø 500 max. Ø 25 ±1	B 54 ±2 60 ±2 68 ±2	depending on PCM and component dimensions
Unit		see details page 159.							

▲ When ordering please specify dimension H and required packaging type.

Dims in mm.

• Diameter of pins see General Data.

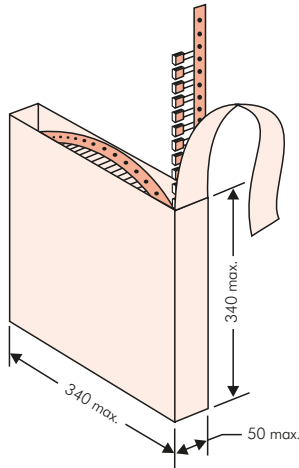
Please clarify customer-specific deviations with the manufacturer.

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

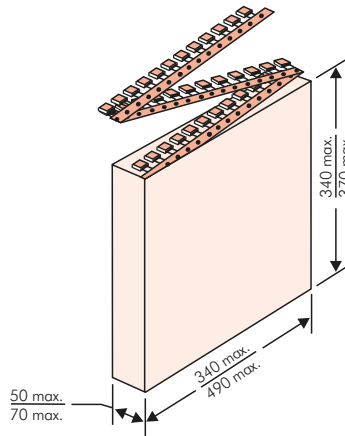
Position of components according to PCM 7.5 (sketch 1). P<sub>0</sub> = 12.7 or 15.0 is possible

## Types of Tape Packaging of Capacitors for Automatic Radial Insertion

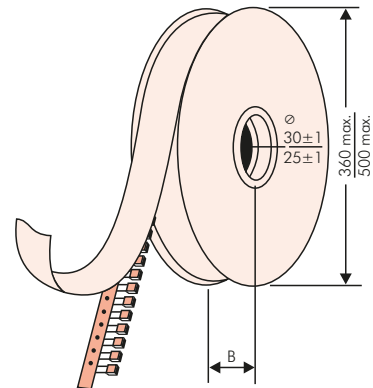
### ■ ROLL Packaging



### ■ AMMO Packaging



### ■ REEL Packaging



## BAR CODE (Labelling)

Labelling of package units in plain text and with alphanumeric 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

**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	
<b>WIMA – MKP 10</b>	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

BARCODE PDF417  
BARCODE 2D Datamatrix

## Packing Quantities for Capacitors with Radial Pins in PCM 2.5 mm to 27.5 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	
<b>2.5 mm</b>	2.5	7	4.6	<b>0B</b>	5000			2200			2500					2800		
	3	7.5	4.6	<b>0C</b>	5000			2000			2300					2300		
	3.8	8.5	4.6	<b>0D</b>	5000			1500			1800					1800		
	4.6	9	4.6	<b>0E</b>	5000			1200			1500					1500		
	5.5	10	4.6	<b>0F</b>	5000			900			1200					1200		
<b>5 mm</b>	2.5	6.5	7.2	<b>1A</b>	5000			2200			2500					2800		
	3	7.5	7.2	<b>1B</b>	5000			2000			2300					2300		
	3.5	8.5	7.2	<b>1C</b>	5000			1600			2000					2000		
	4.5	6	7.2	<b>1D</b>	6000			1300			1500					1500		
	4.5	9.5	7.2	<b>1E</b>	4000			1300			1500					1500		
	5	10	7.2	<b>1F</b>	3500			1100			1400					1400		
	5.5	7	7.2	<b>1G</b>	4000			1000			1200					1200		
	5.5	11.5	7.2	<b>1H</b>	2500			1000			1200					1200		
	6.5	8	7.2	<b>1I</b>	2500			800			1000					1000		
	7.2	8.5	7.2	<b>1J</b>	2500			700			1000					1000		
	7.2	13	7.2	<b>1K</b>	2000			700			950					1000		
	8.5	10	7.2	<b>1L</b>	2000			600			800					800		
	8.5	14	7.2	<b>1M</b>	1500			600			800					800		
11	16	7.2	<b>1N</b>	1000			500			600					640			
<b>7.5 mm</b>	2.5	7	10	<b>2A</b>	5000						2500			4400	2500			
	3	8.5	10	<b>2B</b>	5000						2200			4300	2300		4150	
	4	9	10	<b>2C</b>	4000						1700			3200	1700		3000	
	4.5	9.5	10.3	<b>2D</b>	3500						1500			2900	1400		2700	
	5	10.5	10.3	<b>2E</b>	3000						1300			2500	1300			
	5.7	12.5	10.3	<b>2F</b>	2000						1000			2200	1100			
	7.2	12.5	10.3	<b>2G</b>	1500						900			1800	1000			
<b>10 mm</b>	3	9	13	<b>3A</b>	3000						1100			2200			1900	
	4	9	13	<b>3C</b>	3000						900			1600			1450	
	4	9.5	13	<b>3D</b>	3000						900			1600			1400	
	5	11	13	<b>3F</b>	3000						700			1300			1100	
	6	12	13	<b>3G</b>	2400							550			1100			1000
	6	12.5	13	<b>3H</b>	2400							550			1100			1000
	8	12	13	<b>3I</b>	2000							400			800			740
<b>15 mm</b>	5	11	18	<b>4B</b>	2400						600			1200			1150	
	6	12.5	18	<b>4C</b>	2000						500			1000			1000	
	7	14	18	<b>4D</b>	1600						450			900			850	
	8	15	18	<b>4F</b>	1200						400			800			740	
	9	14	18	<b>4H</b>	1200						350			700			650	
	9	16	18	<b>4J</b>	900						350			700			650	
	11	14	18	<b>4M</b>	1000						300			600			540	
<b>22.5 mm</b>	5	14	26.5	<b>5A</b>	1200									800			770	
	6	15	26.5	<b>5B</b>	1000									700			640	
	7	16.5	26.5	<b>5D</b>	760									600			550	
	8.5	18.5	26.5	<b>5F</b>	500									480			450	
	10.5	19	26.5	<b>5G</b>	594*									400			360	
	10.5	20.5	26.5	<b>5H</b>	594*									400			360	
11	21	26.5	<b>5I</b>	561*									380			350		
<b>27.5 mm</b>	9	19	31.5	<b>6A</b>	567*									460/340*				
	11	21	31.5	<b>6B</b>	459*									380/280*				
	13	24	31.5	<b>6D</b>	378*									300				
	15	26	31.5	<b>6F</b>	324*									270				
	17	29	31.5	<b>6G</b>	198*													
	17	34.5	31.5	<b>6I</b>	198*													
	20	39.5	31.5	<b>6J</b>	162*													

\* for 2-inch transport pitches.

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

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## Packing Quantities for Capacitors with Radial Pins in PCM 37.5 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		
<b>37.5 mm**</b>	9	19	41.5	<b>7A</b>	441*	-	-	-	-	-	-	-	-	-	-	-	-
	11	22	41.5	<b>7B</b>	357*	-	-	-	-	-	-	-	-	-	-	-	-
	13	24	41.5	<b>7C</b>	294*	-	-	-	-	-	-	-	-	-	-	-	-
	15	26	41.5	<b>7D</b>	252*	-	-	-	-	-	-	-	-	-	-	-	-
	17	29	41.5	<b>7E</b>	154*	-	-	-	-	-	-	-	-	-	-	-	-
	19	32	41.5	<b>7F</b>	140*	-	-	-	-	-	-	-	-	-	-	-	-
	20	39.5	41.5	<b>7G</b>	126*	-	-	-	-	-	-	-	-	-	-	-	-
	24	45.5	41.5	<b>7H</b>	112*	-	-	-	-	-	-	-	-	-	-	-	-
	28	38	41.5	<b>7L</b>	84*	-	-	-	-	-	-	-	-	-	-	-	-
	31	46	41.5	<b>7I</b>	84*	-	-	-	-	-	-	-	-	-	-	-	-
	35	50	41.5	<b>7J</b>	35*	-	-	-	-	-	-	-	-	-	-	-	-
	40	55	41.5	<b>7K</b>	28*	-	-	-	-	-	-	-	-	-	-	-	-
<b>48.5 mm**</b>	19	31	56	<b>8D</b>	120*	-	-	-	-	-	-	-	-	-	-	-	
	23	34	56	<b>8E</b>	80*	-	-	-	-	-	-	-	-	-	-	-	
	27	37.5	56	<b>8H</b>	84*	-	-	-	-	-	-	-	-	-	-	-	
	33	48	56	<b>8J</b>	25*	-	-	-	-	-	-	-	-	-	-	-	
	37	54	56	<b>8L</b>	25*	-	-	-	-	-	-	-	-	-	-	-	
<b>52.5 mm</b>	25	45	57	<b>9D</b>	70*	-	-	-	-	-	-	-	-	-	-	-	
	30	45	57	<b>9E</b>	60*	-	-	-	-	-	-	-	-	-	-	-	
	35	50	57	<b>9F</b>	25*	-	-	-	-	-	-	-	-	-	-	-	
	45	55	57	<b>9H</b>	20*	-	-	-	-	-	-	-	-	-	-	-	
	45	65	57	<b>9J</b>	20*	-	-	-	-	-	-	-	-	-	-	-	

\* TPS (Tray-Packing-System). Plate versions may have different packing units.

\*\*For Snubber capacitors in 2-pin version the PCM is changing to 38.5 respective 49.5 mm. Samples and pre-production needs on request.

Rights reserved to amend design data without prior notification.

Updated data on [www.wima.com](http://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 µF			2.5x6.5x7.2			-		20%	bulk	6 -2	

<p><b>Type description:</b></p> <p>SMD-PET = SMDT              SMD-PEN = SMDN              SMD-PPS = SMDI              FKP 02 = FKPO              MKS 02 = MKSO              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              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><b>Rated voltage:</b></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              230 VAC = 3Y              275 VAC = 1W              300 VAC = 2W              305 VAC = AW              350 VAC = BW              440 VAC = 4W              ...</p>	<p><b>Capacitance:</b></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><b>Size:</b></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 = YA              15.3x13.7x7 Size 6054 = YA              2.5x7x4.6 PCM2.5 = 0B              3x7.5x4.6 PCM2.5 = 0C              2.5x6.5x7.2 PCM5 = 1A              3x7.5x7.2 PCM5 = 1B              2.5x7x10 PCM7.5 = 2A              3x8.5x10 PCM7.5 = 2B              3x9x13 PCM10 = 3A              4x9x13 PCM10 = 3C              5x11x18 PCM15 = 4B              6x12.5x18 PCM15 = 4C              5x14x26.5 PCM22.5 = 5A              6x15x26.5 PCM22.5 = 5B              9x19x31.5 PCM27.5 = 6A              11x21x31.5 PCM27.5 = 6B              9x19x41.5 PCM37.5 = 7A              11x22x41.5 PCM37.5 = 7B              19x31x56 PCM 48.5 = 8D              25x45x57 PCM 52.5 = 9D              ...</p>	<p><b>Tolerance:</b></p> <p>±20% = M              ±10% = K              ±5% = J              ±2.5% = H              ±1% = E              ...</p> <p><b>Packing:</b></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><b>Version code:</b></p> <p>Standard = 00              Version A1 = 1A              Version A1.1.1 = 1B              Version A2 = 2A              ...</p>	<p><b>Pin length (untaped)</b></p> <p>3.5 ±0.5 = C9              6 -2 = SD              16 ±1 = P1              ...</p> <p><b>Pin length (taped)</b></p> <p>none = 00</p>

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.