

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
- According to RoHS 2011/65/EU

Typical Applications

For high frequency applications e.g.

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

Construction

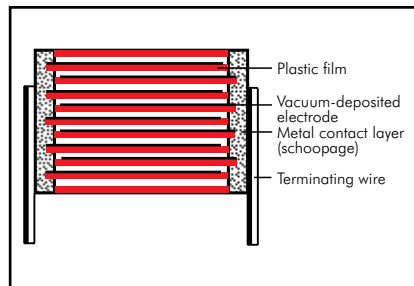
Dielectric:

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.

Epoxy resin seal: Red

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:

≥ 3 × 10⁴ MΩ

(mean value: 1 × 10⁵ MΩ)

Measuring voltage:

U_r = 63 V: U_{test} = 50 V/1 min.

U_r ≥ 100 V: U_{test} = 100 V/1 min.

Test voltage:

1.6 U_r, 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	–	–	–	–	–

for pulses equal to the rated voltage

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	≤ 0.5 × 10 ⁻³	≤ 0.5 × 10 ⁻³
10 kHz	≤ 0.8 × 10 ⁻³	≤ 0.8 × 10 ⁻³
100 kHz	≤ 3.0 × 10 ⁻³	–

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 × U_r 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/sec² 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

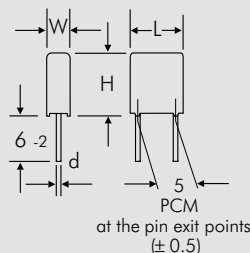
General Data

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_					

New values

** 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 143.

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

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$d = 0.5 \phi$

Continuation

General Data

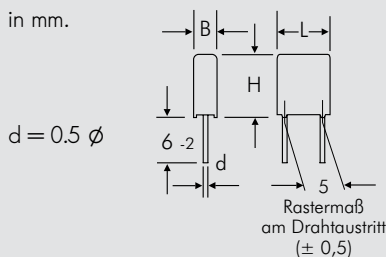
Capacitance	800 VDC/250 VAC*					1000 VDC/250 VAC*				
	W	H	L	PCM**	Part number	W	H	L	PCM**	Part number
1000 pF	3	7.5	7.2	5	MKP2L011001B00_____	3	7.5	7.2	5	MKP2O111001B00_____
1500 "	3	7.5	7.2	5	MKP2L011501B00_____	3	7.5	7.2	5	MKP2O111501B00_____
2200 "	3	7.5	7.2	5	MKP2L012201B00_____	3	7.5	7.2	5	MKP2O112201B00_____
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: $f \leq 400 \text{ Hz}$; $1.4 \times U_{\text{rms}} + U_{\text{DC}} \leq U_r$

New range and values

** PCM = printed circuit module = pin spacing.

Dims. in mm.

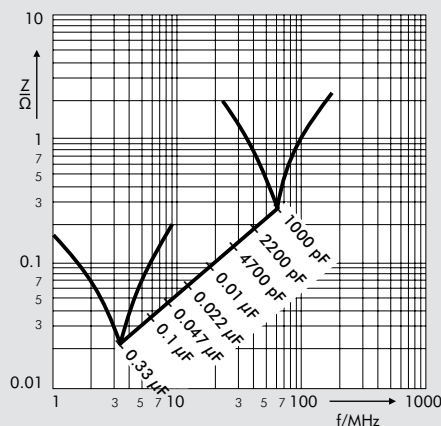


Part number completion:

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

Packing: bulk = S
Pin length: 6-2 = SD

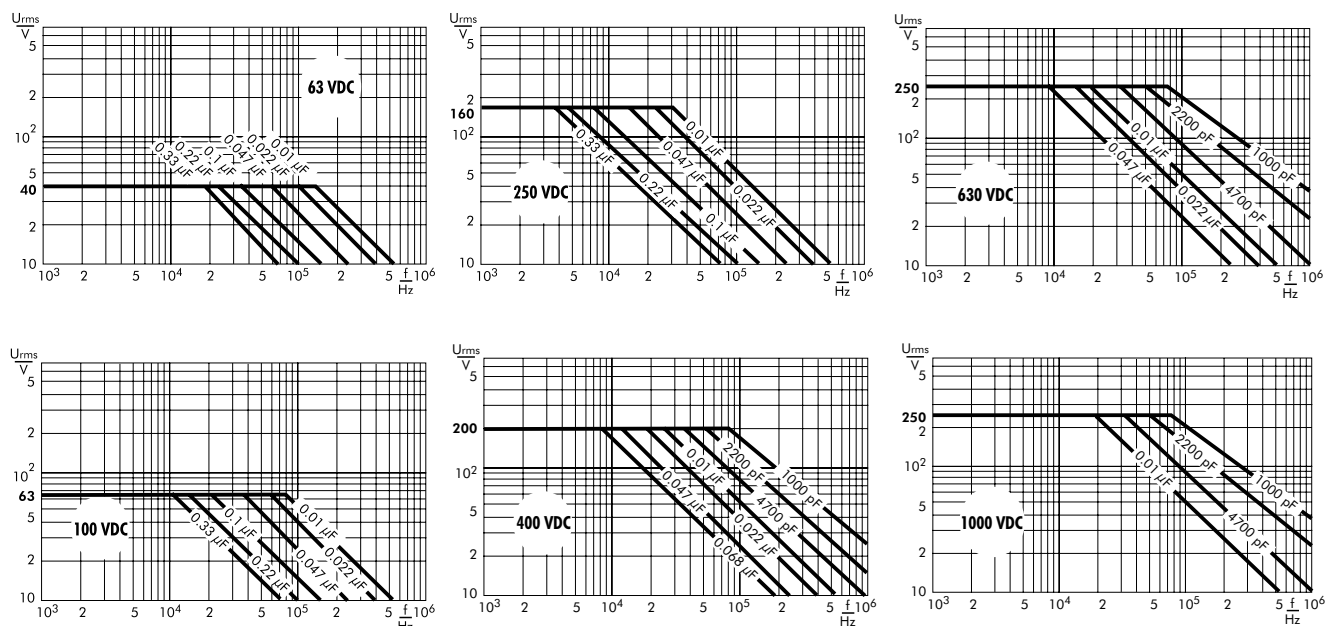
Taped version see page 143.



Impedance change with frequency (general guide).

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

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

Single wave soldering

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

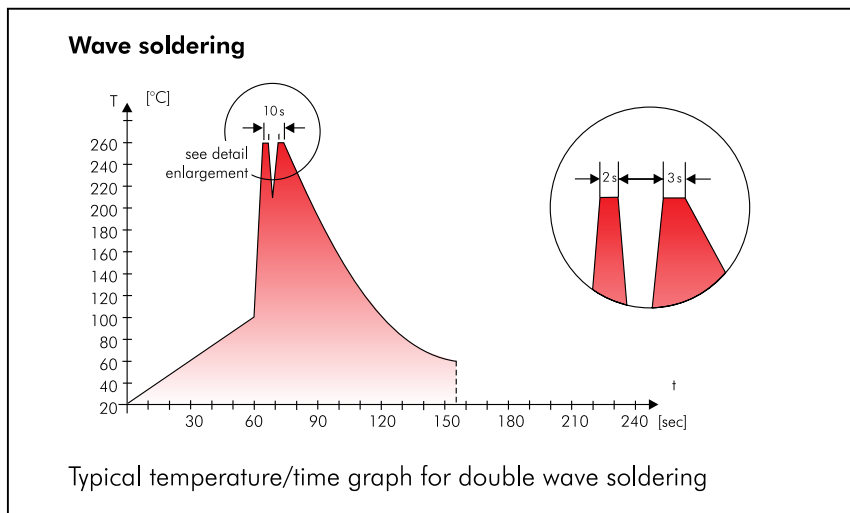
Dwell time: $t < 5\text{ sec}$

Double wave soldering

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

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 9001:2008 Certification

ISO 9001:2008 is an international basic standard of quality assurance systems for all branches of industry. The approval according to ISO 9001:2008 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 of WPCS 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 | – PBB/PBDE |
| – PCB | – Arsenic |
| – CFC | – Cadmium |
| – Hydrocarbon chloride | – Mercury |
| – Chromium 6+ | – 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:

- foamed polystyrene (Styropor®)
- adhesive tapes made of plastic
- metal clips

RoHS Compliance

According to the RoHS Directive 2011/65/EU 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

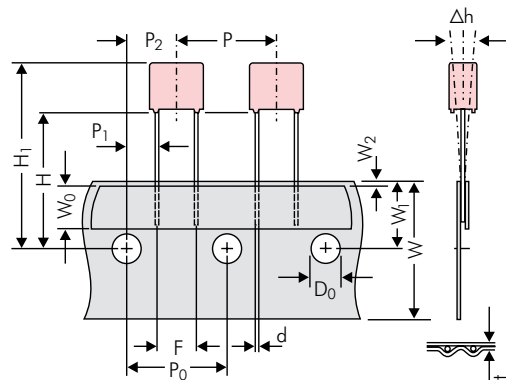


Diagram 1:
PCM 2.5/5/7.5mm

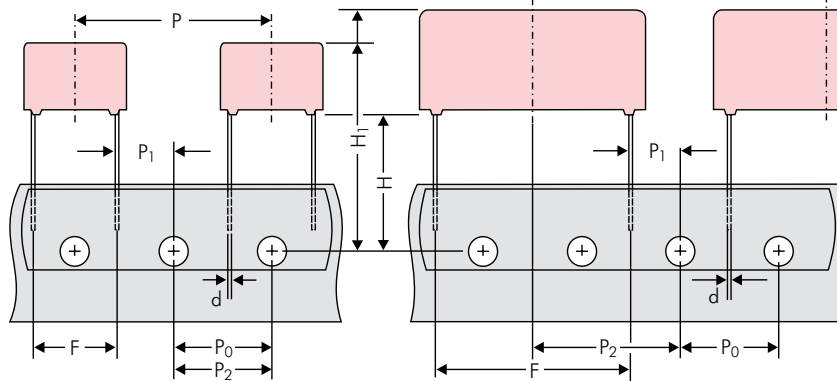


Diagram 2: PCM 10/15 mm

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	0.7 ±0.2	0.7 ±0.2	0.7 ±0.2	0.7 ±0.2	0.7 ±0.2	0.7 ±0.2	0.7 ±0.2
Package (see also page 144)		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 or 66 ±2	REEL ø 500 max. ø 25 ±1	B 54 ±2 60 ±2 or 68 ±2 } depending on PCM and component dimensions
Unit		see details page 145.						

Dims in mm.

* Diameter of pins see General Data.

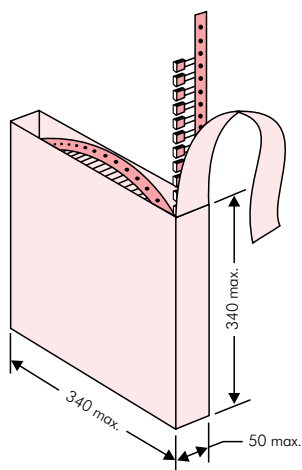
Please clarify customer-specific deviations with the manufacturer.

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

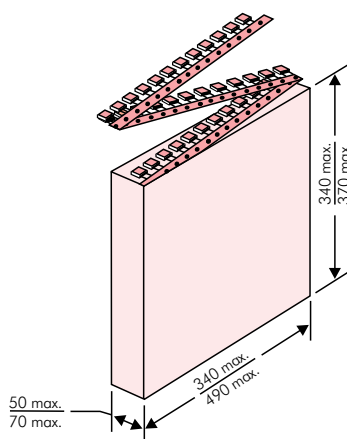
Position of components according to PCM 7.5 (sketch 11). P₀ = 12.7 or 15.0 is possible

Types of Tape Packaging of Capacitors for Automatic Radial Insertion

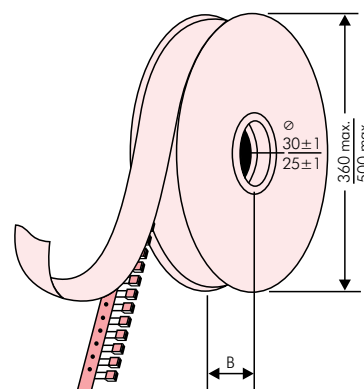
■ ROLL Packaging



■ AMMO Packaging



■ REEL Packaging



BAR CODE (Labelling)

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

Scanner decoding of

- WIMA supplier number
- Customer's P/O number
- Customer's part number
- WIMA confirmation number
- WIMA part number
- Lot number
- Date code
- Quantity

In addition part description of

- article
- capacitance value
- rated voltage
- dimensions
- capacitance tolerance
- packing

as well as gross weight and customer's name are indicated in plain text.

WIMA Best Capacitors Made in Germany		Werk Unna	
Supplier-ID: 123456789	RoHS 2011/65/EU	Date Code: 08.10.10	
Purchase Order No. (P/O): Bestellung xyz		Quantity: 5.000	
Customer Part No.: KUNDETEILENUMMER		Customer No.: 0000100002	Gross Weight [g]: 1870
WIMA Confirmation No.: 0001004053000100		WIMA Part No.: MKS2C034701C00K88D	
Handling Unit:	MKS 2	QTY: 5.000	COO: DE
MKS 2 0.47 μ F 63 VDC 3.5x8.5x7.2 RM5			
Standard 10% Loss - Standard		Drühte 6-2	
1000067326		Week 03/2011	

BARCODE „Code 39“

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			
	H16.5	H18.5	ø 360	ø 500		340 × 340		490 × 370							
	W	H	L	Codes	S	N	O	F	I	H	J	A	C	B	D
2.5 mm	2.5	7	4.6	0B	5000			2500				2800			
	3	7.5	4.6	0C	5000			2300				2300			
	3.8	8.5	4.6	0D	5000			1800				1800			
	4.6	9	4.6	0E	5000			1500				1500			
	5.5	10	4.6	0F	5000			1200				1200			
5 mm	2.5	6.5	7.2	1A	5000			2500				2800			
	3	7.5	7.2	1B	5000			2300				2300			
	3.5	8.5	7.2	1C	5000			2000				2000			
	4.5	6	7.2	1D	6000			1500				1500			
	4.5	9.5	7.2	1E	4000			1500				1500			
	5	10	7.2	1F	3500			1400				1400			
	5.5	7	7.2	1G	4000			1200				1200			
	5.5	11.5	7.2	1H	2500			1200				1200			
	6.5	8	7.2	1I	2500			1000				1000			
	7.2	8.5	7.2	1J	2500			1000				1000			
	7.2	13	7.2	1K	2000			950				1000			
	8.5	10	7.2	1L	2000			800				800			
	8.5	14	7.2	1M	1500			800				800			
	11	16	7.2	1N	1000			600				400			
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		3100	
	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				1200	
	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	
	10	18	19	FG	500			300		650				590	
	11	14	18	4M	1000			300		600				540	
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	ROLL		pcs. per packing unit				AMMO			
								REEL							
	W	H	L	Codes		H16.5	H18.5	ø 360	ø 500	340 x 340	490 x 370				
					S	N	O	F	I	H	J	A	C	B	D
27.5 mm	9	19	31.5	6A	567*	–	–	–	–	460/340*	–	–	–	420	–
	11	21	31.5	6B	459*	–	–	–	–	380/280*	–	–	–	350	–
	13	24	31.5	6D	378*	–	–	–	–	300	–	–	–	290	–
	13	25	33	FK	405*	–	–	–	–	–	–	–	–	–	–
	15	26	31.5	6F	324*	–	–	–	–	270	–	–	–	250	–
	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*	–	–	–	–	–	–	–	–	–	–
	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.

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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 μF				2.5x6.5x7.2		-		20%	bulk	6 -2	
Type description:				Rated voltage:		Capacitance:				Size:		Tolerance:		Packing:			
SMD-PET = SMDT				50 VDC = B0		22 pF = 0022				4.8x3.3x3 Size 1812 = KA		±20% = M		AMMO H16.5 340x340 = A			
SMD-PEN = SMDN				63 VDC = C0		47 pF = 0047				4.8x3.3x4 Size 1812 = KB		±10% = K		AMMO H16.5 490x370 = B			
SMD-PPS = SMDI				100 VDC = D0		100 pF = 0100				5.7x5.1x3.5 Size 2220 = QA		±5% = J		AMMO H18.5 340x340 = C			
FKP 02 = FKPO				250 VDC = F0		150 pF = 0150				5.7x5.1x4.5 Size 2220 = QB		±2.5% = H		AMMO H18.5 490x370 = D			
MKS 02 = MKS0				400 VDC = G0		220 pF = 0220				7.2x6.1x3 Size 2824 = TA		±1% = E		REEL H16.5 360 = F			
FKS 2 = FKS2				450 VDC = H0		330 pF = 0330				7.2x6.1x5 Size 2824 = TB		...		REEL H16.5 500 = H			
FKP 2 = FKP2				520 VDC = H2		470 pF = 0470				10.2x7.6x5 Size 4030 = VA				REEL H18.5 360 = I			
FKS 3 = FKS3				600 VDC = I0		680 pF = 0680				12.7x10.2x6 Size 5040 = XA				REEL H18.5 500 = J			
FKP 3 = FKP 3				630 VDC = J0		1000 pF = 1100				15.3x13.7x7 Size 6054 = YA				ROLL H16.5 = N			
MKS 2 = MKS2				700 VDC = K0		1500 pF = 1150				2.5x7x4.6 PCM 2.5 = 0B				ROLL H18.5 = O			
MKP 2 = MKP2				800 VDC = L0		2200 pF = 1220				3x7.5x4.6 PCM 2.5 = 0C				BLISTER W12 180 = P			
MKS 4 = MKS4				850 VDC = M0		3300 pF = 1330				2.5x6.5x7.2 PCM 5 = 1A				BLISTER W12 330 = Q			
MKP 4C = MKPC				900 VDC = N0		4700 pF = 1470				3x7.5x7.2 PCM 5 = 1B				BLISTER W16 330 = R			
MKP 4 = MKP4				1000 VDC = O1		6800 pF = 1680				2.5x7x10 PCM 7.5 = 2A				BLISTER W24 330 = T			
MKP 10 = MKP1				1100 VDC = P0		0.01 μF = 2100				3x8.5x10 PCM 7.5 = 2B				Bulk/TPS Standard = S			
FKP 1 = FKP1				1200 VDC = Q0		0.022 μF = 2220				3x9x13 PCM 10 = 3A				...			
MKP-X2 = MKX2				1250 VDC = R0		0.047 μF = 2470				4x9x13 PCM 10 = 3C							
MKP-X1 R = MKX1				1500 VDC = S0		0.1 μF = 3100				5x11x18 PCM 15 = 4B							
MKP-Y2 = MKY2				1600 VDC = T0		0.22 μF = 3220				6x12.5x18 PCM 15 = 4C							
MP 3-X2 = MPX2				2000 VDC = U0		0.47 μF = 3470				5x14x26.5 PCM 22.5 = 5A							
MP 3-X1 = MPX1				2500 VDC = V0		1 μF = 4100				6x15x26.5 PCM 22.5 = 5B							
MP 3-Y2 = MPY2				3000 VDC = W0		2.2 μF = 4220				9x19x31.5 PCM 27.5 = 6A							
MP 3R-Y2 = MPRY				4000 VDC = X0		4.7 μF = 4470				11x21x31.5 PCM 27.5 = 6B							
MKP 4F = MKPF				6000 VDC = Y0		10 μF = 5100				9x19x41.5 PCM 37.5 = 7A							
Snubber MKP = SNMP				250 VAC = 0V		22 μF = 5220				11x22x41.5 PCM 37.5 = 7B							
Snubber FKP = SNFP				275 VAC = 1W		47 μF = 5470				19x31x56 PCM 48.5 = 8D							
GTO MKP = GTOM				300 VAC = 2W		100 μF = 6100				25x45x57 PCM 52.5 = 9D							
DC-LINK MKP 3 = DCP3				305 VAC = AV		220 μF = 6220				...							
DC-LINK MKP 4 = DCP4				350 VAC = BV		1000 μF = 7100											
DC-LINK MKP 4S = DCP5				440 VAC = 4W		1500 μF = 7150											
DC-LINK MKP 5 = DCP5				500 VAC = 5W		...											
DC-LINK MKP 6 = DCP6				...													
DC-LINK HC = DCHC																	
DC-LINK HY = DCHY																	
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