

Metallized Paper (MP) RFI-Capacitors Class Y2
in PCM 10 mm to 27.5 mm. Capacitances from 1000 pF to 0.1 µF.
Rated Voltages 250 VAC and 300 VAC.

Special Features

- Particularly high reliability against active and passive flammability
- Excellent self-healing as well as high voltage strength
- Twice the safety by internal series connection (300 VAC)
- High degree of interference suppression due to good attenuation and low ESR
- For temperatures up to +110° C
- According to RoHS 2011/65/EU

Typical Applications

Class Y2 RFI applications to meet EMC regulations

- Capacitors connected to the mains between phase or neutral and earthed casing
- By-passing of the basic or supplementary insulation, pulse peak voltage ≤ 5 kV

Construction

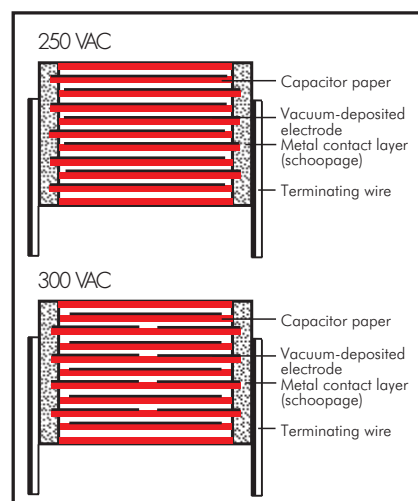
Dielectric:

Paper, epoxy resin impregnated

Capacitor electrodes:

Vacuum-deposited

Internal construction:



Encapsulation:

Self-extinguishing epoxy resin, UL 94 V-0, metal foil

Terminations:

Tinned wire.

Marking:

Marking: Black on Silver.

Electrical Data

Capacitance range:

1000 pF to 0.1 µF (E12-values on request)

Rated voltages:

250 VAC, 300 VAC

Continuous DC voltage* (general guide):

250 VAC: ≤ 1000 V

300 VAC: ≤ 1250 V

Capacitance tolerances: ±20%

Operating temperature range:

−40° C to +110° C

Climatic test category:

250 VAC: 40/110/56/C

300 VAC: 40/110/56/B

in accordance with IEC

Insulation resistance at +20° C:

≥ 12 x 10³ MΩ

Measuring voltage: 100 V/1 min.

Dissipation factors:

$\tan \delta \leq 13 \times 10^{-3}$ at 1 kHz and +20° C

Test specifications:

in accordance with IEC 60384-14

Approvals:

Authority	Specification	Symbol	Approval-No.
UL/Demko	EN 60384-14		ENEC-02833 (250 VAC) ENEC-02399 (300 VAC)
UL	UL 60384-14 CAN/CSA-E60384-14		E 100438

Maximum pulse rise time 250 VAC:

Capacitance pF/µF	Pulse rise time V/µsec max. operation
1000 ... 4700	2500
6800 ... 0.022	1750

Maximum pulse rise time 300 VAC:

Capacitance pF/µF	Pulse rise time V/µsec max. operation
1000 ... 4700	2500
6800 ... 0.015	1850
0.022 ... 0.1	600

for pulses equal to a voltage amplitude

with $\sqrt{2} \times 250 \text{ VAC} = 355 \text{ V}$

with $\sqrt{2} \times 300 \text{ VAC} = 425 \text{ V}$

according to IEC 60384-14

Test voltage: 2400 VDC, 2sec.

Reliability:

Operational life > 300 000 hours

Failure rate < 1 fit (0.5 x 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

* If safety-approved EMI suppression capacitors are operated with a DC voltage being above the specified AC voltage rating the given approvals are no longer valid (IEC 60384-14).

Furthermore the permissible pulse rise time $du/dt (F_{\max.})$ will be subject to a reduction according to

$$F_{\max.} = F_r \times \sqrt{2} \times UAC / UDC$$

if the DC operating voltage UDC is higher than $\sqrt{2} \times UAC$

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	250 VAC*					300 VAC*				
	W	H	L	PCM**	Part number	W	H	L	PCM**	Part number
1000 pF	4	8.5	13.5	10	MPY20W1100FA00_____	5	13	19	15	MPLY2W1100FC00_____
1500 „	4	8.5	13.5	10	MPY20W1150FA00_____	5	13	19	15	MPLY2W1150FC00_____
2200 „	4	8.5	13.5	10	MPY20W1220FA00_____	5	13	19	15	MPLY2W1220FC00_____
3300 „	4	8.5	13.5	10	MPY20W1330FA00_____	5	13	19	15	MPLY2W1330FC00_____
4700 „	5	10	13.5	10	MPY20W1470FB00_____	6	14	19	15	MPLY2W1470FD00_____
6800 „	5	13	19	15	MPY20W1680FC00_____	7	15	19	15	MPLY2W1680FE00_____
0.01 µF	5	13	19	15	MPY20W2100FC00_____	8	17	19	15	MPLY2W2100FF00_____
0.015 „	6	14	19	15	MPY20W2150FD00_____	10	18	19	15	MPLY2W2150FG00_____
0.022 „	7	15	19	15	MPY20W2220FE00_____	8	20	28	22.5	MPLY2W2220FH00_____
0.033 „						8	20	28	22.5	MPLY2W2330FH00_____
0.047 „						10	22	28	22.5	MPLY2W2470FI00_____
0.068 „						12	24	28	22.5	MPLY2W2680FJ00_____
0.1 µF						13	25	33	27.5	MPLY2W3100FK00_____

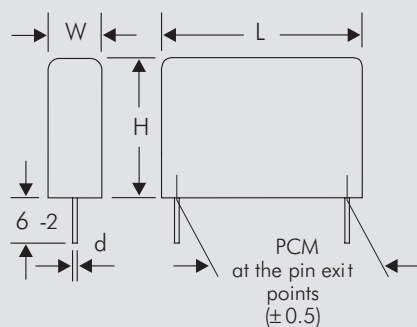
* f = 50/60 Hz

** PCM = Printed circuit module = pin spacing

Upon request with long pins 35-2 mm max.

Dims. in mm.

d = 0.6 ø if PCM 10
d = 0.8 ø if PCM ≥ 15



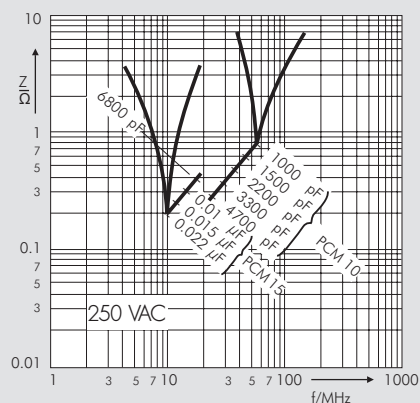
Part number completion:

Tolerance: 20 % = M

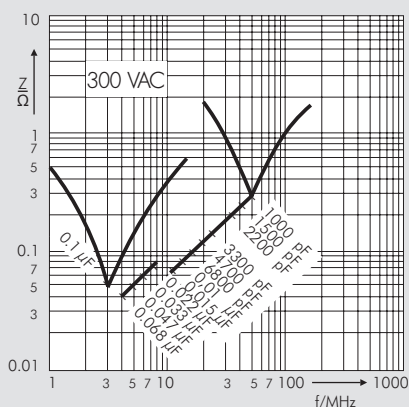
Packing: bulk = S

Pin length: 6-2 = SD

Taped version see page 149.



Impedance change with frequency (general guide)



Impedance change with frequency (general guide)

Rights reserved to amend design data without prior notification.

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

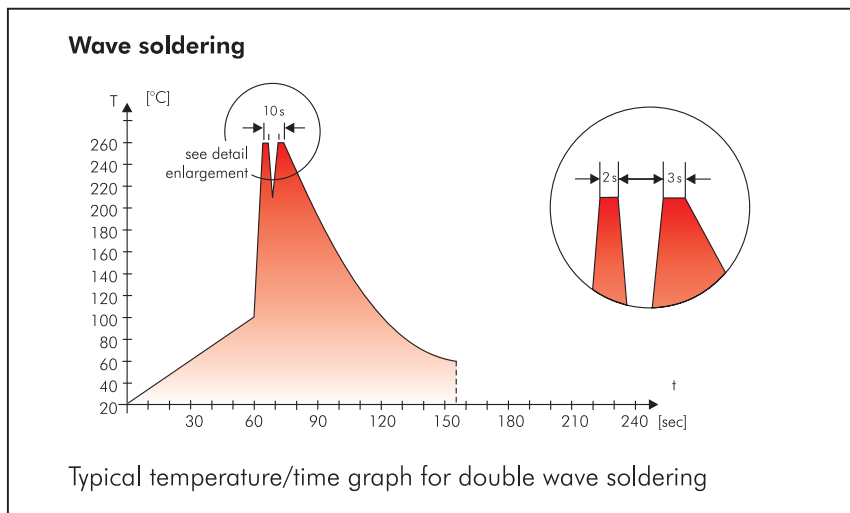
Dwell time: $t < 5\text{ sec}$

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 9001:2015 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

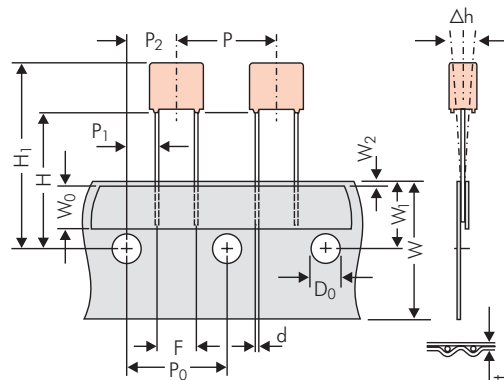


Diagram 1:
PCM 2.5/5/7.5mm

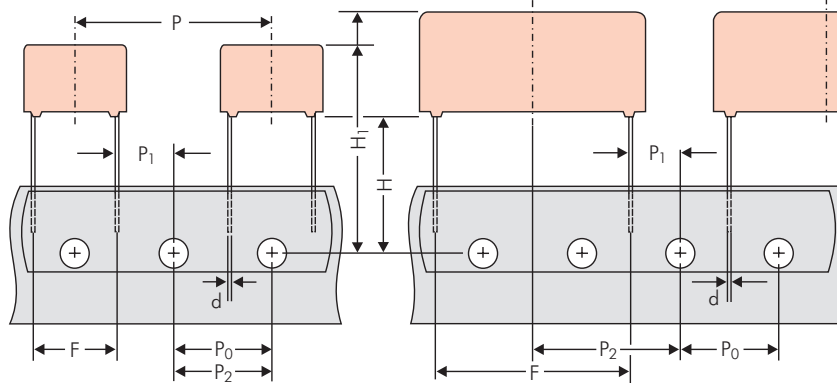


Diagram 2: PCM 10/15 mm

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	16.5 ±0.3	16.5 ±0.5	16.5 ±0.5	16.5 ±0.5	16.5 ±0.5	16.5 ±0.5
		18.5 ±0.5	18.5 ±0.5	18.5 ±0.5	18.5 ±0.5	18.5 ±0.5	18.5 ±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 150)		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	52 ±2 58 ±2 or 66 ±2	REEL Ø 500 max. Ø 25 ±1	54 ±2 60 ±2 or 68 ±2 } depending on PCM and component dimensions
Unit		see details page 151.						

Dims in mm.

* Diameter of pins see General Data.

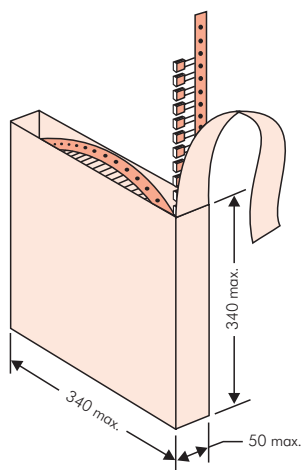
Please clarify customer-specific deviations with the manufacturer.

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

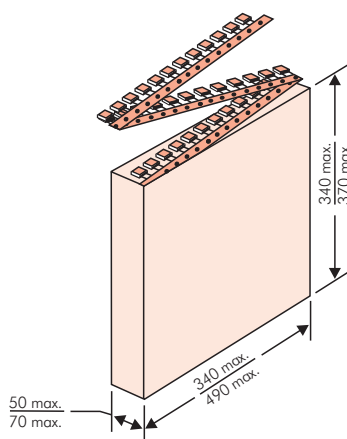
Position of components according to PCM 7.5 (sketch 11). P₀ = 12.7 or 15.0 is possible

Types of Tape Packaging of Capacitors for Automatic Radial Insertion

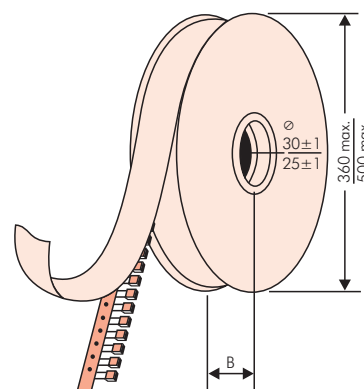
■ ROLL Packaging



■ 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	Vorlage Debitor Inland		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		–		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		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.

Rights reserved to amend design data without prior notification.

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			
						H16.5	H18.5	ø 360		ø 500		340 x 340		490 x 370	
	W	H	L	Codes	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																	