## WIMA FKP 02



Polypropylene (PP) Film/Foil Capacitors for Pulse Applications in PCM 2.5 mm. Capacitances from 100 pF to 0.01 µF. Rated Voltages from 63 VDC to 400 VDC.

#### **Special Features**

- Pulse duty construction
- PCM 2.5 mm
- Close tolerances up to ±2.5%
- Very low dissipation factor
- Negative capacitance change versus temperature
- Very low dielectric absorption
- According to RoHS 2011/65/EU

#### **Typical Applications**

For high frequency applications e.g.

- Sample and hold
- Timing
- LC-Filtering
- Oscillating circuits
- Audio equipment

#### Construction

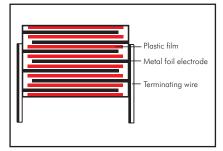
#### **Dielectric:**

Polypropylene (PP) film

#### Capacitor electrodes:

Metal foil

#### 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:

100 pF to 0.01  $\mu$ F (E12-values on request)

#### Rated voltages:

63 VDC, 100 VDC, 250 VDC, 400 VDC

#### Capacitance tolerances:

±20%, ±10%, ±5%, ±2.5%

#### Operating temperature range:

-55° C to +100° C

#### **Test specifications:**

In accordance with IEC 60384-13

#### Climatic test category:

55/100/21 in accordance with IEC

Insulation resistance at +20° C:

 $\geq 3 \times 10^5 M\Omega$ 

Measuring voltage:

 $U_r = 63 \text{ V: } U_{test} = 50 \text{ V/1 min.}$   $U_r \ge 100 \text{ V: } U_{test} = 100 \text{ V/1 min.}$  **Test voltage:**  $2 U_{rr} 2 \text{ sec.}$ 

#### Maximum pulse rise time:

 $1000 \text{ V/}\mu\text{sec}$  for pulses equal to the rated voltage

#### Dielectric absorption:

#### **Temperature coefficient:**

 $-200 \times 10^{-6}$ /° C (typical)

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

at f	C ≤ 0.01 µF
1 kHz 10 kHz 100 kHz	≤ 5 x 10 <sup>-4</sup> ≤ 6 x 10 <sup>-4</sup> ≤ 8 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  $+75^{\circ}$  C for AC voltages.

#### **Reliability:**

Operational life > 300 000 hours Failure rate < 5 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:

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

#### Bump test:

4000 bumps at  $390 \text{ m/sec}^2$  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.

## **WIMA FKP 02**



#### **Continuation**

#### **General Data**

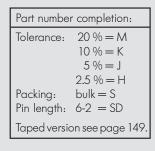
Capacitance	W	H		3 VDC/  PCM**	40 VAC* Part number	100 VDC/63 VAC* W   H   L  PCM**  Part number						
100 pF 150 " 220 " 330 " 470 " 680 "	2.5 2.5 2.5 2.5 2.5 2.5 2.5	7 7 7 7 7	4.6 4.6 4.6 4.6 4.6 4.6	2.5 2.5 2.5 2.5 2.5 2.5 2.5	FKP0C001000B00 FKP0C001500B00 FKP0C002200B00 FKP0C003300B00 FKP0C004700B00 FKP0C006800B00	2.5 2.5 2.5 2.5 2.5 2.5 2.5	7 7 7 7 7	4.6 4.6 4.6 4.6 4.6 4.6	2.5 2.5 2.5 2.5 2.5 2.5 2.5	FKP0D001000B00 FKP0D001500B00 FKP0D002200B00 FKP0D003300B00 FKP0D004700B00 FKP0D006800B00		
1000 pF 1500 " 2200 " 3300 " 4700 " 6800 "	2.5 2.5 3 3.8 4.6 4.6	7 7 7.5 8.5 9	4.6 4.6 4.6 4.6 4.6 4.6	2.5 2.5 2.5 2.5 2.5 2.5 2.5	FKP0C011000B00 FKP0C011500B00 FKP0C012200C00 FKP0C013300D00 FKP0C014700E00 FKP0C016800E00	2.5 2.5 3 3.8 4.6 4.6	7 7 7.5 8.5 9	4.6 4.6 4.6 4.6 4.6 4.6	2.5 2.5 2.5 2.5 2.5 2.5 2.5	FKPOD011000B00 FKP0D011500B00 FKP0D012200C00 FKP0D013300D00 FKP0D014700E00 FKPOD016800E00		
0.01 <b>µ</b> F	5.5	10	4.6	2.5	FKP0C021000F00	5.5	10	4.6	2.5	FKP0D021000F00		

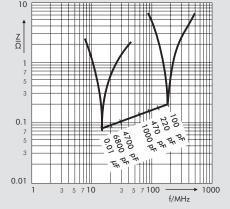
Capacitance			25	0 VDC/	160 VAC*	400 VDC/200 VAC*						
Capacilarice	W	Н	L	PCM**	Part number	W	Н	L	PCM**	Part number		
100 pF	2.5	7	4.6	2.5	FKP0F001000B00	2.5	7	4.6	2.5	FKP0G001000B00		
150 "	2.5	7	4.6	2.5	FKP0F001500B00	2.5	7	4.6	2.5	FKP0G001500B00		
220 "	2.5	7	4.6	2.5	FKP0F002200B00	2.5	7	4.6	2.5	FKP0G002200B00		
330 "	2.5	7	4.6	2.5	FKP0F003300B00	2.5	7	4.6	2.5	FKP0G003300B00		
470 "	2.5	7	4.6	2.5	FKP0F004700B00	2.5	7	4.6	2.5	FKP0G004700B00		
680 "	2.5	7	4.6	2.5	FKP0F006800B00	3	7.5	4.6	2.5	FKP0G006800C00		
1000 pF	2.5	7	4.6	2.5	FKP0F011000B00	3.8	8.5	4.6	2.5	FKP0G011000D00		
1500 "	3	7.5	4.6	2.5	FKP0F011500C00	4.6	9	4.6	2.5	FKP0G011500E00		
2200 "	3.8	8.5	4.6	2.5	FKP0F012200D00	4.6	9	4.6	2.5	FKP0G012200E00		
3300 "	4.6	9	4.6	2.5	FKP0F013300E00	5.5	10	4.6	2.5	FKP0G013300F00		
4700 "	5.5	10	4.6	2.5	FKP0F014700F00							

<sup>\*</sup> AC voltage: f  $\leq$  400 Hz; 1.4 x U  $_{rms}$  + UDC  $\leq$  U  $_{r}$ 

Dims. in mm.

$$d = 0.4 \ \emptyset$$





Impedance change with frequency (general guide).

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The values of the WIMA FKS 02 and WIMA FKM 02 ranges according to the main catalogue 2009 are still available on request.

<sup>\*\*</sup> PCM = Printed circuit module = pin spacing

# Recommendation for Processing and Application of Through-Hole Capacitors



#### **Soldering Process**

Internal temperature of the capacitor must be kept as follows:

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

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

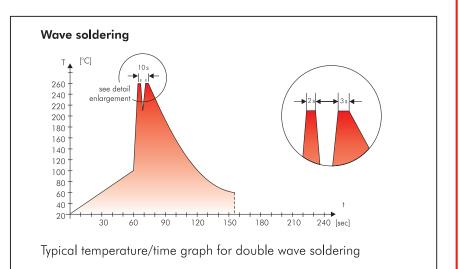
Single wave soldering

Soldering bath temperature: T < 260 ° C Dwell time: t < 5 sec

Double wave soldering

Soldering bath temperature:  $T < 260^{\circ}$  C Dwell time:  $\Sigma t < 5$  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 WPCSI 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.

LeadPBB/PBDEPCBArsenic

etc.

CFC
 Hydrocarbon chloride
 Mercury

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

- carton
- cardboard

- Chromium 6+

- 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 refraind from using such substances since years already.



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**



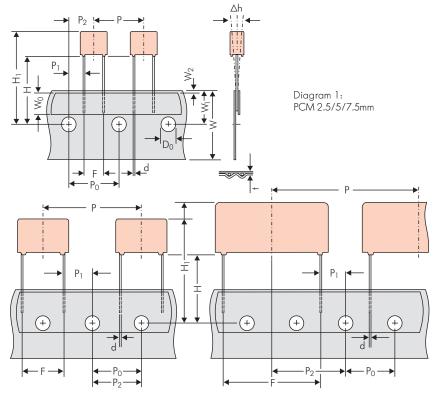


Diagram 2: PCM 10/15 mm

Diagram 3: PCM 22.5 and 27.5\*mm
\*PCM 27.5 taping possible with two feed holes between components

				Dimen	sions for Radial	Taping						
Designation	Symbol	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 <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	Р	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>	cumulative pitch 12.7 ±0.3 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.	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	cumulative 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	Н	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				
edge of the component	- ' '	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 <sub>1</sub>	$H+H_{component} < H_1$ 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 +0.06 -0.05	*0.5 ±0.05 or 0.6 <sup>+0,06</sup> <sub>-0.05</sub>	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.	$\pm$ 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				
6 -		ROLL//	AMMO	AMMO								
Package (see also page 150)		REEL Ø 360 max. Ø 30 ±1	$\left. \begin{array}{c} 8.52 \pm 2 \\ 58 \pm 2 \end{array} \right\}   \begin{array}{c} \text{depending on} \\ \text{comp. dimensions} \end{array}$	REEL \$\ \tilde{g}\$ 360 max. B \$80 \(\pm \)2 or REEL \$\ \tilde{g}\$ 300 \(\pm \)2 or REEL \$\ \tilde{g}\$ 30 \(\pm \)2 or REEL \$\ \tilde{g}\$ 25 \(\pm \)1 & 8 \(\pm \)2 or ROM and component dimensions								
Unit					see details page 151.							

Dims in mm.

PCM 10 and PCM 15 can be crimped to PCM 7.5. Position of components according to PCM 7.5 (sketch 1).  $P_0=12.7$  or 15.0 is possible

Please clarify customer-specific deviations with the manufacturer.

<sup>•</sup> Diameter of pins see General Data.

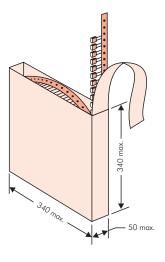
## Types of Tape Packaging of Capacitors for Automatic Radial Insertion

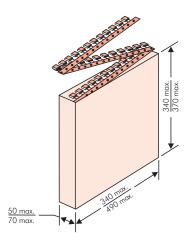


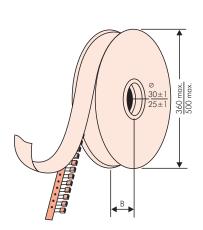
#### ■ ROLL Packaging

## AMMO Packaging

#### **■ REEL Packaging**







## BAR CODE (Labelling)

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

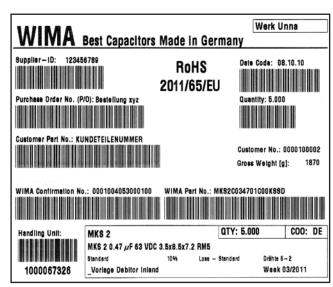
Scanner decoding of

- 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.



BARCODE "Code 39"

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



						pcs. per packing unit										
		Si	ze			RC	LL		RE	EL	. AMMO					
PCM		01.	20		bulk	   ⊔165	Ι μ 1 Ω 5	Ø 30 H16.5		Ø 5 □ □ 1 6 5 <b>1</b>		340 ×		490 ×		
	W	Н	L	Codes	S	<b>N</b>	<b>O</b>	<b>F</b>	<b>I</b>	H	J	<b>A</b>	C	<b>B</b>	<b>D</b>	
	2.5	7	4.6	0B	5000	22		250		-	-	280		_	-	
2.5 mm	3	7.5	4.6	0C	5000	20		230	00	-		2300		-		
2.5 mm	3.8 4.6	8.5 9	4.6 4.6	OD OE	5000 5000	15 12		1800 1500		_	-	1800		_		
	5.5	10	4.6	0F	5000		00	1200		_	-	1500 1200		_	_	
	2.5	6.5	7.2	1A	5000	22		2500		-	-	280		-	_	
	3	7.5	7.2	1B	5000	20		2300		-	-	230		-	-	
	3.5	8.5	7.2	1C	5000	16		200		-	-	200		-	-	
	4.5 4.5	6 9.5	7.2 7.2	1D 1E	6000 4000	13 13		150 150		_	-	150 150				
	5	10	7.2	1F	3500	110		140		_	_	140		_		
5 mm	5.5	7	7.2	1G	4000		00	120	00	-	-	120		-	-	
5 111111	5.5	11.5	7.2	1H	2500	1000		120		-		120		-		
	6.5 7.2	8 8.5	7.2 7.2	11 1J	2500 2500	800 700		100		_	-	100		_		
	7.2	13	7.2	1K	2000		00	95		_	-	100		_	_	
	8.5	10	7.2	1L	2000		00	80	00	-	-		00	-	-	
	8.5	14	7.2	1M	1500		00	80		-	-		00	-		
	2.5	16 7	7.2 10	1N 2A	1000 5000	)	00			4.4			40		-	
	3	8.5	10	2B	5000	_	-	250 220		44 43		250 230		41:		
	4	9	10	2C	4000	-		170		32		1700		310		
7.5 mm	4.5	9.5	10.3	2D	3500	-		150		29		140		27	00	
	5 5.7	10.5	10.3	2E 2F	3000	-	-	130		25		130		-	-	
	7.2	12.5 12.5	10.3 10.3	2F 2G	2000 1500	_	-	100	)()	22 18		110		-		
	3	9	13	3A	3000	-	-	110	00	22		_		190		
	4	8.5	13.5	FA	3000	-		90		16		-			50	
	4	9 9.5	13 13	3C 3D	3000 3000	-	-	90 90		16 16		_		1450 1400		
10 mm	5	10	13.5	FB	2000	-		70		13		_		12		
	5	11	13	3F	3000	-		70	00	13	00	-		120	00	
	6	12	13	3G	2400	-		550		1100		-		10		
	6 8	12.5 12	13 13	3H 3I	2400 2000	-		550 400		1100 800		_		100	40	
	5	11	18	4B	2400	<u> </u>		60		1200		_		1150		
	5	13	19	FC	1000	-	-	60	00	12		_		120		
	6	12.5	18	4C	2000	-	-	50		10		-		100		
	6 7	14 14	19 18	FD 4D	1000 1600	-		50 45		10	00 00	_		10	00 50	
	7	15	19	FE	1000	-	- -	45			00	_			50	
15 mm	8	15	18	4F	1200	-	-	40	00	8	00	_			40	
	8	17	19	FF	500	-	-	40			00	-			40	
	9	14 16	18 18	4H 4J	1200 900	-	-	35 35			00	-			50 50	
	10	18	19	FG	500	-	-	30			50	_			90	
	11	14	18	4M	1000	-	-	30			00	-			40	
	5	14	26.5	5A	1200	-	-	-			00	_			70	
	6	15	26.5	5B	1000	-	-	-			00	-			40	
	7 8	16.5 20	26.5 28	5D FH	760 500		-	_			00	_			50 80	
22.5 mm	8.5	18.5	26.5	5F	500	-	-	_			500 480		-		50	
22.5 IIIII	10	22	28	FI	570*	-	-	_		4	420		-		80	
	10.5	19	26.5	5G	594* 504*	-	-	_			00	-			60	
	10.5 11	20.5 21	26.5 26.5	5H 5I	594* 561*			_			00 80	_	-		60 50	
	12	24	28	FJ	480*	-	-	-			50	-			10	

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

Rights reserved to amend design data without prior notification.

Moulded versions.

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



								рс	s. per p	acking u	ınit					
		Si				RC	LL		RE	EL			AM	MO		
PCM		51	ze		bulk			ø3	360	ø 500		340	× 340	490	× 370	
						H16.5	H18.5	H16.5	H16.5 H18.5		H16.5 H18.5		H16.5 H18.5		H16.5 H18.5	
	W	Н	L	Codes	S	N	0	F	Ι	Н	J	Α	С	В	D	
	9	19	31.5	6A	567*	-	-	_		460/340*		_		420		
	11	21	31.5	6B	459*	-	-	-	-	380/		-	-	350		
	13	24	31.5	6D	378*	-		-	-	3	00	-	-	2	90	
	13	25	33	FK	405*	_		-	-	-	-	-	-		-	
27.5 mm	15	26	31.5	6F	324*	-	-	-	-	2	70	-	-	2	50	
_,,,,	15	26	33	FL	324*	-			-	-	-		-	-	-	
	17 17	29 34.5	31.5 31.5	6G 6I	198* 198*	-			-	-	-	-	-	-	_	
	20	32	33	FM	162*				- -	_	-		_	_		
	20	39.5	31.5	6J	162*	-		_		_		-		-		
	9	19	41.5	7A	441*	_	_	_		-		_		-		
	11	22	41.5	7B	357*	_		-	-	-	-	-	-	-		
	13	24	41.5	7C	294*	-	-	-	-	-	-	-	-	-	-	
	15	26	41.5	7D	252*	-	-	-	-	-	-	-	-	-		
37.5 mm	17 19	29 32	41.5 41.5	7E 7F	154* 140*	-	-	_		-	-	_		_		
37.5 mm	20	39.5	41.5	7F 7G	126*		-	-	_	_		_		_		
	24	45.5	41.5	7H	112*		_	_		_		_		_		
	31	46	41.5	71	84*	_	-	_	_	-	-	-	_	-	_	
	35	50	41.5	7J	35*	_		_		_		-		-		
	40	55	41.5	7K	28*	-	-	-	-	_	-	-		-	-	
	19	31	56	8D	120*	-	-	-	-	-	-	-	-	-	-	
48.5 mm	23	34	56	8E	80*	-	-	-	-	-	-	-	-	-	-	
40.5 mm	27	37.5 48	56 56	8H	84*	-	-	-	-	-	-	-	-	-	-	
	33 37	54	56	8F	25* 25*	_	-		-	_		-		_		
	25	45	57	9D	70*	_	-	_		_		_		_	_	
50.5	30	45	57	9E	60*											
52.5 mm	35	50	57	9F	25*											
	45	55	57	9H	20*	-	-	-	-	-	-	-	-	-	-	
	45	65	57	9J	20*	-	-				-	-		_	_	

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

Updated data on www.wima.com

<sup>\*</sup> for 2-inch transport pitches.
\* TPS (Tray-Packing-System). Plate versions may have different packing units. Samples and pre-production needs on request.

### -WIMA Part Number System



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

Packing Field 16:

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	С	0	2	1	0	0	1	Α	0	0	М	S	S	D
	MKS 2			63 \	/DC		0.0	lμF		2.5×6.	.5×7.2		-	20%	bulk	6	-2

l		<b>.</b>		l	l
Type description:		Rated voltage:	Capacitance:	Size:	Tolerance:
	SMDT	50  VDC = B0	22  pF = 0022	$4.8 \times 3.3 \times 3$ Size $1812 = KA$	$\pm 20\% = M$
	SMDN	63  VDC = C0	47  pF = 0047	4.8 x 3.3 x 4 Size 1812 = KB	$\pm 10\% = K$
	SMDI	100  VDC = D0	100  pF = 0100	$5.7 \times 5.1 \times 3.5$ Size $2220 = QA$	$\pm 5\%$ = J
	FKP0	250  VDC = FO	150  pF = 0150	$5.7 \times 5.1 \times 4.5$ Size $2220 = QB$	$\pm 2.5\% = H$
		400  VDC = G0	220  pF = 0220	$7.2 \times 6.1 \times 3$ Size 2824 = TA	$\pm 1\% = E$
	FKS2	450  VDC = H0	330  pF = 0330	7.2 x 6.1 x 5 Size 2824 = TB	
1	FKP2	520  VDC = H2	470  pF = 0470	$10.2 \times 7.6 \times 5$ Size $4030 = VA$	
FKS 3 =	FKS3	600  VDC = 10	680  pF = 0680	12.7x 10.2x6 Size 5040 = XA	
FKP 3 =	FKP 3	630  VDC = J0	1000  pF = 1100	$15.3 \times 13.7 \times 7$ Size $6054 = YA$	Packing:
MKS 2 =	MKS2	700  VDC = KO	1500  pF = 1150	$2.5 \times 7 \times 4.6 \text{ PCM } 2.5 = 0B$	AMMO H16.5 $340 \times 340 = A$
MKP 2 =	MKP2	800  VDC = 10	2200  pF = 1220	$3 \times 7.5 \times 4.6 \text{ PCM } 2.5 = 0 \text{C}$	AMMO H16.5 $490 \times 370 = B$
MKS 4 =	MKS4	850  VDC = M0	3300  pF = 1330	$2.5 \times 6.5 \times 7.2 \text{ PCM}5 = 1A$	AMMO H18.5 $340 \times 340 = C$
MKP 4C =	MKPC	900  VDC = N0	4700  pF = 1470	$3 \times 7.5 \times 7.2 \text{ PCM} 5 = 18$	AMMO H18.5 $490 \times 370 = D$
MKP 4 =	MKP4	1000  VDC = O1	6800  pF = 1680	$2.5 \times 7 \times 10 \text{ PCM } 7.5 = 2A$	REEL H16.5 360 = F
MKP 10 =	MKP1	1100  VDC = P0	$0.01  \mu F = 2100$	$3 \times 8.5 \times 10 \text{ PCM } 7.5 = 2B$	REEL H16.5 500 = H
FKP 1 =	FKP1	1200  VDC = Q0	$0.022  \mu F = 2220$	$3 \times 9 \times 13 \text{ PCM } 10 = 3A$	REEL H18.5 360 =
MKP-X2 =	MKX2	1250  VDC = R0	$0.047  \mu F = 2470$	$4 \times 9 \times 13 \text{ PCM } 10 = 3C$	REEL H18.5 500 = J
MKP-X1R =	MKX1	1500  VDC = S0	$0.1  \mu F = 3100$	$5 \times 11 \times 18 \text{ PCM } 15 = 4B$	ROLL H16.5 = N
	MKY2	1600  VDC = T0	$0.22  \mu F = 3220$	$6 \times 12.5 \times 18 \text{ PCM } 15 = 4 \text{ C}$	ROLL H18.5 = O
MP 3-X2 $=$	MPX2	2000  VDC = U0	$0.47  \mu F = 3470$	$5 \times 14 \times 26.5 \text{ PCM } 22.5 = 5A$	BLISTER W12 180 $= P$
MP 3-X1 =	MPX1	2500  VDC = V0	$1 \mu F = 4100$	$6 \times 15 \times 26.5 \text{ PCM } 22.5 = 5B$	BLISTER W12 330 $= Q$
MP $3-Y2 =$	MPY2	3000  VDC = W0	$2.2  \mu F = 4220$	$9 \times 19 \times 31.5 \text{ PCM } 27.5 = 6A$	BLISTER W16 330 $= R$
MP 3R-Y2 =	MPRY	4000  VDC = X0	$4.7  \mu F = 4470$	$11 \times 21 \times 31.5 \text{ PCM } 27.5 = 6B$	BLISTER W24 330 $=$ T
MKP 4F =	MKPF	6000 VDC = Y0	$10  \mu F = 5100$	$9 \times 19 \times 41.5 \text{ PCM} 37.5 = 7A$	Bulk/TPS Standard = S
Snubber MKP =		250  VAC = 0W	$22  \mu F = 5220$	$11 \times 22 \times 41.5 \text{ PCM} 37.5 = 7B$	
Snubber FKP =		275  VAC = 1 W	$47  \mu F = 5470$	$19 \times 31 \times 56$ PCM $48.5 = 8D$	
		300  VAC = 2W	$100  \mu F = 6100$	$25 \times 45 \times 57$ PCM $52.5 = 9D$	
DC-LINK MKP 3 =		305  VAC = AVV	$220  \mu F = 6220$	l	
DC-LINK MKP 4 =		350  VAC = BW	$1000  \mu F = 7100$		
DC-LINKMKP4S =		440  VAC = 4VV	$1500  \mu F = 7150$	Vancian and a	Discharged (see to see al)
DC-LINK MKP 5 =		500  VAC = 5W		Version code:	Pin length (untaped)
DC-LINK MKP 6 =				Standard = 00	$3.5 \pm 0.5 = C9$
	DCHC			Version A1 $= 1A$	6-2 = SD
DC-LINK HY =	DCHY			Version A1.1.1 = 1B	$16 \pm 1 = P1$

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.

Version A1.1.1 = 1BVersion A2 = 2A

Pin length (taped)