

Metallized Paper (MP) RFI-Capacitors Class X2 PCM 10 mm to 27.5 mm

Special Features

- Particularly high reliability against active and passive flammability
- Excellent self-healing as well as high voltage strength
- High degree of interference suppression due to good attenuation and low ESR
- For temperatures up to +110° C
- According to RoHS 2002/95/EC

Typical Applications

Class X2 RFI applications to meet EMC regulations

- Capacitors connected to the mains between phase and neutral or phase and phase conductors
- Installation category II in accordance with IEC 60664, pulse peak voltage ≤ 2.5 kV

Construction

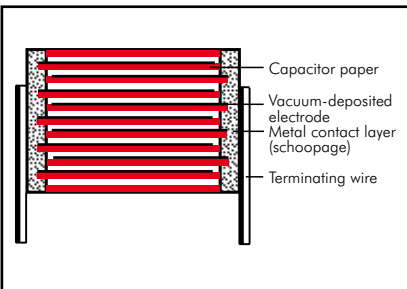
Dielectric:

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 1.0 μ F (E12-values on request)

Rated voltages: 250 VAC, 275 VAC

Continuous DC voltage* (general guide): ≤ 630 V

Capacitance tolerances: $\pm 20\%$

Operating temperature range:

-40° C to +110° C

Climatic test category:

40/110/56/C in accordance with IEC

Insulation resistance at +20° C:

$C \leq 0.33 \mu\text{F}$: $\geq 12 \times 10^3 \text{ M}\Omega$

$C > 0.33 \mu\text{F}$: $\geq 4000 \text{ sec (M}\Omega \times \mu\text{F)}$

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 DIN EN 60384-14

Approvals:

Country	Authority	Specification	Symbol	Approval-No. 250 VAC	Approval-No. 275 VAC
Germany	VDE	DIN EN 132 400 IEC 60384-14/2		89749	89749
USA	UL	UL 1283		E 100438	E 100438
Canada	CSA	C 22.2 No. 8		LR 93312-1	LR 93312-1

Maximum pulse rise time:

Capacitance pF/ μ F	Pulse rise time V/ μ sec max. operation
1000	1100
1500	1100
2200 ... 4700	500
6800 ... 0.022	300
0.033 ... 0.047	200
0.068 ... 1.0	100

for pulses equal to a voltage amplitude with $\sqrt{2} \times \text{UAC} = 390$ V

according to IEC 60384-14

Test voltage: 2700 VDC, 2 sec.

Reliability:

Operational life > 300 000 hours

Failure rate < 1 fit ($0.5 \times \text{U}_r$ and 40° C)

Mounting Recommendation

To minimize or avoid shock and/or vibration stresses to terminating wires and solder connections we recommend to fix voluminous resin-potted MP capacitors as from e.g. PCM 22.5 mm in an appropriate way since for constructional reasons they do not sit tight on the board.

* 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 (DIN EN 60384-14).

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

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

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

Packing

Available taped and reeled up to and including PCM 22.5 mm.

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

For further details and graphs please refer to Technical Information.

Continuation

General Data

Capacitance	250 VAC*					275 VAC*				
	W	H	L	PCM**	Part number	W	H	L	PCM**	Part number
1000 pF	4	8.5	13.5	10	MPX20W1100FA00_____	4	8.5	13.5	10	MPX21W1100FA00_____
1500 „	4	8.5	13.5	10	MPX20W1150FA00_____	4	8.5	13.5	10	MPX21W1150FA00_____
2200 „	4	8.5	13.5	10	MPX20W1220FA00_____	4	8.5	13.5	10	MPX21W1220FA00_____
3300 „	4	8.5	13.5	10	MPX20W1330FA00_____	4	8.5	13.5	10	MPX21W1330FA00_____
4700 „	5	10	13.5	10	MPX20W1470FB00_____	5	10	13.5	10	MPX21W1470FB00_____
6800 „	5	13	19	15	MPX20W1680FC00_____	5	13	19	15	MPX21W1680FC00_____
0.01 µF	5	13	19	15	MPX20W2100FC00_____	5	13	19	15	MPX21W2100FC00_____
0.015 „	5	13	19	15	MPX20W2150FC00_____	5	13	19	15	MPX21W2150FC00_____
0.022 „	5	13	19	15	MPX20W2220FC00_____	5	13	19	15	MPX21W2220FC00_____
0.033 „	6	14	19	15	MPX20W2330FD00_____	6	14	19	15	MPX21W2330FD00_____
0.047 „	7	15	19	15	MPX20W2470FE00_____	7	15	19	15	MPX21W2470FE00_____
0.068 „	8	17	19	15	MPX20W2168FF00_____	8	17	19	15	MPX21W2680FF00_____
0.1 µF	10	18	19	15	MPX20W3100FG00_____	10	18	19	15	MPX21W3100FG00_____
	8	20	28	22.5	MPX20W3100FH00_____	8	20	28	22.5	MPX21W3100FH00_____
0.15 „	8	20	28	22.5	MPX20W3150FH00_____	8	20	28	22.5	MPX21W3150FH00_____
0.22 „	10	22	28	22.5	MPX20W3220FI00_____	10	22	28	22.5	MPX21W3220FI00_____
0.33 „	12	24	28	22.5	MPX20W3330FJ00_____	12	24	28	22.5	MPX21W3330FJ00_____
0.47 „	13	25	33	27.5	MPX20W3470FK00_____	13	25	33	27.5	MPX21W3470FK00_____
0.68 „	15	26	33	27.5	MPX20W3680FL00_____	15	26	33	27.5	MPX21W3690FL00_____
1.0 µF	20	32	33	27.5	MPX20W4100FM00_____	20	32	33	27.5	MPX21W4100FM00_____

* f = 50/60 Hz

** PCM = Printed circuit module = lead spacing

Upon request with long leads 35-2 mm max.

Dims. in mm.

Part number completion:

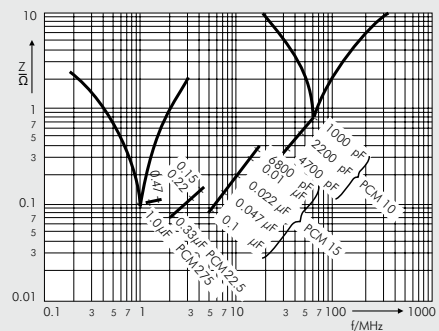
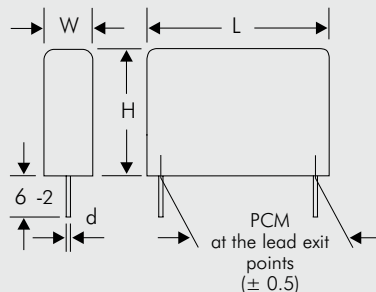
Tolerance: 20 % = M

Packing: bulk = S

Lead length: 6-2 = SD

Taped version see page 140.

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



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

A preheating of through-hole WIMA capacitors is allowed for temperatures $T_{\max} < 100^{\circ}\text{C}$. In practice a preheating duration of $t < 5$ min. has been proven to be best.

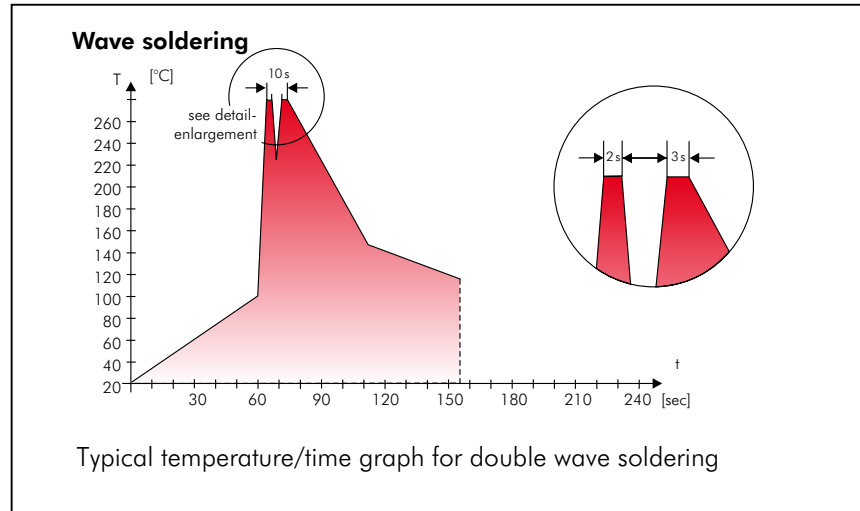
Single wave soldering

Soldering bath temperature: $T < 260^{\circ}\text{C}$
Immersion time: $t < 5$ sec

Double wave soldering

Soldering bath temperature: $T < 260^{\circ}\text{C}$
Immersion time: $2 \times t < 3$ 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 9001:2000 Certification

ISO 9001:2000 is an international basic standard of quality assurance systems for all branches of industry. The approval according to ISO 9001:2000 of our factories by the VDE inspectorate 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
- lead attachment
- cast resin preparation/encapsulation
- 100% final inspection
- AQL check

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:

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

RoHS Compliance

According to the RoHS Directive 2002/95/EC 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 2002/95/EG

WIMA capacitors are lead free in accordance with RoHS 2002/95/EC

Tape for lead-free WIMA capacitors

DIN EN ISO 14001:2005

WIMA's environmental management has been established in accordance with the guidelines of DIN EN ISO 14001:2005. The certification has been granted in June 2006.

Typical Dimensions for Taping Configuration

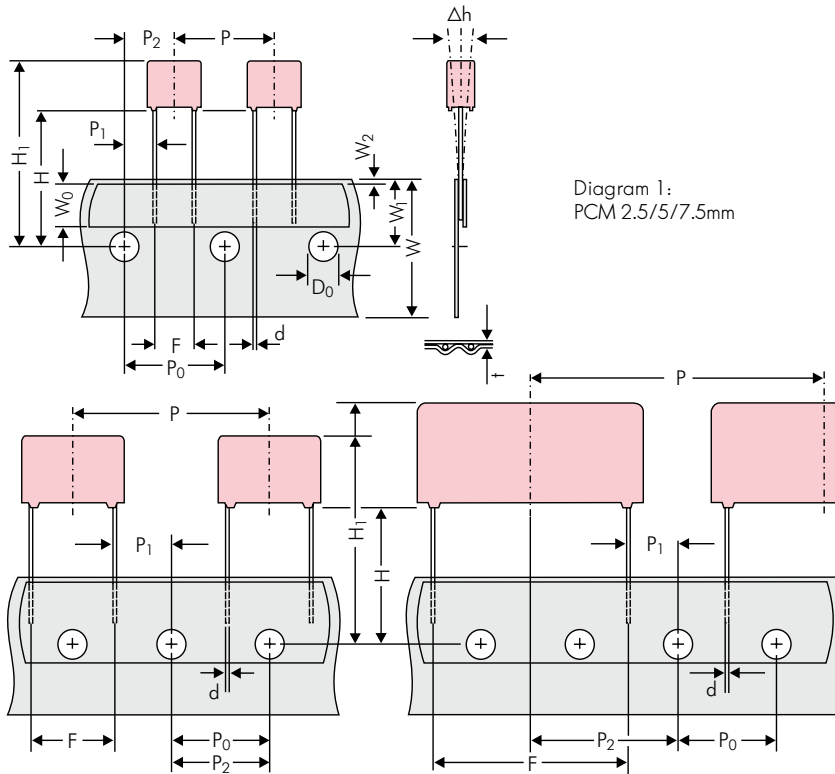


Diagram 2: PCM 10/15 mm

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 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 lead	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				
Lead 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				
Lead 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 141)	ROLL/AMMO			AMMO								
	REEL	φ 360 max. φ 30 ±1	B 52 ±2 58 ±2	depending on comp. dimensions		REEL	φ 360 max. φ 30 ±1	B 52 ±2 58 ±2 or 66 ±2	REEL	φ 500 max. φ 25 ±1	B 60 ±2 68 ±2	depending on PCM and component dimensions
Unit	see details page 143.											

Dims in mm.

* Diameter of leads 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). P₀ = 12.7 or 15.0 is possible



Packing Quantities for Bulk Capacitors and TPS*

PCM	Size				pcs. per packaging unit bulk			pcs. per packaging unit/TPS*	
	W	H	L	Codes	Mini M	Standard S	Maxi G	Mini X	Standard Y
2.5 mm	2.5	7	4.6	0B	1000	5000	10 000	-	-
	3	7.5	4.6	0C	1000	5000	10 000	-	-
	3.8	8.5	4.6	0D	1000	5000	10 000	-	-
	4.6	9	4.6	0E	1000	5000	10 000	-	-
	5.5	10	4.6	0F	1000	5000	10 000	-	-
5 mm	2.5	6.5	7.2	1A	2000	5000	10 000	-	-
	3	7.5	7.2	1B	1000	5000	-	-	-
	3.5	8.5	7.2	1C	1000	5000	-	-	-
	4.5	6	7.2	1D	1000	6000	-	-	-
	4.5	9.5	7.2	1E	1000	4000	-	-	-
	5	10	7.2	1F	1000	3500	-	-	-
	5.5	7	7.2	1G	1000	4000	-	-	-
	5.5	11.5	7.2	1H	500	2500	-	-	-
	6.5	8	7.2	1I	1000	2500	-	-	-
	7.2	8.5	7.2	1J	500	2500	-	-	-
	7.2	13	7.2	1K	500	2000	-	-	-
	8.5	10	7.2	1L	500	2000	-	-	-
	8.5	14	7.2	1M	500	1500	-	-	-
11	16	7.2	1N	250	1000	-	-	-	
7.5 mm	2.5	7	10	2A	1000	5000	-	-	-
	3	8.5	10	2B	1000	5000	-	-	-
	4	9	10	2C	1000	4000	-	-	-
	4.5	9.5	10.3	2D	1000	3500	-	-	-
	5	10.5	10.3	2E	1000	3000	-	-	-
	5.7	12.5	10.3	2F	500	2000	-	-	-
	7.2	12.5	10.3	2G	500	1500	-	-	-
10 mm	3	9	13	3A	1000	3000	-	-	-
	4	8.5	13.5	3A	500	3000	-	-	-
	4	9	13	3C	1000	3000	-	-	-
	4	9.5	13	3D	1000	3000	-	-	-
	5	10	13.5	3B	500	2000	-	-	-
	5	11	13	3F	1000	3000	-	-	-
	6	12	13	3G	800	2400	-	-	-
	6	12.5	13	3H	800	2400	-	-	-
8	12	13	3I	500	2000	-	-	-	
15 mm	5	11	18	4B	800	2400	-	-	-
	5	13	19	4C	200	1000	-	-	-
	6	12.5	18	4C	500	2000	-	-	-
	6	14	19	4D	250	1000	-	-	-
	7	14	18	4D	400	1600	-	-	-
	7	15	19	4E	250	1000	-	-	-
	8	15	18	4H	400	1200	-	-	-
	8	17	19	4F	100	500	-	-	-
	9	14	18	4F	400	1200	-	-	-
	9	16	18	4J	300	900	-	-	-
	10	18	19	4G	100	500	-	-	-
11	14	18	4M	300	1000	-	-	-	
22.5 mm	5	14	26.5	5A	300	1200	-	-	-
	6	15	26.5	5B	250	1000	-	-	-
	7	16.5	26.5	5D	190	760	-	-	-
	8	20	28	5H	-	-	-	115	690
	8.5	18.5	26.5	5F	-	-	-	220	880
	10	22	28	5I	-	-	-	90	540
	10.5	19	26.5	5G	-	-	-	170	680
	10.5	20.5	26.5	5H	-	-	-	170	680
	11	21	26.5	5I	-	-	-	170	680
12	24	28	5J	-	-	-	75	450	
27.5 mm	9	19	31.5	6A	-	-	-	160	640
	11	21	31.5	6B	-	-	-	136	544
	13	24	31.5	6D	-	-	-	112	448
	13	25	33	6K	-	-	-	56	336
	15	26	31.5	6F	-	-	-	96	384
	15	26	33	6L	-	-	-	48	288
	17	29	31.5	6G	-	-	-	88	176
	17	34.5	31.5	6I	-	-	-	88	176
	20	32	33	6M	-	-	-	36	216
	20	39.5	31.5	6J	-	-	-	36	144
37.5 mm	9	19	41.5	7A	-	-	-	60	480
	11	22	41.5	7B	-	-	-	51	408
	13	24	41.5	7C	-	-	-	84	252
	15	26	41.5	7D	-	-	-	72	144
	17	29	41.5	7E	-	-	-	66	132
	19	32	41.5	7F	-	-	-	54	108
	20	39.5	41.5	7G	-	-	-	27	108
	24	45.5	41.5	7H	-	-	-	21	84

Rights reserved to amend design data without prior notification.
Samples and pre-production needs on request.

■ Moulded versions.

* Tray-Packing-System

Packing Units for Taped Capacitors with Radial Leads



PCM	Size				ROLL		REEL				AMMO			
					H16.5	H18.5	ø 360		ø 500		340 × 340		490 × 370	
	W	H	L	Codes	N	O	F	I	H	J	A	C	B	D
2.5 mm	2.5	7	4.6	0B	2200		2500				2800			
	3	7.5	4.6	0C	2000		2300				2300			
	3.8	8.5	4.6	0D	1500		1800				1800			
	4.6	9	4.6	0E	1200		1500				1500			
	5.5	10	4.6	0F	900		1200				1200			
5 mm	2.5	6.5	7.2	1A	2200		2500				2800			
	3	7.5	7.2	1B	2000		2300				2300			
	3.5	8.5	7.2	1C	1600		2000				2000			
	4.5	6	7.2	1D	1300		1500				1500			
	4.5	9.5	7.2	1E	1300		1500				1500			
	5	10	7.2	1F	1100		1400				1400			
	5.5	7	7.2	1G	1000		1200				1200			
	5.5	11.5	7.2	1H	1000		1200				1200			
	6.5	8	7.2	1I	800		1000				1000			
	7.2	8.5	7.2	1J	700		1000				1000			
	7.2	13	7.2	1K	700		950				1000			
	8.5	10	7.2	1L	600		800				800			
	8.5	14	7.2	1M	600		800				800			
11	16	7.2	1N	500		700				700				
7.5 mm	2.5	7	10	2A			2500		4400		2500			
	3	8.5	10	2B			2200		4300		2300		4150	
	4	9	10	2C			1700		3200		1700		3100	
	4.5	9.5	10.3	2D			1500		2900		1400		2800	
	5	10.5	10.3	2E			1300		2500		1300			
	5.7	12.5	10.3	2F			1000		2200		1100			
	7.2	12.5	10.3	2G			900		1800		1000			
10 mm	3	9	13	3A			1100		2200				1900	
	4	8.5	13.5	FA			900		1600				1450	
	4	9	13	3C			900		1600				1450	
	4	9.5	13	3D			900		1600				1400	
	5	10	13.5	FB			700		1300				1200	
	5	11	13	3F			700		1300				1200	
	6	12	13	3G			550		1100				1000	
	6	12.5	13	3H			550		1100				1000	
8	12	13	3I			400		800				740		
15 mm	5	11	18	4B			600		1200				1150	
	5	13	19	FC			600		1200				1200	
	6	12.5	18	4C			500		1000				1000	
	6	14	19	FD			500		1000				1000	
	7	14	18	4D			450		900				850	
	7	15	19	FE			450		900				850	
	8	15	18	4H			400		800				740	
	8	17	19	FF			400		800				740	
	9	14	18	4F			350		700				650	
	9	16	18	4J			350		700				650	
10	18	19	FG			300		650				590		
11	14	18	4M			300		600				540		
22.5 mm	5	14	26.5	5A					800				770	
	6	15	26.5	5B					700				640	
	7	16.5	26.5	5D					600				550	
	8	20	28	FH					500				480	
	8.5	18.5	26.5	5F					480				450	
	10	22	28	FI					420				380	
	10.5	19	26.5	5G					400				360	
	10.5	20.5	26.5	5H					400				360	
	11	21	26.5	5I					380				350	
	12	24	28	FJ					350				310	
27.5 mm	9	19	31.5	6A					460/340*				420	
	11	21	31.5	6B					380/280*				350	
	13	24	31.5	6D					300				290	
	15	26	31.5	6F					270				250	

* for 2-inch transport pitches.

Samples and pre-production needs 1 packing unit minimum.

■ Moulded versions.

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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: Special features (e.g. Snubber versions)
- Field 15: Capacitance tolerance
- Field 16: Packing
- Field 17 - 18: Lead 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	16 VDC = A0	22 pF = 0022	4.8x3.3x3 Size 1812 = X1	20% = M	AMMO H16.5 340x340 = A
SMD-PEN = SMDN	2.5 VDC = A1	47 pF = 0047	4.8x3.3x4 Size 1812 = X2	10% = K	AMMO H16.5 490x370 = B
SMD-PPS = SMDI	4 VDC = A2	100 pF = 0100	5.7x5.1x3.5 Size 2220 = Y1	5% = J	AMMO H18.5 340x340 = C
FKP 02 = FKPO	14 VDC = A3	150 pF = 0150	5.7x5.1x4.5 Size 2220 = Y2	2.5% = H	AMMO H18.5 490x370 = D
MKS 02 = MKS0	28 VDC = A4	220 pF = 0220	7.2x6.1x3 Size 2824 = T1	1% = E	REEL H16.5 360 = F
FKS 2 = FKS2	40 VDC = A5	330 pF = 0330	7.2x6.1x5 Size 2824 = T2	...	REEL H16.5 500 = H
FKM 2 = FKM2	5 VDC = A6	470 pF = 0470	10.2x7.6x5 Size 4030 = K1		REEL H18.5 360 = I
FKP 2 = FKP2	50 VDC = B0	680 pF = 0680	12.7x10.2x6 Size 5040 = V1		REEL H18.5 500 = J
MKS 2 = MKS2	63 VDC = C0	1000 pF = 1100	15.3x13.7x7 Size 6054 = Q1		ROLL H16.5 = N
MKP 2 = MKP2	100 VDC = D0	1500 pF = 1150	2.5x7x4.6 PCM 2.5 = 0B		ROLL H18.5 = O
MKI 2 = MKI2	160 VDC = E0	2200 pF = 1220	3x7.5x4.6 PCM 2.5 = 0C		BLISTER W12 180 = P
FKS 3 = FKS3	250 VDC = F0	3300 pF = 1330	2.5x6.5x7.2 PCM 5 = 1A		BLISTER W12 330 = Q
FKM 3 = FKM3	400 VDC = G0	4700 pF = 1470	3x7.5x7.2 PCM 5 = 1B		BLISTER W16 330 = R
FKP 3 = FKP3	450 VDC = H0	6800 pF = 1680	2.5x7x10 PCM 7.5 = 2A		BLISTER W24 330 = T
MKS 4 = MKS4	600 VDC = I0	0.01 µF = 2100	3x8.5x10 PCM 7.5 = 2B		Bulk Mini = M
MKM 4 = MKM4	630 VDC = J0	0.022 µF = 2220	3x9x13 PCM 10 = 3A		Bulk Standard = S
MKP 4 = MKP4	700 VDC = K0	0.047 µF = 2470	4x9x13 PCM 10 = 3C		Bulk Maxi = G
MKP 10 = MKP1	800 VDC = L0	0.1 µF = 3100	5x11x18 PCM 15 = 4B		TPS Mini = X
FKP 4 = FKP4	850 VDC = M0	0.22 µF = 3220	6x12.5x18 PCM 15 = 4C		TPS Standard = Y
FKP 1 = FKP1	900 VDC = N0	0.47 µF = 3470	5x14x26.5 PCM 22.5 = 5A		...
MKP-X2 = MKX2	1000 VDC = O1	1 µF = 4100	6x15x26.5 PCM 22.5 = 5B		
MKP-X2 R = MKXR	1100 VDC = P0	2.2 µF = 4220	9x19x31.5 PCM 27.5 = 6A		
MKP-Y2 = MKY2	1200 VDC = Q0	4.7 µF = 4470	11x21x31.5 PCM 27.5 = 6B		
MP 3-X2 = MPX2	1250 VDC = R0	10 µF = 5100	9x19x41.5 PCM 37.5 = 7A		
MP 3-X1 = MPX1	1500 VDC = S0	22 µF = 5220	11x22x41.5 PCM 37.5 = 7B		
MP 3-Y2 = MPY2	1600 VDC = T0	47 µF = 5470	94x49x182 DCH_ = H0		
MP 3R-Y2 = MPRY	2000 VDC = U0	100 µF = 6100	94x77x182 DCH_ = H1		
Snubber MKP = SNMP	2500 VDC = V0	220 µF = 6220	...		
Snubber FKP = SNFP	3000 VDC = W0	1 F = A010			
GTO MKP = GTOM	4000 VDC = X0	2.5 F = A025			
DC-LINK MKP 4 = DCP4	6000 VDC = Y0	50 F = A500			
DC-LINK MKP C = DCPC	250 VAC = 0W	100 F = B100	Special features:		
DC-LINK HC = DCH_	275 VAC = 1W	110 F = B110	Standard = 00		Lead length (untaped)
SuperCap C = SCSC	300 VAC = 2W	600 F = B600	Version A1 = 1A		3.5 ±0.5 = C9
SuperCap MC = SCMC	400 VAC = 3W	1200 F = C120	Version A1.1.1 = 1B		6-2 = SD
SuperCap R = SCSR	440 VAC = 4W	...	Version A1.2 = 1C		16-1 = P4
SuperCap MR = SCMR	500 VAC = 5W

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.