

# PFC Input Capacitors

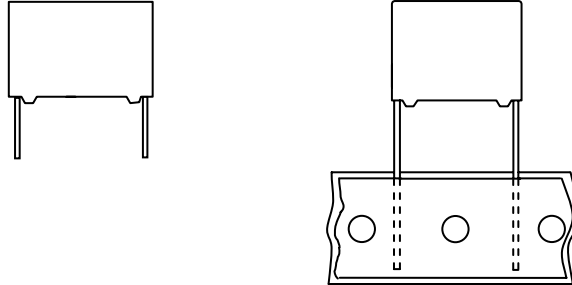
## Metallized Polypropylene film capacitors

PCMP 372

(MPP)

MKP RADIAL POTTED CAPACITORS

Pitch 10.0/15.0/22.5/27.5mm



### QUICK REFERENCE DATA

Capacitance range (E6 series)	0.022 to 2.2 $\mu$ F
Capacitance tolerance	$\pm 5\%$ , $\pm 10\%$
Rated voltage (DC)	450V, 500V, 630 V
Climatic category	40/105/21
Temperature range	-40 $^{\circ}$ C ~ + 105 $^{\circ}$ C
Reference specification	IEC 60384-16
Potting & Encapsulation material	Qualified in accordance with UL94V-0

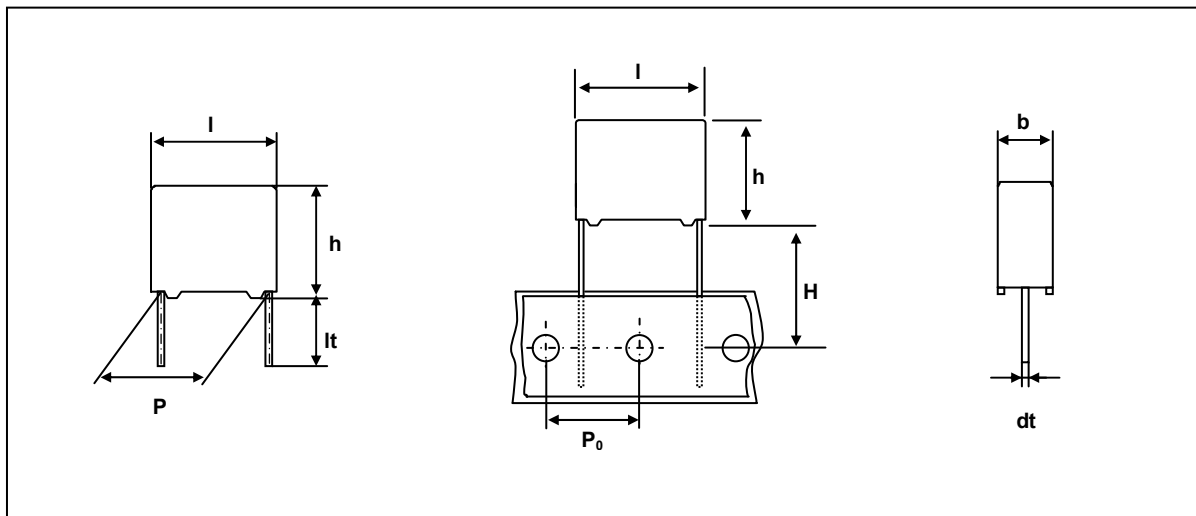
<h4>FEATURES</h4> <ul style="list-style-type: none"> <li>. Low-noise</li> <li>. Self-healing properties</li> <li>. Low dissipation factor</li> <li>. Low ESR</li> <li>. Supplied loose in box &amp; ammo packing</li> </ul>	<h4>APPLICATIONS</h4> <ul style="list-style-type: none"> <li>. PFC Input Capacitor for LCD/PDP power</li> </ul>
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- Please refer to caution and warning at <http://www.pilkor.co.kr/download/Introductions.pdf> before using these products.

**PFC Input Capacitors**  
**Metallized Polypropylene film capacitors**

**PCMP 372**  
**(MPP)**

**Ordering Information**



PCMP 372 X X X X X X

Type series

Capacitance

Code	Voltage
R	450V mini
U	500V mini
Q	630V mini

Code	Pitch
D	10.0mm
F	15.0mm
J	22.5mm
L	27.5mm

Available versions					Product ( $I_{max}$ )			
code	Packing method	C - tol.	Lead length & Height	Hole to hole ( $P_0$ )	12.5	18.0	26.0	31.0
					Pitch (P)			
3	Loose in box	$\pm 5\%$	$lt = 5.0 \pm 1.0mm$	-	10.0	15.0	22.5	27.5
4	Loose in box	$\pm 10\%$	$lt = 5.0 \pm 1.0mm$	-	10.0	15.0	22.5	27.5
5	Loose in box	$\pm 5\%$	$lt = 25 \pm 2.0mm$	-	10.0	15.0	22.5	27.5
6	Loose in box	$\pm 10\%$	$lt = 25 \pm 2.0mm$	-	10.0	15.0	22.5	27.5
7	Ammopack	$\pm 5\%$	$H = 18.5 mm^*$	12.7mm	10.0	15.0	22.5	27.5
8	Ammopack	$\pm 10\%$	$H = 18.5 mm^*$	12.7mm	10.0	15.0	22.5	27.5

\* H(In-tape height) ; For detailed specifications refer to chapter PACKAGING

## Packaging Information

SMALLEST PACKING QUANTITIES ( SPQ )	Loose in box	
	It = 5.0±1.0mm	It = 25.0±2.0mm
DIMENSIONS	SPQ	SPQ
4.0 X 10.0 X 12.5	2000	1200
5.0 X 11.0 X 12.5	1500	1000
6.0 X 12.0 X 12.5	1000	1000
5.0 X 11.0 X 18.0	1000	1000
6.0 X 12.0 X 18.0	1000	1000
7.0 X 13.5 X 18.0	1000	1000
8.5 X 15.0 X 18.0	1000	1000
10.0 X 16.5 X 18.0	1000	1000
11.0 X 18.5 X 18.0	1000	1000
6.0 X 15.5 X 26.0	1000	1000
7.0 X 16.5 X 26.0	1000	1000
8.5 X 18.0 X 26.0	500	500
10.0 X 19.5 X 26.0	500	500
11.5 X 21.0 X 26.0	500	500
12.5 X 22.5 X 26.0	500	500
13.0 X 23.0 X 26.0	500	500
11.0 X 21.0 X 31.0	500	250
13.0 X 23.0 X 31.0	250	250
15.0 X 25.0 X 31.0	250	250
18.0 X 28.0 X 31.0	200	200

## PFC Input Capacitors

PCMP 372

## Metallized Polypropylene film capacitors

(MPP)

 $V_{Rdc} = 450V \text{ \& } 500V$ 

mini type

Cap. ( $\mu F$ )	b x h x l (mm)	Mass (g)	CATALOGUE NUMBER	
			PCMP 372.....	
			loose in box	
			450V mini	500V mini
			lt= 5.0 $\pm$ 1.0 mm	lt= 5.0 $\pm$ 1.0 mm
C – tol. $\pm$ 10%		C – tol. $\pm$ 10%		
Pitch = 10.0 $\pm$ 0.4 mm			dt = 0.6 + 0.06 / -0.05 mm	
0.10	4.0 x 10.0 x 12.5	0.8	PCMP 372DR4104	PCMP 372DU4104
0.15	5.0 x 11.0 x 12.5	0.8	PCMP 372DR4154	PCMP 372DU4154
0.22	5.0 x 11.0 x 12.5	0.9	PCMP 372DR4224	PCMP 372DU4224
0.33	6.2 x 12.3 x 12.5	1.0	PCMP 372DR4334	PCMP 372DU4334
Pitch = 15.0 $\pm$ 0.4 mm			dt = 0.8 + 0.08 / -0.05 mm	
0.22	5.0 x 11.0 x 18.0	1.2	PCMP 372FR4224	PCMP 372FU4224
0.33	5.0 x 11.0 x 18.0	1.2	PCMP 372FR4334	PCMP 372FU4334
0.47	6.0 x 12.0 x 18.0	1.4	PCMP 372FR4474	PCMP 372FU4474
0.56	7.0 x 13.5 x 18.0	1.9	PCMP 372FR4564	PCMP 372FU4564
0.68	8.5 x 15.0 x 18.0	2.6	PCMP 372FR4684	PCMP 372FU4684
0.82	8.5 x 15.0 x 18.0	2.6	PCMP 372FR4824	PCMP 372FU4824
1.0	8.5 x 15.0 x 18.0	2.6	*PCMP 372FR4105	*PCMP 372FU4105
1.0	10.0 x 16.5 x 18.0	3.1	**PCMP 372FR3105	**PCMP 372FU3105
1.5	11.0 x 18.5 x 18.0	4.1	PCMP 372FR4155	PCMP 372FU4155
Pitch = 22.5 $\pm$ 0.4 mm			dt = 0.8 + 0.08 / -0.05 mm	
0.47	6.0 x 15.5 x 26.0	3.0	PCMP 372JR4474	PCMP 372JU4474
0.56	6.0 x 15.5 x 26.0	3.0	PCMP 372JR4564	PCMP 372JU4564
0.68	6.0 x 15.5 x 26.0	3.0	PCMP 372JR4684	PCMP 372JU4684
0.82	7.0 x 16.5 x 26.0	3.5	PCMP 372JR4824	PCMP 372JU4824
1.0	7.0 x 16.5 x 26.0	3.5	PCMP 372JR4105	PCMP 372JU4105
1.5	8.5 x 18.0 x 26.0	4.4	PCMP 372JR4155	PCMP 372JU4155
2.2	10.0 x 19.5 x 26.0	5.5	PCMP 372JR4225	PCMP 372JU4225

\* 10% tolerance products only / \*\* 5% tolerance products only

## PFC Input Capacitors

PCMP 372

## Metallized Polypropylene film capacitors

(MPP)

 $V_{Rdc} = 630 V$ 

mini type

Cap. ( $\mu F$ )	b x h x l (mm)	Mass (g)	CATALOGUE NUMBER	
			PCMP 372.....	
			loose in box	
			It= 5.0 $\pm$ 1.0 mm	It= 25.0 $\pm$ 2.0 mm
			C - tol. $\pm$ 10%	C - tol. $\pm$ 10%
Pitch = 10.0 $\pm$ 0.4 mm			dt = 0.6 + 0.06 / -0.05 mm	
0.022	4.0 x 10.0 x 12.5	0.8	PCMP 372DQ4223	PCMP 372DQ6223
0.033	5.0 x 11.0 x 12.5	0.9	PCMP 372DQ4333	PCMP 372DQ6333
0.047	5.0 x 11.0 x 12.5	0.9	PCMP 372DQ4473	PCMP 372DQ6473
0.068	5.0 x 11.0 x 12.5	0.9	PCMP 372DQ4683	PCMP 372DQ6683
0.10	5.0 x 11.0 x 12.5	0.9	PCMP 372DQ4104	PCMP 372DQ6104
0.15	6.0 x 12.0 x 12.5	0.9	PCMP 372DQ4154	PCMP 372DQ6154
0.22	6.2 x 12.3 x 12.5	1.0	PCMP 372DQ4224	PCMP 372DQ6224
Pitch = 15.0 $\pm$ 0.4 mm			dt = 0.8 + 0.08 / -0.05 mm	
0.10	5.0 x 11.0 x 18.0	1.2	PCMP 372FQ4104	PCMP 372FQ6104
0.15	5.0 x 11.0 x 18.0	1.2	PCMP 372FQ4154	PCMP 372FQ6154
0.22	6.0 x 12.0 x 18.0	1.4	PCMP 372FQ4224	PCMP 372FQ6224
0.33	7.0 x 13.5 x 18.0	1.9	PCMP 372FQ4334	PCMP 372FQ6334
0.47	8.5 x 15.0 x 18.0	2.6	PCMP 372FQ4474	PCMP 372FQ6474
0.68	10.0 x 16.5 x 18.0	3.1	PCMP 372FQ4684	PCMP 372FQ6684
0.82	11.0 x 18.5 x 18.0	4.1	PCMP 372FQ4824	PCMP 372FQ6824
1.0	11.0 x 18.5 x 18.0	4.1	PCMP 372FQ4105	PCMP 372FQ6105
Pitch = 22.5 $\pm$ 0.4 mm			dt = 0.8 + 0.08 / -0.05 mm	
0.47	7.0 x 16.5 x 26.0	3.5	PCMP 372JQ4474	PCMP 372JQ6474
0.68	7.0 x 16.5 x 26.0	3.5	PCMP 372JQ4684	PCMP 372JQ6684
0.82	8.5 x 18.0 x 26.0	4.4	PCMP 372JQ4824	PCMP 372JQ6824
1.0	8.5 x 18.0 x 26.0	4.4	PCMP 372JQ4105	PCMP 372JQ6105
1.5	10.0 x 19.5 x 26.0	5.5	PCMP 372JQ4155	PCMP 372JQ6155
2.2	13.0 x 23.0 x 26.0	8.0	PCMP 372JQ4225	PCMP 372JQ6225

**MOUNTING**

## NORMAL USE

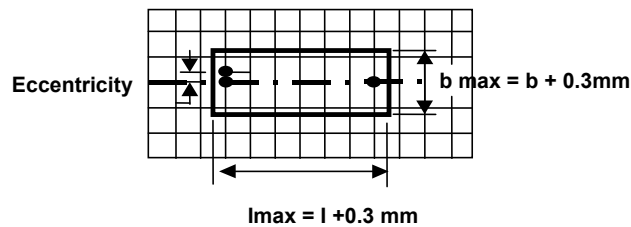
The capacitors are designed for mounting on printed-circuit boards. The capacitors packed in bandoliers are designed for mounting on printed-circuit boards by means of automatic insertion machines.

## SPECIFIC METHOD OF MOUNTING TO WITHSTAND VIBRATION AND SHOCK

- . For pitches of 15 mm the capacitors shall be mechanically fixed by the leads
- . For larger pitches the capacitors shall be mounted in the same way and the body clamped.

**SPACE REQUIREMENTS ON PRINTED-CIRCUIT BOARD**

The maximum length and width of film capacitors are shown in the following drawing ;



- Eccentricity as in drawing.

The maximum eccentricity is smaller than or equal to the lead diameter of the product concerned.

- Product height with seating plane as given by IEC 60717 as reference :  $h_{\max} \leq h + 0.3 \text{ mm}$

**STORAGE TEMPERATURE**

. Storage temperature :  $T_{stg} = -25$  to  $+40^{\circ}\text{C}$  with RH maximum 80% without condensation.

**RATINGS AND CHARACTERISTICS**

Unless otherwise specified all electrical values apply at an ambient temperature of  $23 \pm 1^{\circ}\text{C}$ , an atmospheric pressure of 86 to 106kPa and a relative humidity of  $50 \pm 2\%$ .

For reference testing a conditioning period shall be applied of  $96 \pm 4$  hours by heating the products in a circulating air oven at the rated temperature and a relative humidity not exceeding 20%.

**CHARACTERISTICS**● **Test Voltage**

- Cut off current 10mA / rise time 100V/sec.
- Test Voltage ( between lead and lead ) :  $1.6 \times V_{Rdc}$ , 1min.
- Test Voltage ( between leads and case ) :  $2840 V_{dc}$ , 1min.

● **Capacitance**

. Capacitance : Within specified tolerance range when sine wave AC is applied at  $1\text{kHz} \pm 200\text{Hz}$  and  $5V_{rms}$

● **Dissipation Factor(DF)**

. Dissipation factor: When sine wave AC is applied at 10kHz and  $\leq 1 V_{rms}$ ,  $DF < 20 \times 10^{-4}$

● **Insulation Resistance**

. The insulation resistance is measured for 1min.  $\pm 5s$ , at 100V for  $V_{Rdc} < 500V$ , at 500V for  $V_{Rdc} \geq 500V$

Rated voltage	Minimum RC	Minimum Insulation Resistance
	Capacitance > 0.33uF	Capacitance $\leq$ 0.33uF
450V mini/ 500V mini/ 630V mini	> 10,000s	> 30G $\Omega$

( R = insulation resistance between the terminations [ $\Omega$ ], C= capacitance[Farad] )

● **Self heating temperature**

. Maximum allowable rise is  $7^{\circ}\text{C}$

● **Rated Voltage Pulse Load Slope(dV/dt)<sub>R</sub>**

. For values see specific reference data. IF the pulse voltage is lower than the rated voltage, the values of the specific reference data must be multiplied by  $V_{Rdc}$  and divided by the applied voltage.

Rated voltage	MAXIMUM RATED VOLTAGE PULSE SLOPE (V/ $\mu$ s)			
	P = 10.0 mm	P = 15.0 mm	P = 22.5 mm	P = 27.5 mm
450V mini/ 500V mini	150	95	60	-
630V mini	270	141	85	65

**PRODUCT MARKING**

The capacitors are marked with the following informations :

- . Rated capacitance in code according to IEC 60062 ( 680n ; 680nF )
- . Tolerance on rated capacitance ( J :  $\pm 5\%$ , K :  $\pm 10\%$  )
- . Rated DC voltage ( 630V )
- . Manufacturer's mark ( PILKOR )
- . Manufacturer's type designation ( 372 )
- . Code for dielectric material ( MKP )
- . Date code number ( WK.... )

**Example of marking**

Pitch = 10.0mm

220n K 450V 372 MKP .... PILKOR
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Marking on the side

Pitch = 15.0mm

470n K 630V 372 MKP
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Marking on the top

PILKOR WK....
------------------

Marking on the side

Pitch = 22.5mm or 27.5mm

680n K 630V 372 MKP
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Marking on the top

PILKOR WK....
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Marking on the side

or

680n K 630V PILKOR 372 MKP WK....
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Marking on the top

Pitch = 27.5mm

2u2 K 630V 372 MKP .... PILKOR
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Marking on the top