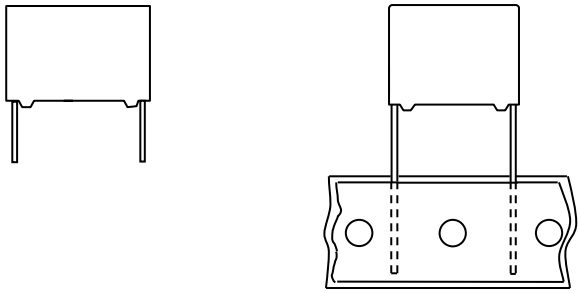
PFC Input Capacitors PCMP 352
Metallized Polypropylene film capacitors (MPP)

MKP BOXED CAPACITORS **Pitch 10.0/15.0mm**



QUICK REFERENCE DATA

Capacitance range (E6 series)	0. 22 to 2.2μF
Capacitance tolerance	±5%, ±10%
Rated voltage (DC)	450V
Climatic category	40/105/21
Temperature range	-40℃ ~ + 105℃
Reference specification	IEC 60384-16
Potting & Encapsulation material	Qualified in accordance with UL94V-0

FEATURES	APPLICATIONS
. Low-noise	. PFC Input Capacitor for LCD/PDP TV power
. Self-healing properties	. PFC Input Capacitor for LED lamp power
. Low dissipation factor	. Peak to peak voltage applied on the capacitor
. Low ESR	should be less than 300 Vp-p, and zero to peak
. Supplied loose in box	voltage should be less than 450 Vo-p.
. Miniature type of PCMP 372	

- Design and specifications are subjected to change without notice. Please refer to caution and warning at http://www.pilkor.co.kr/sub/download/Introductions.pdf before using these products.

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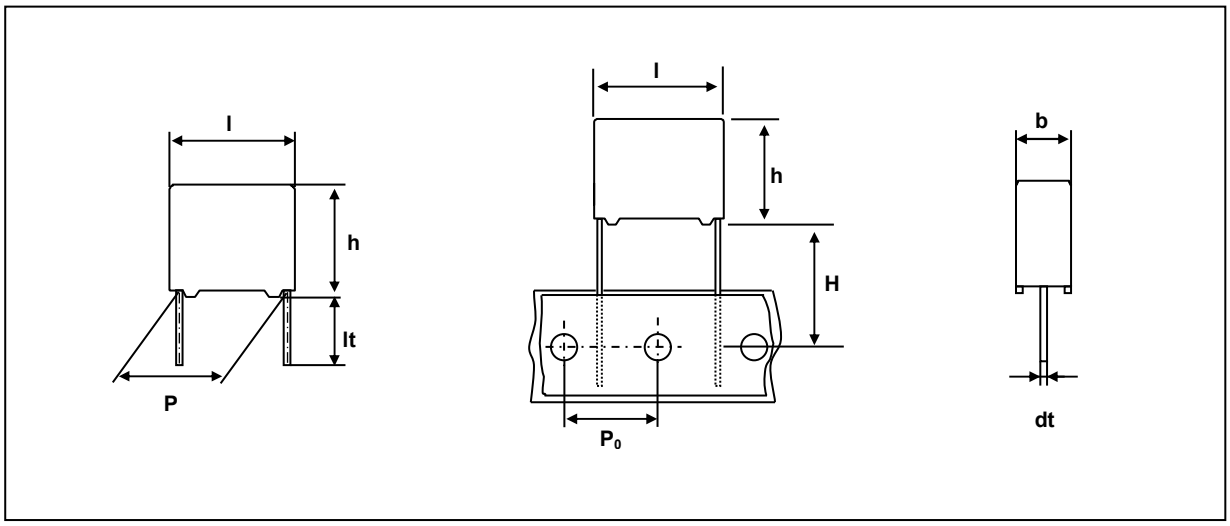
Ordering Information



P	3	5	2	D	4	5	4	7	4	K	A	S	L
1				2	3		4			5	6	7	

Digits 1	
Code	Series Name
P352	PCMP 352

Digits 2	
Code	Original Pitch
D	10.0mm
F	15.0mm

Digits 3	
Code	Voltage
45	450V

Digits 4	
Code	Capacitance (example)
474	0.47uF
105	1.0uF

Digits 5	
Code	Capacitance Tolerance
J	± 5 %
K	± 10 %

Digits 6	
Code	Revision
A	Standard

Digits 7				Product(lmax)	
				12.5	18.0
Code	Packing Method	Lead length & Height	Hole to hole (Po)	Pitch(P)	
SL	Loose in box	lt= 5.0±1.0mm	-	10.0	15.0
LL	Loose in box	lt=25.0±2.0mm	-	10.0	15.0
AA	Ammo packing	H=18.5mm*	12.7mm	10.0	15.0

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

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Packaging Information

SMALLEST PACKING QUANTITIES (SPQ)	Loose in box	
	lt = 5.0± 1.0mm	lt = 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

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V_{Rdc} = 450 V

Cap. (μF)	b x h x l (mm)	Mass (g)	CATALOGUE NUMBER loose in box	
			lt= 5.0 ± 1.0 mm	lt= 25.0 ± 2.0 mm
			C – tol. ± 10%	C – tol. ± 10%
Pitch = 10.0 ± 0.4 mm			dt = 0.6 + 0.06 / -0.05 mm	
0.22	4.0 x 10.0 x 12.5	0.8	P352D45224KASL	P352D45224KALL
0.27	5.0 x 11.0 x 12.5	1.0	P352D45274KASL	P352D45274KALL
0.33	5.0 x 11.0 x 12.5	1.0	P352D45334KASL	P352D45334KALL
0.39	6.0 x 12.0 x 12.5	1.3	P352D45394KASL	P352D45394KALL
0.47	6.0 x 12.0 x 12.5	1.3	P352D45474KASL	P352D45474KALL
Pitch = 15.0 ± 0.4 mm			dt = 0.8 + 0.08 / -0.05 mm	
0.47	5.0 x 11.0 x 18.0	1.4	P352F45474KASL	P352F45474KALL
0.56	6.0 x 12.0 x 18.0	1.8	P352F45564KASL	P352F45564KALL
0.68	6.0 x 12.0 x 18.0	1.8	P352F45684KASL	P352F45684KALL
0.82	7.0 x 13.5 x 18.0	2.2	P352F45824KASL	P352F45824KALL
1.0	7.0 x 13.5 x 18.0	2.2	P352F45105KASL	P352F45105KALL
1.2	8.5 x 15.0 x 18.0	2.9	P352F45125KASL	P352F45125KALL
1.5	8.5 x 15.0 x 18.0	2.9	P352F45155KASL	P352F45155KALL
1.8	10.0 x 16.5 x 18.0	3.6	P352F45185KASL	P352F45185KALL
2.2	11.0 x 18.5 x 18.0	4.4	P352F45225KASL	P352F45225KALL

Original pitch	New Code	Old Code	Example
10.0mm	P352D45xxxxxxx	P352HADxxxxxxx	P352HAF105KALJ
15.0mm	P352F45xxxxxxx	P352HAFxxxxxxx	⇒ P352F45105KASL

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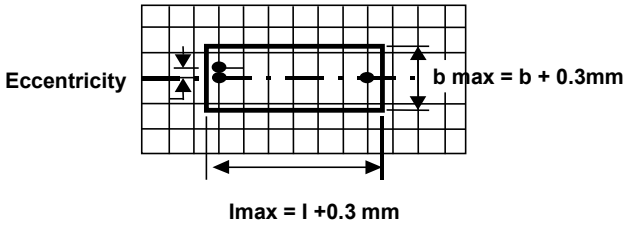
MOUNTING

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 VIBRATIONAND 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+0.3mm

STORAGE TEMPERATURE

. Storage temperature : T_{stg} = -25 to +40℃ with RH maximum 80% without condensation.

RATINGS AND CHARACTERISTICS

Unless otherwise specified all electrical values apply at an ambient temperature of 23 ±1℃, an atmospheric pressure of 86 to 106kPa and a relative humidity of 50 ±2%.
For reference testing a conditioning period shall be applied of 96 ±4 hours by heating the products in a circulating air oven at the rated temperature and a relative humidity not exceeding 20%.

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CHARACTERISTICS

● **Test Voltage**
- Cut off current 10mA / rise time 100V/sec.
- Test Voltage (between lead and lead) : 1.6 x 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 1kHz ±200Hz and 5V_{rms}

● **Dissipation Factor(DF)**

. Dissipation factor: When sine wave AC is applied at 10kHz and ≤1 V_{rms}, DF<30X10^{-4}

● **Insulation Resistance**

. The insulation resistance is measured for 1min.±5s, at 100V for V_{Rdc}<500V, at 500V for V_{Rdc}≥500V

Rated voltage	Minimum RC	Minimum Insulation Resistance
	Capacitance > 0.33uF	Capacitance ≤ 0.33uF
450V	> 10,000s	> 30GΩ

(R = insulation resistance between the terminations[Ω] , C= capacitance[Farad])

● **Rated Voltage Pulse Load Slope($dV/dt)_R$**

. For values see specific reference data. IF the pulse voltage is lower than the rated voltage, 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/μs)	
	P = 10.0 mm	P = 15.0 mm
450V	47.5	47.5

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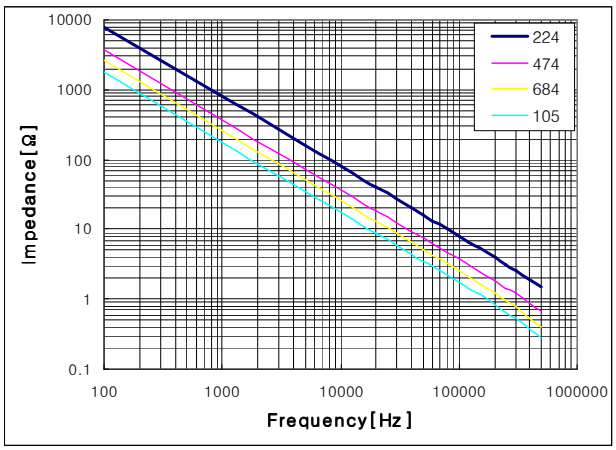
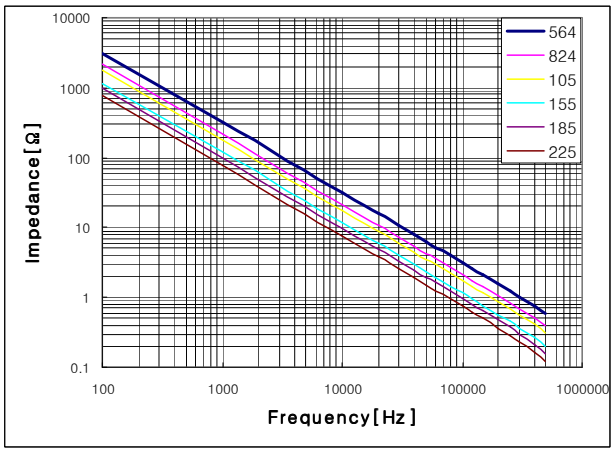
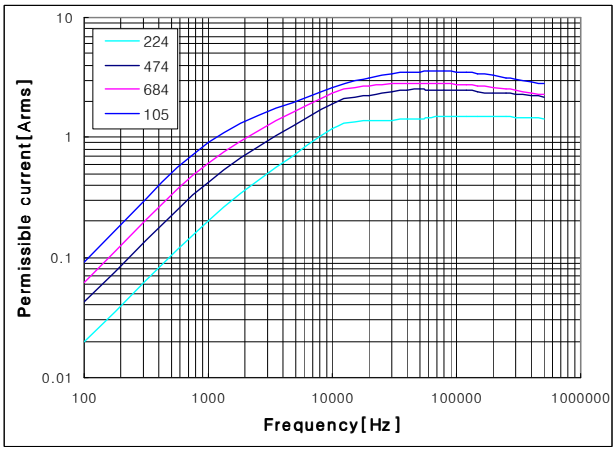
THE GRAPHS OF CHARACTERISTICS



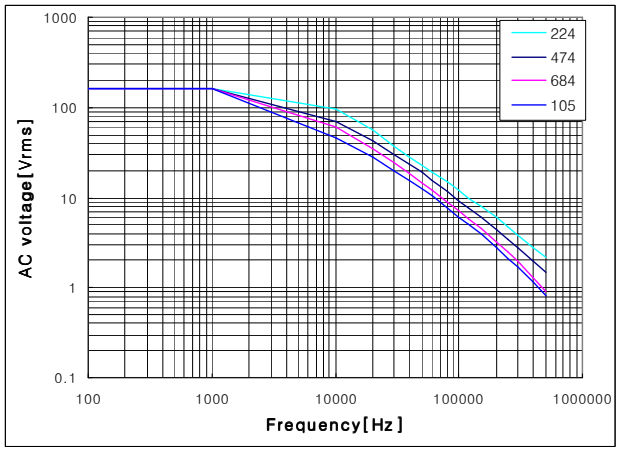
Impedance as a function of frequency
at $T_{amb.}$ ≤ 85℃ for original pitch 10.0mm



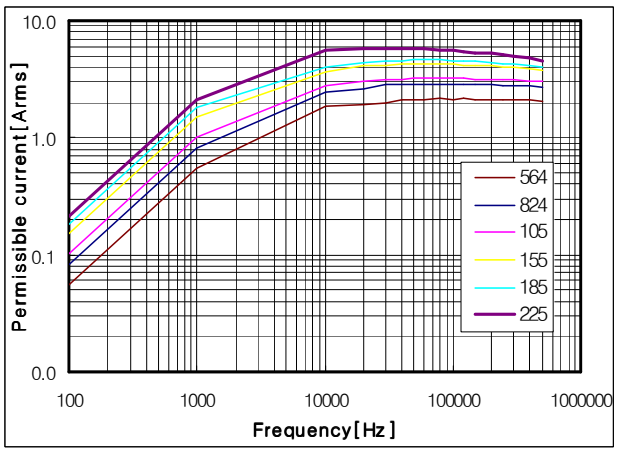
Impedance as a function of frequency
at $T_{amb.}$ ≤ 85℃ for original pitch 15.0mm



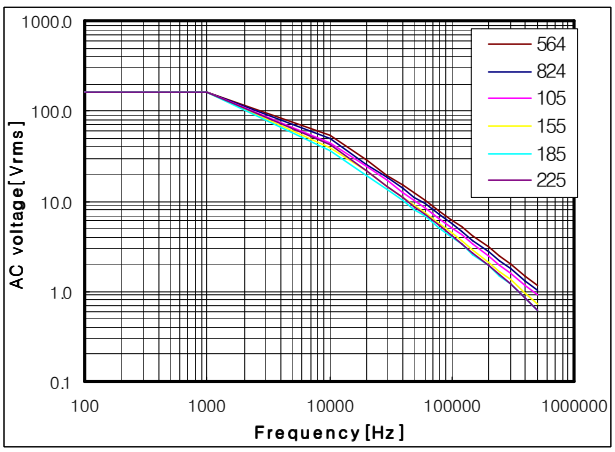
Permissible current as a function of frequency
at $T_{amb.}$ ≤ 85℃ for original pitch 10.0mm



AC voltage as a function of frequency
at $T_{amb.}$ ≤ 85℃ for original pitch 10.0mm



Permissible current as a function of frequency
at $T_{amb.}$ ≤ 85℃ for original pitch 15.0mm



AC voltage as a function of frequency
at $T_{amb.}$ ≤ 85℃ for original pitch 15.0mm

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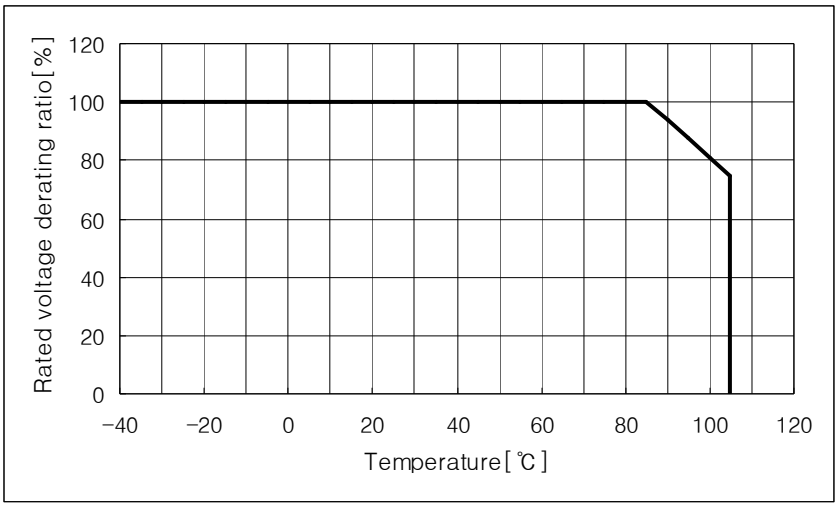
- **Permissible current to temperature**

When operating in the range of $T_{amb.}$ (85℃ ~ 105℃) with waveform, the value for characteristic of permissible current to frequency shown in Fig. shall be derated 2.25% at each 1℃.

- **Self heating temperature**

. Maximum allowable rise is 7℃ under 85℃.

- **Maximum permissible continuous voltage vs temperature [℃]**



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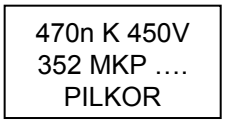
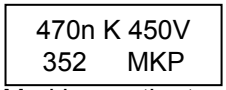
PRODUCT MARKING

The capacitors are marked with the following information :
. Rated capacitance in code according to IEC 60062 (470n ; 470nF)
. Tolerance on rated capacitance (J : ±5%, K : ±10%)
. Rated DC voltage (450V)
. Manufacturer's mark (PILKOR)
. Manufacturer's type designation (352)
. Code for dielectric material (MKP)
. Date code number (WK.…)
. White or black color

Example of marking



Marking on the side



Marking on the top

Marking on the side