

WIMA FKS 2



Polyester film and foil capacitors for pulse applications in PCM 5 mm

■ Low induction and low damping with high resonant frequency. ■ Low ESR because of metal foil electrodes and end-surface contacts. ■ High pulse duty. ■ Reservoir and decoupling capacitors for high-speed digital circuits. ■ Available taped and reeled.

Technical Data

Dielectric: Polyethylene terephthalate film.

Capacitor electrodes: Metal foil.

Encapsulation: Flame retardant plastic case, UL 94 V-0, with epoxy resin seal.

Colour: Blue. Marking: Black.

Temperature range: -55° C to +100° C.

Test specifications: In accordance with IEC 60384-11 and EN 130100.

Test category: 55/100/56 in accordance with IEC.

Insulation resistance at +20° C:

$\geq 3 \times 10^4$ megohms

(mean value: 8×10^5 megohms).

In accordance with IEC 60384-11 and EN 130100.

Measuring voltage: 100 V/1 min.

Dissipation factors at +20° C:

$\tan \delta \leq 7 \times 10^{-3}$ at 1 kHz

$\tan \delta \leq 15 \times 10^{-3}$ at 10 kHz

$\tan \delta \leq 20 \times 10^{-3}$ at 100 kHz

Capacitance tolerances: +/-20%, +/-10%, +/-5%.

Maximum pulse rise time: 1000 V/microsecond for pulses equal to the rated voltage.

Test voltage: 2 Vr, 2 sec.

[Graphs:](#)

[Taping:](#)

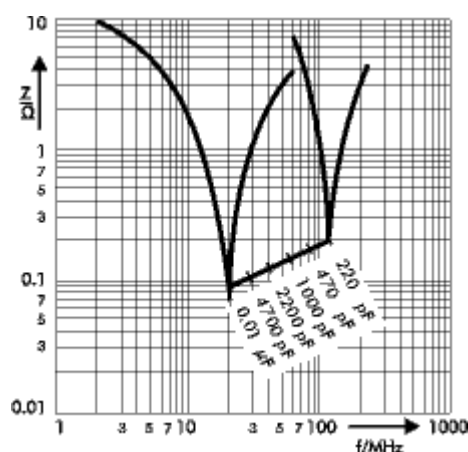
Vibration: 6 hours at 10...2000 Hz and 0.75 mm displacement amplitude or 10 g in accordance with IEC 60068-2-6.

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.

Voltage derating: A voltage derating factor of 1.25% per K must be applied from +85° C for DC voltages and from +75° C for AC voltages.

Impedance change with frequency
(general guide)



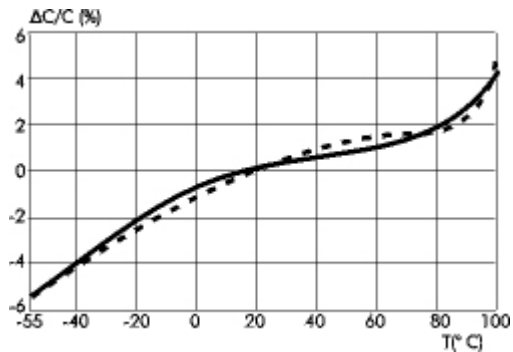
General Data

Capacitance	100VDC/63VAC*				250VDC/160VAC*				400VDC/200VAC*				*AC voltage: f = 50 Hz; 1.4 x Urms + UDC ≤ Ur **PCM = Printed circuit module = lead spacing.
	W	H	L	PCM**	W	H	L	PCM**	W	H	L	PCM**	
220 pF	2.5	6.5	7.2	5	2.5	6.5	7.2	5	2.5	6.5	7.2	5	Dims. in mm
330 "	2.5	6.5	7.2	5	2.5	6.5	7.2	5	2.5	6.5	7.2	5	
470 "	2.5	6.5	7.2	5	2.5	6.5	7.2	5	2.5	6.5	7.2	5	
680 "	2.5	6.5	7.2	5	2.5	6.5	7.2	5	2.5	6.5	7.2	5	
1000pF	2.5	6.5	7.2	5	2.5	6.5	7.2	5	2.5	6.5	7.2	5	
1500 "	2.5	6.5	7.2	5	2.5	6.5	7.2	5	2.5	6.5	7.2	5	
2200 "	2.5	6.5	7.2	5	2.5	6.5	7.2	5	2.5	6.5	7.2	5	
3300 "	2.5	6.5	7.2	5	2.5	6.5	7.2	5	2.5	6.5	7.2	5	
4700 "	2.5	6.5	7.2	5	2.5	6.5	7.2	5	2.5	6.5	7.2	5	
6800 "	2.5	6.5	7.2	5	2.5	6.5	7.2	5	3	7.5	7.2	5	
0.01 μF	3	7.5	7.2	5	3	7.5	7.2	5	3.5	8.5	7.2	5	

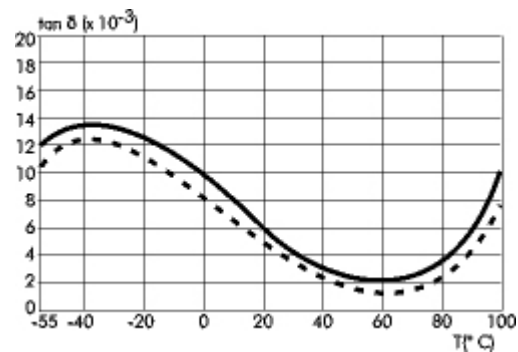
Rights reserved to amend design data without prior notification.

Polyester

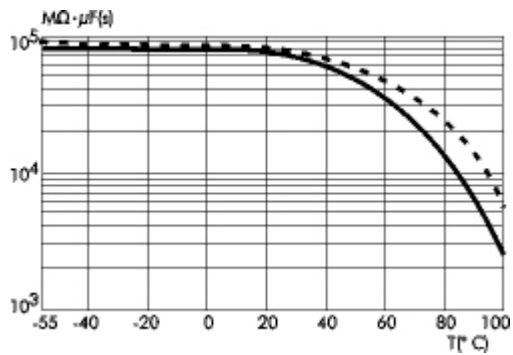
Typical graphs of the polyester dielectric



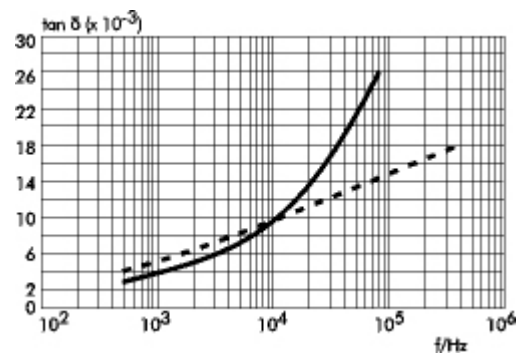
Capacitance change with temperature
(f=1 kHz) (general guide)



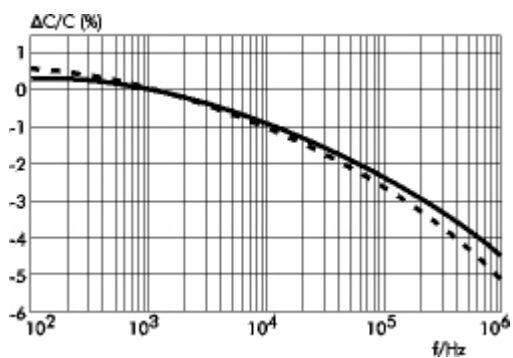
Dissipation factor change with temperature
(f=1 kHz) (general guide)



Insulation resistance change with temperature
(general guide)



Dissipation factor change with frequency
(general guide)



Capacitance change with frequency
(general guide)

Annotation:

The full lines characterize the metallized versions

The broken lines show the film/foil types

Typical dimensions for taping configuration

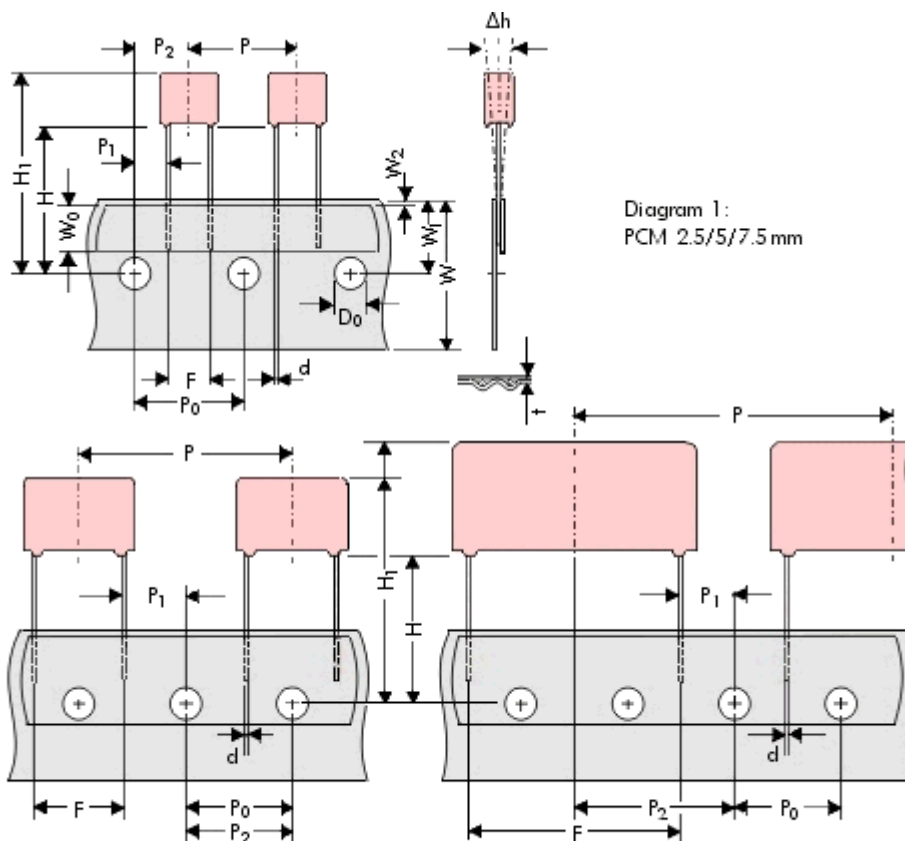


Diagram 2: PCM 10/15 mm

Diagram 3: PCM 22.5 and 27.5⁴mm

¹PCM 27.5 taping possible with two feed holes between components

[illegible]

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 ₁ 24.25 to 31.5	< H ₁ 25.0 to 31.5.	< H ₁ 26.0 to 37.0	< H ₁ 30.0 to 43.0	< H ₁ 35.0 to 45.0
Lead spacing	F	2.5 _{+0.5}	5 _{+0.8/-0.2}	7.5 _{+0.8}	10.0 _{+0.8}	15.0 _{+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 0.7 _{+0.07/-0.05}	*0.5 _{+0.05} or 0.7 _{+0.07/-0.05}	0.8 _{+0.08/-0.05}	0.8 _{+0.08/-0.05}	*0.8 _{+0.08/-0.05} or 1.0 _{+0.1/-0.0}
Component alignment	delta h	_{+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	**	<u>ROLL / AMMO / REEL</u>		<u>AMMO / REEL</u>				
**Please give "H" dimension and desired packaging type when ordering.								
* Diameter of leads see General Data.								
** PCM 10 and PCM 15 can be crimped to PCM 7.5 mm. Position of components according to PCM 7.5 (sketch 1). P0 = 12.7 or 15.0 is possible.								
Dims. in mm.								
<u>Minimum packing units for capacitors with radial leads</u>								

Please clarify customer-specific deviations with the manufacturer.