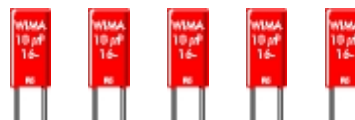


**WIMA MKS 2**



**Metallized polyester capacitors  
in PCM 5 mm**

- For all standard PCM 5 mm applications.
- Wide capacitance range from 0.01 µF through 10 µF and voltage ranges from 16 VDC to 400 VDC.
- Very advantageous volume/capacitance ratio.
- Reservoir capacitor with unlimited life expectancy even at high temperatures.
- Available taped and reeled.

**Technical Data**

**Dielectric:** Polyethylene terephthalate film.  
**Capacitor electrodes:** Vacuum-deposited aluminium.  
**Encapsulation:** Flame retardant plastic case, UL 94 V-0, with epoxy resin seal.  
 Colour: Red. Marking: White/Silver or Black.  
**Temperature range:** -55° C to +100° C.  
**Test specifications:** In accordance with IEC 60384-2 and EN 130400.  
**Test category:** 55/100/21 in accordance with IEC.  
**Insulation resistance** at +20° C

Ur	Utest	C ≤ 0.33 µF	0.33µF<C≤10µF
16 VDC	10 V	-	≥ 1000 sec. (MR x µF) Mean value: 3000 sec.
50 VDC	10 V	≥ 5 x 10 <sup>3</sup> MR Mean value: 3 x 10 <sup>4</sup> MR	≥ 1000 sec. (MR x µF) Mean value: 3000 sec.
63 VDC	50 V	≥ 1 x 10 <sup>4</sup> MR Mean value: 5 x 10 <sup>4</sup> MR	≥ 1250 sec. (MR x µF) Mean value: 3000 sec.
≥100VDC	100V	≥ 1.5 x 10 <sup>4</sup> MR Mean value: 1 x 10 <sup>5</sup> MR	≥ 3000 sec. (MR x µF) Mean value: 6000 sec.

In accordance with IEC 60384-2 and EN 130400.  
 Measuring time: 1 min.  
**Capacitance tolerances:** ±20%, ±10%, ±5%.  
**Test voltage:** 1.6 Ur, 2 sec.  
**Dissipation factors** at +20° C: tan delta

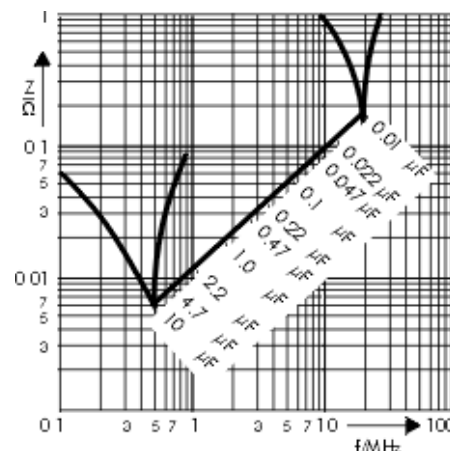
at f	C≤0.1µF	0.1µF<C≤1.0µF	C>1.0µF
1 kHz	≤ 8x10 <sup>-3</sup>	≤ 8x10 <sup>-3</sup>	≤ 10x10 <sup>-3</sup>
10 kHz	≤ 15x10 <sup>-3</sup>	≤ 15x10 <sup>-3</sup>	-
100kHz	≤ 30x10 <sup>-3</sup>	-	-

**Maximum pulse rise time:**

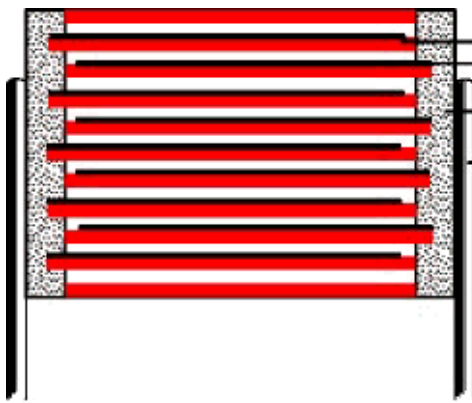
Capacitance µF	Pulse rise time V/µsec max. operation/test					
	16 VDC	50 VDC	63 VDC	100 VDC	250 VDC	400 VDC
0.01...0.022	-	25/250	35/350	35/350	50/500	80/800
0.033...0.068	-	15/150	20/200	25/250	50/500	80/800
0.1...0.47	-	10/100	15/150	20/200	50/500	80/800
0.68 ...1.0	7.5/75	8/80	12/120	15/150	-	-
1.5...3.3	5/50	8/80	7.5/75	10/100	-	-
4.7	4/40	5/50	-	-	-	-
6.8...10	3/30	3/30	-	-	-	-

for pulses equal to the rated voltage.  
**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/sec<sup>2</sup> 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)**



**Internal structure of a WIMA metallized film capacitor**



plastic film dielectric  
 vacuum-deposited aluminium electrodes  
 metal contact layer (schoopage)  
 terminating wire

**WIMA capacitors have reliable internal end terminations**  
 They employ the simple concept of the wire making electrical contact with the complete end surface of the electrode which ensures minimal inductance. The result is capacitors of good attenuation and self-resonance behaviour.

**General Data**

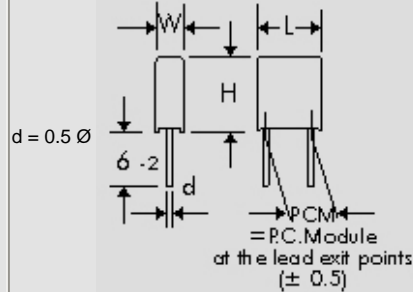
Capacitance	16 VDC/ 10 VAC*				50 VDC/ 30 VAC*				63 VDC/ 40 VAC*				100 VDC/ 63 VAC*				250 VDC/ 160 VAC*				400 VDC/ 200 VAC*			
	W	H	L	PCM**	W	H	L	PCM**	W	H	L	PCM**	W	H	L	PCM**	W	H	L	PCM**	W	H	L	PCM**
0.01 µF					2.5	5.5	7.2	5	2.5	6.5	7.2	5	2.5	6.5	7.2	5	2.5	6.5	7.2	5	3	7.5	7.2	5
0.015 "					2.5	5.5	7.2	5	2.5	6.5	7.2	5	2.5	6.5	7.2	5	2.5	6.5	7.2	5	4.5	9.5	7.2	5
0.022 "					2.5	5.5	7.2	5	2.5	6.5	7.2	5	2.5	6.5	7.2	5	3	7.5	7.2	5	4.5	9.5	7.2	5
0.033 "					2.5	5.5	7.2	5	2.5	6.5	7.2	5	2.5	6.5	7.2	5	3.5	8.5	7.2	5	5.5	11.5	7.2	5
0.047 "					2.5	5.5	7.2	5	2.5	6.5	7.2	5	2.5	6.5	7.2	5	4.5	9.5	7.2	5	7.2	13	7.2	5
0.068 "					2.5	5.5	7.2	5	2.5	6.5	7.2	5	3	7.5	7.2	5	5	10	7.2	5	7.2	13	7.2	5
0.1 µF					2.5	5.5	7.2	5	2.5	6.5	7.2	5	3	7.5	7.2	5	5.5	11.5	7.2	5	7.2	13	7.2	5
0.15 "					2.5	5.5	7.2	5	2.5	6.5	7.2	5	3.5	8.5	7.2	5	7.2	13	7.2	5	8.5	14	7.2	5
0.22 "					2.5	6.5	7.2	5	3	7.5	7.2	5	3.5	8.5	7.2	5	7.2	13	7.2	5				
0.33 "					2.5	6.5	7.2	5	3.5	8.5	7.2	5	4.5	9.5	7.2	5	8.5	14	7.2	5				
0.47 "					3	7.5	7.2	5	4.5	9.5	7.2	5	5	10	7.2	5								
0.68 "					4.5	8.5	7.2	5	4.5	9.5	7.2	5	5.5	11.5	7.2	5								
1.0 µF	3.5	8.5	7.2	5	5	9	7.2	5	5	10	7.2	5	7.2	13	7.2	5								
1.5 "	4.5	8.5	7.2	5	5	10	7.2	5	5.5	11.5	7.2	5	8.5	14	7.2	5								
2.2 "	5	9	7.2	5	5.5	11.5	7.2	5	7.2	13	7.2	5												
3.3 "	5.5	11.5	7.2	5	7.2	13	7.2	5	8.5	14	7.2	5												
4.7 "	5.5	11.5	7.2	5	7.2	13	7.2	5																
6.8 "	7.2	13	7.2	5	8.5	14	7.2	5																
10 µF	8.5	14	7.2	5																				

\*AC voltage: f = 50 Hz;  
 1.4 x Urms + UDC ≤ Ur

\*\*PCM = Printed circuit module = lead spacing.

Dims. in mm

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The former range **WIMA MKS 22** was extensively integrated in the WIMA MKS 2 range.

Permissible AC voltage in relation to frequency at 10° C internal temperature rise (general guide):

