

WIMA MKS 2



Miniature type capacitors

Metallized polyester capacitors

■ CECC approval

Certificate No. 30 401-046

■ Ideally suited for decoupling

■ Available taped and reeled

Technical Data

Dielectric: Polyethylene terephthalate film

Capacitor electrodes: Vacuum-deposited aluminium

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

Class of application: FME in accordance with DIN 40 040

Temperature range: -55° C to +100° C

Test specifications: In accordance with CECC 30 400 and IEC 384-2.

Test category: 55/100/21 in accordance with IEC

Insulation resistance at +20° C

V_r	V_{test}	$C \leq 0.33 \mu F$	$0.33 \mu F < C \leq 4.7 \mu F$
50 VDC	10 V	$\geq 5 \times 10^3 M\Omega$ Mean value $3 \times 10^4 M\Omega$	$\geq 1000 \text{ sec } (M\Omega \times \mu F)$ Mean value 3 000 sec
63 VDC	50 V	$\geq 1 \times 10^4 M\Omega$ Mean value $5 \times 10^4 M\Omega$	$\geq 3000 \text{ sec } (M\Omega \times \mu F)$ Mean value 6 000 sec
100 VDC	100 V	$\geq 1.5 \times 10^4 M\Omega$ Mean value $1 \times 10^5 M\Omega$	$\geq 5000 \text{ sec } (M\Omega \times \mu F)$ Mean value 10 000 sec

In accordance with CECC 30 400 and IEC 384-2

Measuring time: 1 min

Capacitance tolerances: $\pm 20\%$, $\pm 10\%$, $\pm 5\%$.

* These values: $\pm 20\%$, $\pm 10\%$ ($\pm 5\%$ available subject to special enquiry)

Dissipation factors at +20° C $\tan \delta$

at f	$C \leq 0.1 \mu F$	$0.1 \mu F < C \leq 10 \mu F$	$C > 10 \mu F$
1 kHz	$\leq 8 \times 10^{-3}$	$\leq 8 \times 10^{-3}$	$\leq 10 \times 10^{-3}$
10 kHz	$\leq 15 \times 10^{-3}$	$\leq 15 \times 10^{-3}$	-
100 kHz	$\leq 25 \times 10^{-3}$	-	-

Temperature characteristics: See graph page 5

Maximum pulse rise time:

Capacitance μF		Pulse rise time V/ μ sec				
		50 VDC	63 VDC	100 VDC	250 VDC	400 VDC
0.01	0.022	-	35/350	35/350	50/500	80/800
0.033	0.068	-	20/200	25/250	50/500	80/800
0.1	0.47	12/120	15/150	20/200	50/500	-
0.68	1.0	10/100	12/120	15/150	-	-
1.5	3.3	8/ 80	7.5/75	-	-	-
	4.7	5/ 50	-	-	-	-

for pulses equal to the rated voltage

Test voltage: 1.6 V_r , 2 sec

Pulse test: Based on DIN specifications 44 122.

Vibration: 6 hours at 10 2000 Hz and 0.75 mm displacement amplitude or 10 g in accordance with IEC 68-2-6

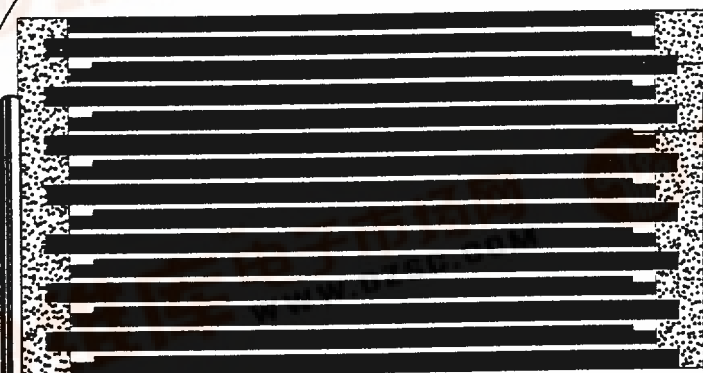
Low air density: 1 kPa = 10 mbar in accordance with IEC 68-2-13

Bump test: 4000 bumps at 390 m/sec² in accordance with IEC 68-2-29

Voltage derating: A voltage derating factor of 125% per K must be applied from + 85 °C for DC voltages and from + 75 °C for AC voltages

PCM
(Printed circuit module)

5 mm



Internal structure of a WIMA metallized film capacitor

plastic film dielectric

vacuum-deposited aluminium electrodes

metal contact layer

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 (see technical data and graphs)

WIMA MKS 2

General Data

Capacitance	50 VDC/30 VAC*				63 VDC/40 VAC*			
	W	H	L	PCM**	W	H	L	PCM**
0.01 μ F					2.5	6.5	7.2	5*
0.015 "					2.5	6.5	7.2	5*
0.022 "					2.5	6.5	7.2	5*
0.033 "					2.5	6.5	7.2	5*
0.047 "					2.5	6.5	7.2	5*
0.068 "					2.5	6.5	7.2	5*
0.1 μ F					2.5	6.5	7.2	5*
0.15 "	2.5	6.5	7.2	5*	3.5	8.5	7.2	5
0.22 "	3	7.5	7.2	5	3.5	8.5	7.2	5
0.33 "	3.5	8.5	7.2	5	4.5	9.5	7.2	5
0.47 "	4.5	9.5	7.2	5	5	10	7.2	5
0.68 "	4.5	9.5	7.2	5*	5	10	7.2	5
1.0 μ F	5	10	7.2	5*	5.5	11.5	7.2	5
1.5 "	5.5	11.5	7.2	5*	7.2	13	7.2	5*
2.2 "	7.2	13	7.2	5*				
3.3 "	7.2	13	7.2	5**				
4.7 "	7.2	13	7.2	5**				

Capacitance	100 VDC/63 VAC*				250 VDC/160 VAC*				400 VDC/200 VAC*			
	W	H	L	PCM**	W	H	L	PCM**	W	H	L	PCM**
0.01 μ F	2.5	6.5	7.2	5*	2.5	6.5	7.2	5*	3	7.5	7.2	5*
0.015 "	2.5	6.5	7.2	5*	2.5	6.5	7.2	5*	4.5	8.5	7.2	5*
0.022 "	2.5	6.5	7.2	5*	3	7.5	7.2	5*	4.5	9.5	7.2	5*
0.033 "	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	6.5	7.2	5*	4.5	9.5	7.2	5*	7.2	13	7.2	5*
0.068 "	3	7.5	7.2	5	5	10	7.2	5*				
0.1 μ F	3	7.5	7.2	5	5.5	11.5	7.2	5*				
0.15 "	4.5	9.5	7.2	5	7.2	13	7.2	5*				
0.22 "	5	10	7.2	5								
0.33 "	5.5	11.5	7.2	5								
0.47 "	5.5	11.5	7.2	5								
0.68 "	7.2	13	7.2	5*								
1.0 μ F	7.2	13	7.2	5*								

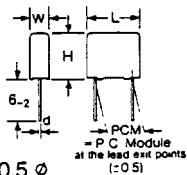
* AC voltage: $f = 50 \text{ Hz}$,
 $1.4 \times V_{\text{rms}} + \text{VDC} \leq \text{VDC (rated)}$

** PCM = printed circuit module
 = lead spacing

* Produced in accordance
 with CECC

* See note with respect to capacitance
 tolerances page 25

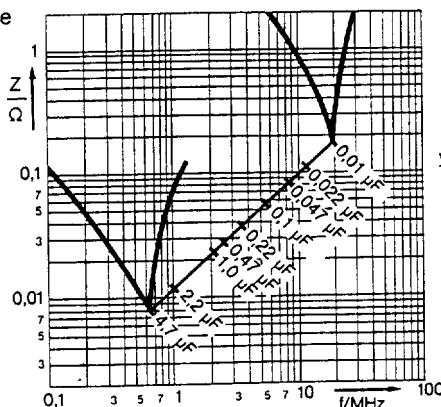
Dims. in mm.



$d = 0.5 \text{ mm}$

Taped version see page 12.

Impedance change with
 frequency (general guide)
 The graph applies also to WIMA MKS 2-1
 and WIMA MKS 22



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

