

143-674 to 684

# 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-retardent 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**

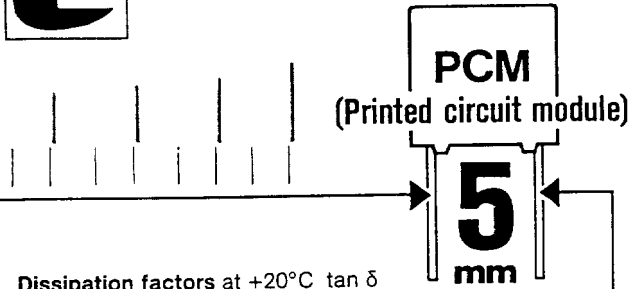
$V_r$	$V_{test}$	$C \leq 0.33 \mu F$	$0.33 \mu F < C \leq 4.7 \mu F$
50 VDC	10 V	$\geq 5 \times 10^3 M\Omega$ Mean value $3 \times 10^4 M\Omega$	$\geq 1000 \text{ sec } (M\Omega \times \mu F)$ Mean value 3 000 sec
63 VDC	50 V	$\geq 1 \times 10^4 M\Omega$ Mean value $5 \times 10^4 M\Omega$	$\geq 3000 \text{ sec } (M\Omega \times \mu F)$ 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 $\mu F$	Pulse rise time V/ $\mu\text{sec}$ max operation/test					
	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

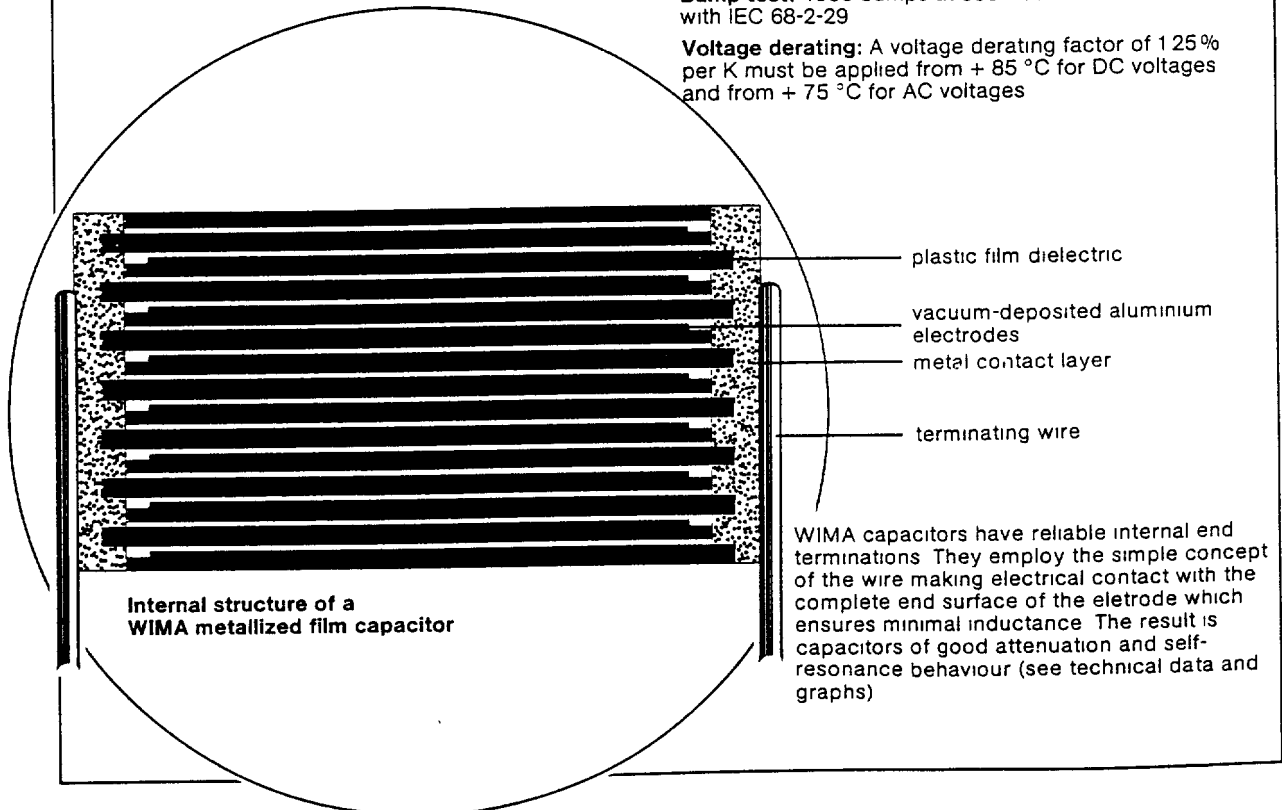
**Pulse test:** Based on DIN specifications 44 122.

**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/sec<sup>2</sup> in accordance with IEC 68-2-29

**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



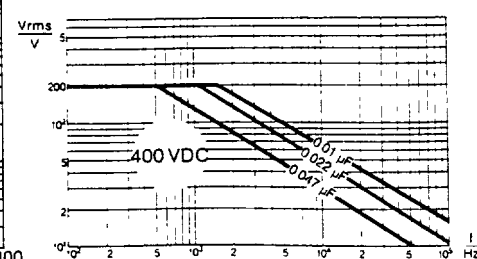
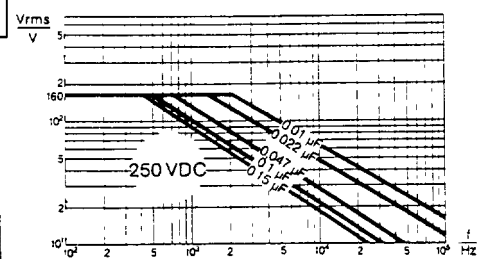
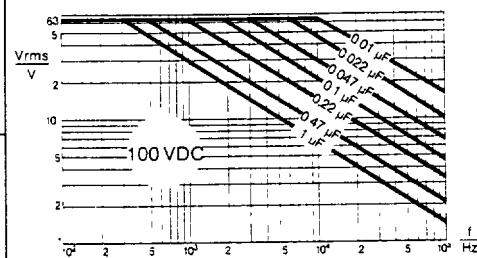
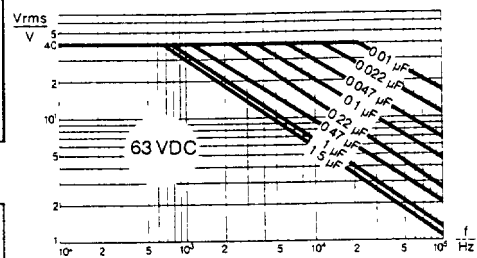
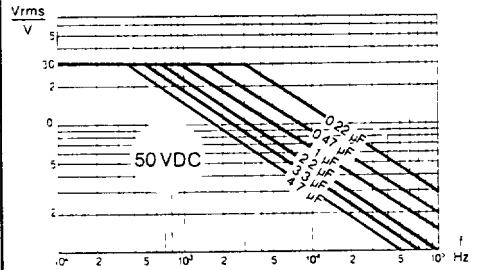
# WIMA MKS 2

## General Data

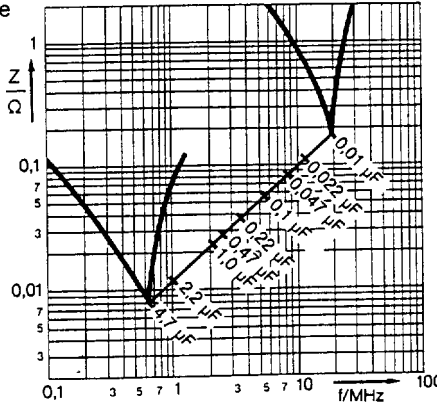
Capacitance	50 VDC/30 VAC*				63 VDC/40 VAC*			
	W	H	L	PCM**	W	H	L	PCM**
0.01 $\mu$ F					25	65	72	5*
0.015 "					25	65	72	5*
0.022 "					25	65	72	5*
0.033 "					2.5	6.5	72	5*
0.047 "					2.5	6.5	72	5*
0.068 "					2.5	6.5	72	5*
0.1 $\mu$ F					2.5	6.5	72	5*
0.15 "	25	6.5	72	5*	3.5	8.5	72	5
0.22 "	3	7.5	72	5	3.5	8.5	72	5
0.33 "	3.5	8.5	72	5	4.5	9.5	72	5
0.47 "	4.5	9.5	72	5	5	10	72	5
0.68 "	4.5	9.5	72	5*	5	10	72	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 $\mu$ F	2.5	6.5	72	5*	2.5	6.5	72	5*	3	7.5	72	5*
0.015 "	2.5	6.5	72	5*	2.5	6.5	72	5*	4.5	8.5	72	5*
0.022 "	2.5	6.5	72	5*	3	7.5	72	5*	4.5	9.5	72	5*
0.033 "	2.5	6.5	72	5*	3.5	8.5	72	5*	5.5	11.5	72	5*
0.047 "	2.5	6.5	72	5*	4.5	9.5	72	5*	7.2	13	72	5*
0.068 "	3	7.5	72	5	5	10	72	5*				
0.1 $\mu$ F	3	7.5	72	5	5.5	11.5	72	5*				
0.15 "	4.5	9.5	72	5	7.2	13	72	5*				
0.22 "	5	10	72	5								
0.33 "	5.5	11.5	72	5								
0.47 "	5.5	11.5	72	5								
0.68 "	7.2	13	72	5*								

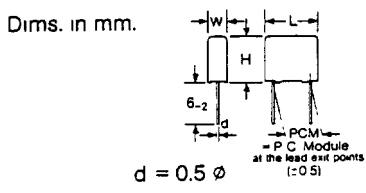
Permissible AC voltage in relation to frequency at 10° C internal temperature rise (general guide):



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



- \* AC voltage:  $f = 50 \text{ Hz}$ ,  $1.4 \times V_{rms} + VDC \leq VDC$  (rated)
- \*\* PCM = printed circuit module = lead spacing
- \* Produced in accordance with CECC
- \* See note with respect to capacitance tolerances page 25



Taped version see page 12.

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