

WIMA MKS 4



Metallized polyester capacitors for stringent requirements

For all standard applications in PCM ≥ 7.5 mm. ■ Wide capacitance range up to 33 μ F and voltage ranges from 50 VDC through 2000 VDC. ■ Low ESR. ■ Reservoir capacitors with unlimited life expectancy even at high temperatures. ■ Available taped and reeled up to and including case size 15 x 26 x 31.5/PCM 27.5 mm.

Technical Data / [General Data](#)

Dielectric: Polyethylene terephthalate film.
Capacitor electrodes: Vacuum-deposited aluminium.
Encapsulation: Flame-retardent plastic case, UL 94 V-0, with epoxy resin seal.
 Colour: Red. Epoxy resin seal: Red. Marking: Black.
Temperature range: -55° C to +100° C
Test specifications: In accordance with IEC 60384-2 and EN 130400.
Test category: 55/100/56 in accordance with IEC.
Insulation resistance at +20° C:

Ur	Utest	C $\leq 0.33 \mu$ F	0.33 μ <C \leq 33 μ F
50 VDC	10 V	-	≥ 1500 sec (M Ω x μ F) Mean value: 4500 sec
63 VDC	50 V	$\geq 1 \times 10^4$ M Ω Mean value: 5x10 ⁴ M Ω	≥ 3000 sec (M Ω x μ F) Mean value: 6000 sec
100 VDC	100V	$\geq 1.5 \times 10^4$ M Ω Mean value: 5x10 ⁴ M Ω	≥ 5000 sec (M Ω x μ F) Mean value: 15000 sec
≥ 250 VDC	100V	$\geq 3 \times 10^4$ M Ω Mean value: 1x10 ⁵ M Ω	≥ 10000 sec (M Ω x μ F) Mean value: 40000 sec

In accordance with IEC 60384-2 grade 1 and EN 130400. Measuring time: 1 min.

Maximum pulse rise time:

Capacitance pF/ μ F	Pulse rise time V/ μ sec max.operation/test								
	50 VDC	63 VDC	100 VDC	250 VDC	400 VDC	630 VDC	1000 VDC	1500 VDC	2000 VDC
1000...6800	-	-	-	60/600	60/600	60/600	70/700	90/900	100/1000
0.01 ...0.022	-	-	30/300	35/350	38/380	40/400	50/500	50/500	60/600
0.033...0.068	-	15/150	15/150	20/200	25/250	32/320	26/260	35/350	40/400
0.1 ...0.22	-	10/100	12/120	15/150	15/150	17/170	20/200	35/350	40/400
0.33...0.68	-	9/90	9/90	10/100	10/100	13/130	20/200	25/250	-
1.0...2.2	6/60	6/60	5/50	6/60	9/90	13/130	15/150	-	-
3.3...6.8	-	3/30	3/30	6/60	7/70	9/90	-	-	-
10...33	-	2.5/25	2.5/25	5/50	-	-	-	-	-

for pulses equal to the rated voltage.

Capacitance tolerances: $\pm 20\%$, $\pm 10\%$, $\pm 5\%$.
Dissipation factors at +20° C: tan delta

at f	C \leq 0.1 μ F	0.1 μ F<C \leq 1.0 μ F	C>1.0 μ F
1 kHz	$\leq 8 \times 10^{-3}$	$\leq 8 \times 10^{-3}$	$\leq 10 \times 10^{-3}$
10 kHz	$\leq 15 \times 10^{-3}$	$\leq 15 \times 10^{-3}$	-
100kHz	$\leq 30 \times 10^{-3}$	-	-

Test voltage: 1.6 Ur, 2 sec.

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.

[Graphs:](#) / [Taping:](#)

[Example for ordering/Part number](#)

*AC voltage: $f = 50 \text{ Hz}; 1.4 \times U_{rms} + U_{DC} \leq U_r$

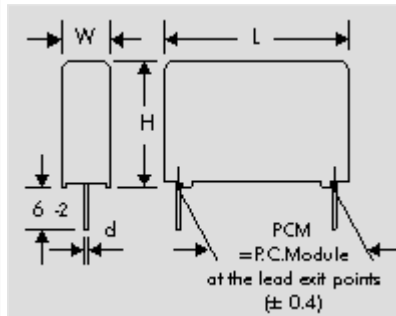
**PCM = Printed circuit module = lead spacing.

**Admissible AC voltage 220 VAC max.

* On ordering please state the request PCM (lead spacing)!
If not specified, smaller PCM will be booked.

Dims. in mm

Rights reserved to amend design data without prior notification.



∅ d	PCM	W
0.5	7.5	≤ 3
0.7	7.5	≥ 4
0.7	10	≥ 4
0.8	15...22.5	≥ 4
0.8	27.5	≤ 15
1.0	27.5	≥ 15
1.0	37.5	≥ 15

The former range **WIMA MKS 3** was fully integrated in the WIMA MKS 4 range.

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

