

WIMA MKS 2-i

PCM

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Metallized polyester miniature capacitors for stringent requirements

■ PCM 5 mm capacitors for applications with stringent requirements. ■ Ideally suited to meet reservoir capacitor applications in digital circuits. ■ For increased pulse duty. ■ Low ESR. ■ 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: Silver.

Temperature range: -55° C to +100° C.

Test specifications: In accordance with IEC 60384-2 and EN 130 400 (u.prep.).

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

Insulation resistance at +20° C:

U_r	U_{test}	$C \leq 0.33 \mu F$	$0.33 \mu F < C \leq 1.0 \mu F$
63 VDC	50 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: 15 000 sec
$\geq 100 \text{ VDC}$	100 V	$\geq 1.5 \times 10^4 M\Omega$ Mean value: $2 \times 10^5 M\Omega$	$\geq 5000 \text{ sec } (M\Omega \times \mu F)$ Mean value: 15 000 sec

In accordance with IEC 60384-2 grade 1 and EN 130 400 (u.prep.).

Measuring time: 1 min.

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

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

at f	$C \leq 0.1 \mu F$	$0.1 \mu F < C \leq 1.0 \mu F$
1 kHz	$\leq 8 \times 10^{-3}$	$\leq 8 \times 10^{-3}$
10 kHz	$\leq 12 \times 10^{-3}$	$\leq 12 \times 10^{-3}$
100 kHz	$\leq 22 \times 10^{-3}$	—

Temperature characteristics: See graph page 5.

Test voltage: 1.6 U_r , 2 sec.

Maximum pulse rise time:

Capacitance μF	Pulse rise time V/ μ sec max. operation / test			
	63 VDC	100 VDC	250 VDC	400 VDC
0.01 ... 0.022	40/400	40/400	50/500	80/800
0.033 ... 0.068	30/300	30/300	50/500	80/800
0.1 ... 0.22	25/250	30/300	50/500	—
0.33 ... 0.47	25/250	25/250	—	—
0.68 ... 1.0	20/200	25/250	—	—

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.

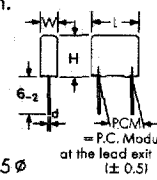
Bump test: 4000 bumps at 390 m/sec² in accordance with IEC 60068-2-29.

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 see page 5.

Impedance behaviour same as WIMA MKS 2 (general guide).
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General Data

Capacitance	63 VDC / 40 VAC*				100 VDC / 63 VAC*				250 VDC / 160 VAC*				400 VDC / 200 VAC*				*AC voltage: f = 50 Hz; 1.4 × U_{rms} + U_{DC} ≤ U_r **PCM = Printed circuit module = lead spacing
	W	H	L	PCM	W	H	L	PCM	W	H	L	PCM	W	H	L	PCM	
0.01 μF	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	Dims. mm.  d = 0.5 $\emptyset$
0.015 "	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	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	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	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	6.5	7.2	5	3	7.5	7.2	5	5	10	7.2	5					
0.1 μF	2.5	6.5	7.2	5	3	7.5	7.2	5	5.5	11.5	7.2	5					Taped version see page 92. Rights reserved to amend design data without prior notification.
0.15 "	2.5	6.5	7.2	5	3.5	8.5	7.2	5	7.2	13	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	5.5	11.5	7.2	5									
1.0 μF	5	10	7.2	5	7.2	13	7.2	5									