

WIMA MKC 2

Metallized polycarbonate capacitors in PCM 5 mm



- Polycarbonate dielectric for PCM 5 mm applications.
- Constant capacitance value with temperature.
- Ideally suited for applications with wide temperature range, e.g. automotive (under the hood).
- Available taped and reeled.

Technical Data

Dielectric: Polycarbonate film.

Capacitor electrodes: Vacuum-deposited aluminium.

Encapsulation: Flame-retardant plastic case, UL 94 V-0, with epoxy resin seal. Colour: Red. Marking: Black.

Temperature range: -55° C to +100° C.

Test specifications: In accordance with IEC 60384-6 and EN 130 500.

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

Insulation resistance at +20° C:

U_r	U_{test}	$C \leq 0.33 \mu F$	$0.33 \mu F < C \leq 0.47 \mu F$
63 VDC	50 V	$\geq 3.75 \times 10^3 M\Omega$ Mean value: $5 \times 10^4 M\Omega$	$\geq 1250 \text{ sec } (M\Omega \times \mu F)$ Mean value: 3000 sec
$\geq 100 \text{ VDC}$	100 V	$\geq 3.75 \times 10^3 M\Omega$ Mean value: $5 \times 10^4 M\Omega$	$\geq 1250 \text{ sec } (M\Omega \times \mu F)$ Mean value: 3000 sec

In accordance with IEC 60384-6 and EN 130 500.

Measuring time: 1 min.

Maximum pulse rise time:

Capacitance $\mu F / \mu F$	Pulse rise time V/ μsec max. operation/test		
	63 VDC	100 VDC	250 VDC
1000 ... 6800	—	—	50/500
0.01 ... 0.022	—	35/350	40/400
0.033 ... 0.068	20/200	20/200	30/300
0.1 ... 0.47	15/150	15/150	25/250

for pulses equal to the rated voltage.

Dissipation factors at +20° C:

$\tan \delta \leq 3 \times 10^{-3}$ at 1 kHz

$\tan \delta \leq 5 \times 10^{-3}$ at 10 kHz

$\tan \delta \leq 10 \times 10^{-3}$ at 100 kHz

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

Temperature characteristics: See page 5.

Test voltage: 1.6 U_r , 2 sec.

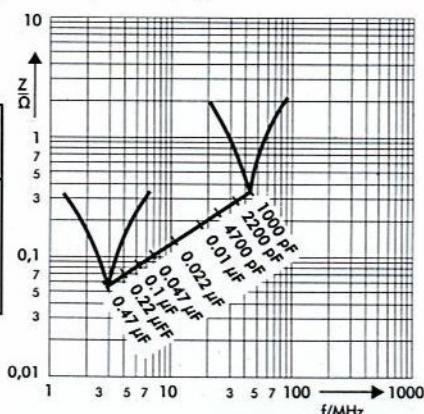
Vibration: 6 hours at 10...2000 Hz and 0.75 mm displacement amplitude or 10 g in accordance with IEC 60068-2-6.

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.

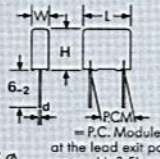
Voltage derating: A voltage derating factor of 1% per K must be applied from +85° C for DC voltages and from +75° C for AC voltages.

Graphs see page 5.



Impedance change
with frequency
(general guide)

General Data

Capacitance	63 VDC / 40 VAC*				100 VDC / 63 VAC*				250 VDC / 160 VAC*				PCM**
	W	H	L	PCM**	W	H	L	PCM**	W	H	L	PCM**	
1000 pF									2.5	6.5	7.2	5	* AC voltage: $f \leq 400 \text{ Hz}$; $1.4 \times U_{rms} + U_{DC} \leq U_r$ ** PCM = Printed circuit module = lead spacing Dims. in mm. 
1500 "									2.5	6.5	7.2	5	
2200 "									2.5	6.5	7.2	5	
3300 "									2.5	6.5	7.2	5	
4700 "									2.5	6.5	7.2	5	
6800 "									2.5	6.5	7.2	5	
0.01 μF									2.5	6.5	7.2	5	Taped version see page 92. Rights reserved to amend design data without prior notification.
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	3	7.5	7.2	5	
0.047 "					2.5	6.5	7.2	5	3.5	8.5	7.2	5	
0.068 "	3	7.5	7.2	5	3	7.5	7.2	5	4.5	9.5	7.2	5	
0.1 μF	3.5	8.5	7.2	5	3.5	8.5	7.2	5	5	10	7.2	5	
0.15 "	4.5	9.5	7.2	5	4.5	9.5	7.2	5	5.5	11.5	7.2	5	
0.22 "	5	10	7.2	5	5	10	7.2	5	7.2	13	7.2	5	
0.33 "	7.2	13	7.2	5	7.2	13	7.2	5					
0.47 "	7.2	13	7.2	5	7.2	13	7.2	5					