

WIMA FKC 3

Polycarbonate film and foil capacitors for pulse applications

- Good attenuation, high resonant frequency.
- Constant capacitance value with temperature.
- Low ESR because of metal foil electrodes and end-surface contacts.
- High insulation resistance.
- For pulse applications where constant capacitance values with wide temperature ranges are required.
- Available taped and reeled.

Technical Data

Dielectric: Polycarbonate film.

Capacitor electrodes: Metal foil.

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

Temperature range: - 55° C to + 100° C.

Test specifications: In accordance with IEC 60384-12 and EN 131 700.

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

Insulation resistance at + 20° C:

$\geq 5 \times 10^5$ megohms (mean value: 1×10^6 megohms)

In accordance with IEC 60384-12 and EN 131 700.

Measuring voltage: 100 V/1 min.

Dissipation factors at + 20° C:

$\tan \delta \leq 2 \times 10^{-3}$ at 1 kHz

$\tan \delta \leq 4 \times 10^{-3}$ at 10 kHz

$\tan \delta \leq 8 \times 10^{-3}$ at 100 kHz

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

Temperature characteristics: See graph page 5.

Maximum pulse rise time: 1000 V/microsecond for pulses equal to the rated voltage.

Test voltage: 2 U_r , 2 sec.

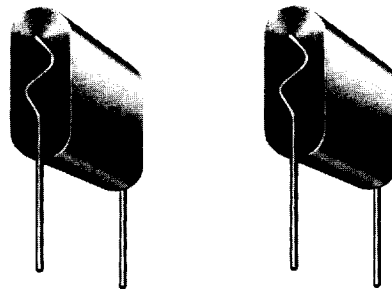
Vibration: 6 hours at 10 ... 2000 Hz and 0.75 mm displacement amplitude or 10 g in accordance with IEC 60068-2-6.

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.



WIMA capacitors with metal foil electrodes have low inductances. The electrodes are short-circuited at the ends of the winding section.

High contact reliability is achieved by welding a preformed wire to the extended electrodes.
German Federal Patent No. 1539 085.

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General Data

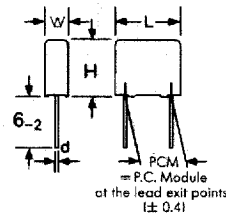
Capacitance	160 VDC / 100 VAC*				250 VDC / 160 VAC*				400 VDC / 250 VAC*				630 VDC / 300 VAC*				1000 VDC / 300 VAC*			
	W	H	L	PCM**	W	H	L	PCM**	W	H	L	PCM**	W	H	L	PCM**	W	H	L	PCM**
100 pF	3	8.5	10	7.5	3	8.5	10	7.5	3	9	13	10	3	9	13	10				
150 "	3	8.5	10	7.5	3	8.5	10	7.5	3	9	13	10	3	9	13	10				
220 "	3	8.5	10	7.5	3	8.5	10	7.5	3	9	13	10	3	9	13	10				
330 "	3	8.5	10	7.5	3	8.5	10	7.5	3	9	13	10	3	9	13	10				
470 "	3	8.5	10	7.5	3	8.5	10	7.5	3	9	13	10	3	9	13	10				
680 "	3	8.5	10	7.5	3	8.5	10	7.5	3	9	13	10	3	9	13	10				
1000 pF	3	8.5	10	7.5	3	8.5	10	7.5	3	9	13	10	3	9	13	10	3	9	13	10
1500 "	3	8.5	10	7.5	3	8.5	10	7.5	3	9	13	10	3	9	13	10	4	10	18	15
2200 "	3	8.5	10	7.5	3	8.5	10	7.5	3	9	13	10	4	9.5	13	10	4	10	18	15
3300 "	3	8.5	10	7.5	4	9	10	7.5	3	9	13	10	4	9.5	13	10	4	10	18	15
4700 "	4	9	10	7.5*	3	9	13	10	4	9.5	13	10	5	11	13	10	5	11	18	15
6800 "	3	9	13	10*	4	9.5	13	10	5	11	13	10	6	12	13	10	6	12.5	18	15
	4	9.5	13	10*																
0.01 µF	4	9.5	13	10	4	9.5	13	10	6	12	13	10	6	12	13	10*	7	14	18	15
0.015 "	4	9.5	13	10	5	11	13	10	6	12.5	18	15	5	11	18	15*				
0.022 "	5	11	13	10	6	12	13	10	7	14	18	15	7	14	18	15				
0.033 "	6	12	13	10	7	14	18	15	8	15	18	15	8	15	18	15				
0.047 "	6	12.5	18	15	8	15	18	15	9	16	18	15								

* AC voltage: $f \leq 400$ Hz;
 $1.4 \times U_{rms} + U_{DC} \leq U_r$

Dims. in mm.

** PCM = Printed circuit module = lead spacing

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



Taped version see page 92.

$d = 0.5 \phi$ if $W = 3$
 $d = 0.7 \phi$ if $W \geq 4$ } PCM 7.5 and 10
 $d = 0.8 \phi$ if PCM = 15

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

