WIMA FKC 3

A-05-17-07

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-retardent plastic case, UL 94 V–O, with epoxy resin seal. Colour: Yellow. Marking: Black.
Temperature range: – 55° C to + 100° C.
Test specifications: In accordance with IEC 384-12 and CECC 31700.
Test category: 55/100/56 in accordance with IEC.
Insulation resistance at + 20° C:
$\geqslant 5 \times 10^5$ megohms (mean value: 1×10^6 megohms)
In accordance with IEC 384-12 and CECC 31700.
Measuring voltage: 100 V/1 min.
Dissipation factors at + 20° C:
tan $\delta \leqslant 2 \times 10^{-3}$ at 1 kHz
tan $\delta \leqslant 4 \times 10^{-3}$ at 10 kHz
tan $\delta \leqslant 8 \times 10^{-3}$ at 100 kHz
Capacitance tolerances: ± 20 %, ± 10 %, ± 5 %.
Temperature characteristics: See graph page 5.
Maximum pulse rise time: 1000 V/microsecond for pulses equal to the rated voltage.
Test voltage: 2 Vr, 2 sec.
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^2 in accordance with IEC 68-2-29.
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.

General Data

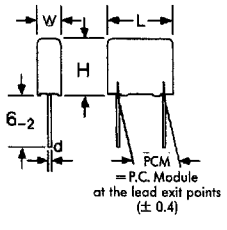
Capacitance	160 VDC / 100 VAC*				250 VDC / 160 VAC*				400 VDC / 250 VAC*				630 VDC / 300 VAC*				1000 VDC / 300 VAC*			
	W	H	L	PCM**	W	H	L	PCM**	W	H	L	PCM**	W	H	L	PCM**	W	H	L	PCM**
100 pF	3	8.5	10	**7.5**	3	8.5	10	**7.5**	3	9	13	10	3	9	13	10				
150 „	3	8.5	10	**7.5**	3	8.5	10	**7.5**	3	9	13	10	3	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
	3	9	13	10*																
6800 „	4	9	10	**7.5***	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
													5	11	18	15*				
0.015 „	4	9.5	13	10	5	11	13	10	6	12.5	18	15	7	14	18	15				
0.022 „	5	11	13	10	6	12	13	10	7	14	18	15	8	15	18	15				
0.033 „	6	12	13	10	7	14	18	15	8	15	18	15								
0.047 „	6	12.5	18	15	8	15	18	15	9	16	18	15								

* AC voltage: f ⩽ 400 Hz;
1.4 × Vrms + VDC ⩽ VDC (rated)

** PCM = Printed circuit module = lead spacing

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

Dims. in mm.



Taped version see page 71.

d = 0.5 ø if W = 3
d = 0.7 ø if W ⩾ 4
d = 0.8 ø if PCM = 15
} PCM 7.5 and 10

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