

# 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-O, with epoxy resin seal. Colour: Yellow. Marking: Black.

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

**Test specifications:** In accordance with IEC 60384-12 and CECC 31700.

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

**Insulation resistance** at +20° C:

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

In accordance with IEC 60384-12 and CECC 31700.

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:**  $2 V_r$ , 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/sec<sup>2</sup> 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.

# WIMA FKC 3

## General Data

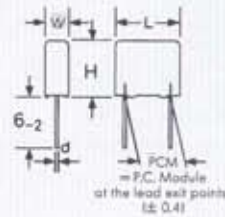
Capacitance	160 VDC / 100 VAC* **				250 VDC / 160 VAC* **				400 VDC / 250 VAC* **				630 VDC / 300 VAC* **				1000 VDC / 300 VAC* **			
	W	H	L	PCM	W	H	L	PCM	W	H	L	PCM	W	H	L	PCM	W	H	L	PCM
100 pF	3	8.5	10	7.5	3	8.5	10	7.5	3	9	13	10	3	9	13	10				
150 pF	3	8.5	10	7.5	3	8.5	10	7.5	3	9	13	10	3	9	13	10		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

\* AC voltage:  $f \leq 400 \text{ Hz}$ ;  
 $1.4 \times V_{\text{rms}} + \text{VDC} \leq \text{VDC (rated)}$

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 88.

$d = 0.5 \phi$  if  $W = 3$   
 $d = 0.7 \phi$  if  $W \geq 4$   
 $d = 0.8 \phi$  if  $\text{PCM} = 15$

Rights reserved to amend design data without prior notification.

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

