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-retardent 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 131700.

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 60384-12 and EN 131700.
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.
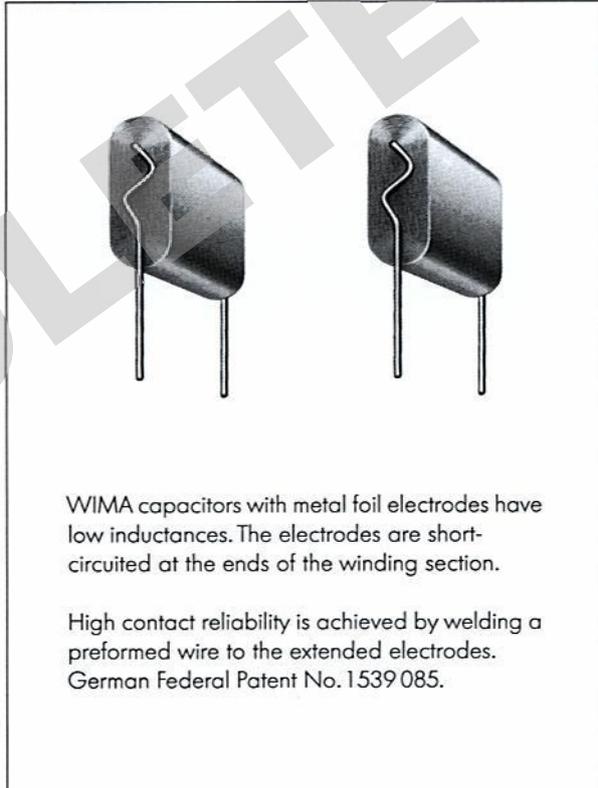
Test voltage: 2 Ur, 2 sec.

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^2 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.

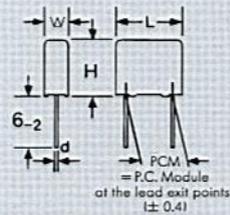WIMA capacitors with metal foil electrodes have low inductances. The electrodes are short-circuited at the ends of the winding section.

High contact reliability is achieved by welding a preformed wire to the extended electrodes. German Federal Patent No. 1539085.

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General Data

Capacitance	160 VDC / 100 VAC* ** W	H	L	PCM	250 VDC / 160 VAC* ** W	H	L	PCM	400 VDC / 250 VAC* ** W	H	L	PCM	630 VDC / 300 VAC* ** W	H	L	PCM	1000 VDC / 300 VAC* ** 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 × Urms + UDC ≤ Ur

** 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.

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Dims. in mm.

PCM = P.C. Module at the lead exit points (± 0.4)

d = 0.5 ∅ if W = 3 } PCM 7.5 and 10
d = 0.7 ∅ if W ≥ 4
d = 0.8 ∅ if PCM = 15

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