

# WIMA MKS 3



## Metallized polyester capacitors in PCM 7.5 mm

- 1000 pF to 2.2 μF in PCM 7.5 mm. ■ For general applications. ■ Alternative to PCM 5 mm with possibility to be placed across wiring path. ■ Available taped and reeled.

### Technical Data

**Dielectric:** Polyethylene terephthalate 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 60384-2 and EN 130400 (u. prep.).

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

**Insulation resistance at +20° C:**

| Ur       | Utest | C ≤ 0.33 μF   | 0.33 μF < C ≤ 2.2 μF                                  |
|----------|-------|---|---|
| 50 VDC   | 10 V  | -   | ≥ 1500 sec.<br>(MΩ x μF)<br>Mean value:<br>4500 sec.  |
| 63 VDC   | 50 V  | ≥ 1x10 <sup>4</sup> MΩms<br>Mean value:<br>5x10 <sup>4</sup> MΩms   | ≥ 3000 sec.<br>(MΩ x μF)<br>Mean value:<br>6000 sec.  |
| ≥ 100VDC | 100V  | ≥ 1.5x10 <sup>4</sup> MΩms<br>Mean value:<br>1x10 <sup>5</sup> MΩms | ≥ 5000 sec.<br>(MΩ x μF)<br>Mean value:<br>10000 sec. |

In accordance with IEC 60384-2 and EN 130400 (u. prep.).  
Measuring time: 1 min.

**Capacitance tolerances:** +/-20%, +/-10%, +/-5%.

### Dissipation factors at +20° C: tan delta

| at f   | C ≤ 0.1 μF            | 0.1 μF < C ≤ 1.0 μF   | C > 1.0 μF            |
|--------|-----------------------|-----------------------|-----------------------|
| 1 kHz  | ≤ 8x10 <sup>-3</sup>  | ≤ 8x10 <sup>-3</sup>  | ≤ 10x10 <sup>-3</sup> |
| 10 kHz | ≤ 15x10 <sup>-3</sup> | ≤ 15x10 <sup>-3</sup> | -                     |
| 100kHz | ≤ 30x10 <sup>-3</sup> | -                     | -                     |

### Maximum pulse rise time:

| Capacitance<br>pF/μF | Pulse rise time V/μsec<br>max. operation/test |        |        |        |        |        |
|----------------------|---|--------|--------|--------|--------|--------|
|                      | 50VDC   | 63VDC  | 100VDC | 250VDC | 400VDC | 630VDC |
| 1000...6800          | -   | -      | -      | 60/600 | 60/600 | 60/600 |
| 0.01...0.022         | -   | -      | 30/300 | 30/300 | 60/600 | 60/600 |
| 0.033...0.068        | -   | 15/150 | 15/150 | 20/200 | 60/600 | 60/600 |
| 0.1...0.15           | -   | 10/100 | 15/150 | 15/150 | -      | -      |
| 0.22...1.0           | 8/80  | 8/80   | 10/100 | 12/120 | -      | -      |
| 1.5...2.2            | 6/60  | -      | -      | -      | -      | -      |

for pulses equal to the rated voltage.

**Test voltage:** 1.6 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<sup>2</sup> in accordance with IEC 60068-2-29.

**Voltage derating:** A voltage derating factor of 1.25% per K must be applied from +85° C for DC voltages and from +75° C for AC voltages.

### General Data

| Capacitance | 50 VDC/<br>30 VAC* |   |   |       | 63 VDC/<br>40 VAC* |      |      |       | 100 VDC/<br>63 VAC* |      |      |       | 250 VDC/<br>160 VAC* |      |      |       | 400 VDC/<br>200 VAC* |      |      |       | 630 VDC/<br>220 VAC* |      |      |       |
|-------------|--------------------|---|---|-------|--------------------|------|------|-------|---------------------|------|------|-------|----------------------|------|------|-------|----------------------|------|------|-------|----------------------|------|------|-------|
|             | W                  | H | L | PCM** | W                  | H    | L    | PCM** | W                   | H    | L    | PCM** | W                    | H    | L    | PCM** | W                    | H    | L    | PCM** | W                    | H    | L    | PCM** |
| 1000pF      |                    |   |   |       |                    |      |      |       |                     |      |      |       |                      |      |      |       |                      |      |      |       | 2.5                  | 7    | 10   | 7.5   |
| 1500 "      |                    |   |   |       |                    |      |      |       |                     |      |      |       |                      |      |      |       |                      |      |      |       | 2.5                  | 7    | 10   | 7.5   |
| 2200 "      |                    |   |   |       |                    |      |      |       |                     |      |      |       |                      |      |      |       | 2.5                  | 7    | 10   | 7.5   | 2.5                  | 7    | 10   | 7.5   |
| 3300 "      |                    |   |   |       |                    |      |      |       |                     |      |      |       |                      |      |      |       | 2.5                  | 7    | 10   | 7.5   | 2.5                  | 7    | 10   | 7.5   |
| 4700 "      |                    |   |   |       |                    |      |      |       |                     |      |      |       |                      |      |      |       | 2.5                  | 7    | 10   | 7.5   | 2.5                  | 7    | 10   | 7.5   |
| 6800 "      |                    |   |   |       |                    |      |      |       |                     |      |      |       | 2.5                  | 7    | 10   | 7.5   | 3                    | 8.5  | 10   | 7.5   | 3                    | 8.5  | 10   | 7.5   |
| 0.01 μF     |                    |   |   |       |                    |      |      |       |                     |      |      |       | 2.5                  | 7    | 10   | 7.5   | 3                    | 8.5  | 10   | 7.5   | 3                    | 8.5  | 10   | 7.5   |
| 0.015 "     |                    |   |   |       |                    |      |      |       |                     |      |      |       | 2.5                  | 7    | 10   | 7.5   | 4                    | 9    | 10   | 7.5   | 4                    | 9    | 10   | 7.5   |
| 0.022 "     |                    |   |   |       |                    |      |      |       | 2.5                 | 7    | 10   | 7.5   | 3                    | 8.5  | 10   | 7.5   | 4.5                  | 9.5  | 10.3 | 7.5   | 4.5                  | 9.5  | 10.3 | 7.5   |
| 0.033 "     |                    |   |   |       |                    |      |      |       | 2.5                 | 7    | 10   | 7.5   | 3                    | 8.5  | 10   | 7.5   | 5                    | 10.5 | 10.3 | 7.5   | 5                    | 10.5 | 10.3 | 7.5   |
| 0.047 "     |                    |   |   |       |                    |      |      |       | 2.5                 | 7    | 10   | 7.5   | 3                    | 8.5  | 10   | 7.5   | 5.7                  | 12.5 | 10.3 | 7.5   | 5.7                  | 12.5 | 10.3 | 7.5   |
| 0.068 "     |                    |   |   |       | 2.5                | 7    | 10   | 7.5   | 3                   | 8.5  | 10   | 7.5   | 4                    | 9    | 10   | 7.5   |                      |      |      |       |                      |      |      |       |
| 0.1 μF      |                    |   |   |       | 2.5                | 7    | 10   | 7.5   | 3                   | 8.5  | 10   | 7.5   | 5                    | 10.5 | 10.3 | 7.5   |                      |      |      |       |                      |      |      |       |
| 0.15 "      |                    |   |   |       | 2.5                | 7    | 10   | 7.5   | 3                   | 8.5  | 10   | 7.5   | 5                    | 10.5 | 10.3 | 7.5   |                      |      |      |       |                      |      |      |       |
| 0.22 "      |                    |   |   |       | 3                  | 8.5  | 10   | 7.5   | 4                   | 9    | 10   | 7.5   | 5                    | 10.5 | 10.3 | 7.5   |                      |      |      |       |                      |      |      |       |
| 0.33 "      |                    |   |   |       | 4                  | 9    | 10   | 7.5   | 4.5                 | 9.5  | 10.3 | 7.5   | 5.7                  | 12.5 | 10.3 | 7.5   |                      |      |      |       |                      |      |      |       |
| 0.47 "      |                    |   |   |       | 4.5                | 9.5  | 10.3 | 7.5   | 5                   | 10.5 | 10.3 | 7.5   |                      |      |      |       |                      |      |      |       |                      |      |      |       |
| 0.68 "      |                    |   |   |       | 5                  | 10.5 | 10.3 | 7.5   | 5.7                 | 12.5 | 10.3 | 7.5   |                      |      |      |       |                      |      |      |       |                      |      |      |       |

