WIMA MKP 2

Metallized Polypropylene (PP) Capacitors in PCM 5 mm

Special Features

- **High volume/capacitance ratio**
- **Self-healing**
- **Increased pulse duty from 250 VDC rated voltage**
- **Very low dissipation factor**
- **Negative capacitance change versus temperature**
- **Very low dielectric absorption**
- **According to RoHS 2002/95/EC**

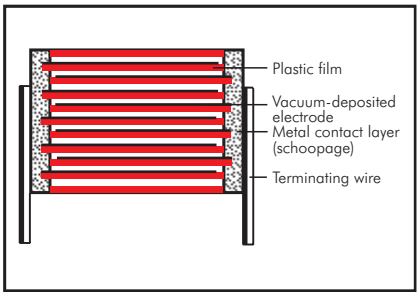
Typical Applications

For high frequency applications e.g.

- **Sample and hold**
- **Timing**
- **Oscillating circuits**
- **High frequency coupling and decoupling**

Construction

Dielectric:
Polypropylene (PP) film
Capacitor electrodes:
Vacuum-deposited
Internal construction:



Encapsulation:
Solvent-resistant, flame-retardent plastic case with epoxy resin seal, UL 94 V-0
Terminations:
Tinned wire.
Marking:
Colour: Red. Marking: Black.
Epoxy resin seal: Red

Electrical Data

Capacitance range:
1000 pF to 0.33 µF (E12-values on request)
Rated voltages:
63 VDC, 100 VDC, 250 VDC, 400 VDC, 630 VDC, 1000 VDC
Capacitance tolerances:
± 20%, ±10%, ±5%
Operating temperature range:
–55° C to +100° C
Test specifications:
In accordance with IEC 60384-16 and EN 131 200
Climatic test category:
55/085/56 in accordance with IEC
Insulation resistance at +20° C:
$\geqslant 3 \times 10^4$ MΩ
(mean value: 1×10^5 MΩ)
Measuring voltage:
$U_r =$ 63 V: $U_{test} =$ 50 V/1 min.
$U_r \geqslant$ 100 V: $U_{test} =$ 100 V/1 min.
Test voltage:
1.6 U_r, 2 sec.
Maximum pulse rise time:

Capacitance pF/µF	max. pulse rise time V/µsec					
	63 VDC	100 VDC	250 VDC	400 VDC	630 VDC	1000 VDC
1000 ... 2200	100	100	250	300	400	500
3300 ... 6800	100	100	250	300	400	500
0.01 ... 0.022	100	100	250	300	400	500
0.033 ... 0.068	100	100	250	300	400	–
0.1 ... 0.22	100	100	250	–	–	–
0.33	100	100	250	–	–	–

for pulses equal to the rated voltage

Dielectric absorption:
0.05 %
Dissipation factors at +20° C: tan δ

at f	C ⩽ 0.1 µF	0.1 µF < C ⩽ 0.33 µF
1 kHz	$\leqslant 0.5 \times 10^{-3}$	$\leqslant 0.5 \times 10^{-3}$
10 kHz	$\leqslant 0.8 \times 10^{-3}$	$\leqslant 0.8 \times 10^{-3}$
100 kHz	$\leqslant 3.0 \times 10^{-3}$	-

Voltage derating:
A voltage derating factor of 1.35 % per K must be applied from +85° C for DC voltages and from +75° C for AC voltages
Reliability:
Operating life > 300 000 hours
Failure rate < 2 fit (0.5 x U_r and 40° C)

Mechanical Tests

Pull test on leads:
10 N in direction of leads according to IEC 60068-2-21
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:
1kPa = 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

Packing

Available taped and reeled.

Detailed taping information and graphs at the end of the catalogue.

For further details and graphs please refer to Technical Information.