WIMA MKS 2

Metallized Polyester (PET) Capacitors in PCM 5 mm

Special Features

- **High volume/capacitance ratio**
- **Self-healing**
- **According to RoHS 2002/95/EC**

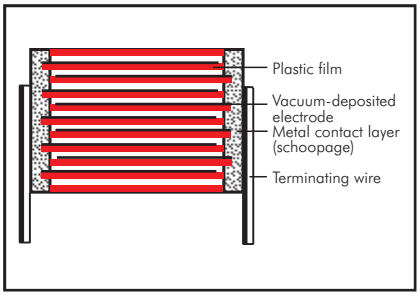
Typical Applications

For general DC-applications e.g.

- **By-pass**
- **Blocking**
- **Coupling and decoupling**
- **Timing**

Construction

Dielectric:
Polyethylene-terephthalate (PET) 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: Silver/White. Epoxy resin seal: Red

Electrical Data

Capacitance range:
1000 pF to 10 µF (E12-values on request)
Rated voltages:
16 VDC, 50 VDC, 63 VDC, 100 VDC, 250 VDC, 400 VDC, 630 VDC
Capacitance tolerances:
±20%, ±10%, ±5%
Operating temperature range:
–55° C to +100° C
Climatic test category:
55/100/21 in accordance with IEC
Insulation resistance at +20° C:

U_r	U_{test}	C ⩽ 0.33 µF	0.33 µF < C ⩽ 10 µF
16 VDC	10 V	⩾3.75 x 10^3 MΩ (mean value: 1 x 10^4 MΩ)	⩾1000 sec (MΩ x µF) (mean value: 3000 sec)
50 VDC	10 V	⩾5 x 10^3 MΩ (mean value: 3 x 10^4 MΩ)	⩾1000 sec (MΩ x µF) (mean value: 3000 sec)
63 VDC	50 V	⩾1 x 10^4 MΩ (mean value: 5 x 10^4 MΩ)	⩾1250 sec (MΩ x µF) (mean value: 3000 sec)
⩾100 VDC	100 V	⩾1.5 x 10^4 MΩ (mean value: 1 x 10^5 MΩ)	⩾3000 sec (MΩ x µF) (mean value: 6000 sec)

Measuring time: 1 min.
Dissipation factors at + 20° C: tan δ

at f	C ⩽ 0.1 µF	0.1 µF < C ⩽ 1.0 µF	C > 1.0 µF
1 kHz	⩽ 8 x 10^{-3}	⩽ 8 x 10^{-3}	⩽ 10 x 10^{-3}
10 kHz	⩽ 15 x 10^{-3}	⩽ 15 x 10^{-3}	–
100 kHz	⩽ 30 x 10^{-3}	–	–

Maximum pulse rise time:

Capacitance pF/µF	Pulse rise time V/µsec max. operation/test						
	16 VDC	50 VDC	63 VDC	100 VDC	250 VDC	400 VDC	630 VDC
1000 ... 6800	–	40/400	40/400	40/400	50/500	80/800	110/1100
0.01 ... 0.022	–	25/250	35/350	35/350	50/500	80/800	110/1100
0.033 ... 0.068	–	15/150	20/200	25/250	50/500	80/800	–
0.1 ... 0.47	–	10/100	15/150	20/200	50/500	80/800	–
0.68 ... 1.0	–	8/80	12/120	15/150	–	–	–
1.5 ... 3.3	–	8/80	7,5/75	10/100	–	–	–
4.7	4/40	5/50	5/50	–	–	–	–
6.8 ... 10	3/30	3/30	–	–	–	–	–

for pulses equal to the rated voltage

Test specifications:
In accordance with IEC 60384-2 and EN 130 400
Test voltage: 1.6 U_r, 2 sec.
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
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.