WIMA FKP 2

Polypropylene (PP) Film and Foil Capacitors for Pulse Applications in PCM 5 mm

Special Features

- **Pulse duty construction**
- **Close tolerances up to ±2.5 % (±1 % on request)**
- **Very low dissipation factor**
- **Negative capacitance change versus temperature**
- **Very low dielectric absorption**
- **According to RoHS 2002/95/EC**

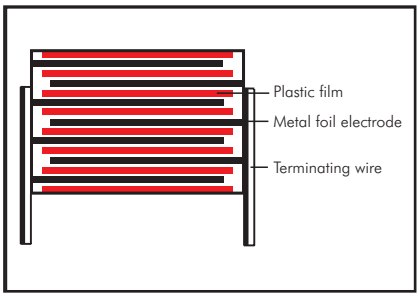
Typical Applications

For high frequency applications e.g.

- **Sample and hold**
- **Timing**
- **LC-Filtering**
- **Oscillating circuits**
- **Audio equipment**

Construction

Dielectric:
Polypropylene (PP) film
Capacitor electrodes:
Metal foil
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: Yellow

Electrical Data

Capacitance range:
33 pF to 0.033 µF (E12-values on request)
Rated voltages:
63 VDC, 100 VDC, 250 VDC, 400 VDC, 630 VDC, 800 VDC, 1000 VDC
Capacitance tolerances:
±10%, ±5%, ±2.5% (±1% available subject to special enquiry)
Operating temperature range:
–55° C to +100° C
Test specifications:
In accordance with IEC 60384-13 and EN 131 800
Climatic test category:
55/100/56 in accordance with IEC
Insulation resistance at +20° C:
$\geqslant 5 \times 10^5$ MΩ
(mean value: 1×10^6 MΩ)
Measuring voltage:
$U_r =$ 63 V: $U_{test} =$ 50 V/1 min.
$U_r \geqslant$ 100 V: $U_{test} =$ 100 V/1 min.
Dissipation factors at +20° C: tan δ

at f	C ⩽ 1000 pF	1000 pF < C ⩽ 4700 pF	C > 4700 pF
1 kHz	⩽ 3×10^{-4}	⩽ 4×10^{-4}	⩽ 4×10^{-4}
10 kHz	⩽ 3×10^{-4}	⩽ 4×10^{-4}	⩽ 4×10^{-4}
100 kHz	⩽ 4×10^{-4}	⩽ 5×10^{-4}	–
1 MHz	⩽ 10×10^{-4}	–	–

Test voltage: 2 U_r, 2 sec.
Maximum pulse rise time:
1000 V/µsec for pulses equal to the rated voltage
Dielectric absorption:
0.05%
Temperature coefficient:
-200×10^{-6}/° C (typical)
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 < 5 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.