

## Polypropylene (PP) Film and Foil Capacitors for Pulse Applications PCM 7.5 mm to 15 mm

### Special Features

- Pulse duty construction
- 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

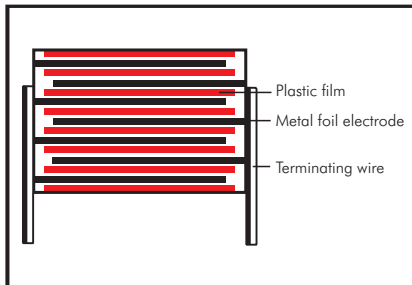
#### Dielectric:

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:

100 pF to 0.22 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 60384-13 and EN 131 800

#### Climatic test category:

55/100/56 in accordance with IEC

#### Insulation resistance at +20° C:

≥ 5 × 10<sup>5</sup> MΩ

(mean value: 1 × 10<sup>6</sup> MΩ)

Measuring voltage:

U<sub>r</sub> = 63 V: U<sub>test</sub> = 50 V/1 min.

U<sub>r</sub> ≥ 100 V: U<sub>test</sub> = 100 V/1 min.

Test voltage: 2 U<sub>r</sub>, 2 sec.

#### Maximum pulse rise time:

1000 V/μsec for pulses equal to the rated voltage

#### Dielectric absorption:

0.05 %

#### Temperature coefficient:

-200 × 10<sup>-6</sup>/° C (general guide)

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

at f	C ≤ 0.1 μF	0.1 μF < C ≤ 0.22 μF
1 kHz	≤ 4 × 10 <sup>-4</sup>	≤ 3 × 10 <sup>-4</sup>
10 kHz	≤ 5 × 10 <sup>-4</sup>	≤ 6 × 10 <sup>-4</sup>
100 kHz	≤ 10 × 10 <sup>-4</sup>	-

#### 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:

Operational life > 300 000 hours

Failure rate < 5 fit (0.5 × U<sub>r</sub> 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:

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

### 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.