

Polypropylene (PP) Film and Foil Capacitors for Pulse Applications in PCM 2.5 mm

Special Features

- Pulse duty construction
- PCM 2.5 mm
- Close tolerances up to $\pm 2.5\%$
- 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

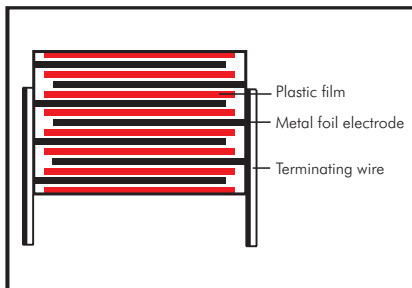
Dielectric:

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 0.01 μ F (E12-values on request)

Rated voltages:

63 VDC, 100 VDC, 250 VDC, 400 VDC

Capacitance tolerances:

$\pm 10\%$, $\pm 5\%$, $\pm 2.5\%$

Operating temperature range:

-55° C to $+100^{\circ}$ C

Test specifications:

In accordance with IEC 60384-13 and EN 131 800

Climatic test category:

55/100/21 in accordance with IEC

Insulation resistance at $+20^{\circ}$ C:

$\geq 5 \times 10^5$ M Ω

(mean value: 1×10^6 M Ω)

Measuring voltage:

$U_r = 63$ V: $U_{test} = 50$ V/1 min.

$U_r \geq 100$ V: $U_{test} = 100$ V/1 min.

Test voltage: $2 U_r$, 2 sec.

Maximum pulse rise time:

1000 V/ μ sec for pulses equal to the rated voltage

Dielectric absorption:

0.05%

Temperature coefficient:

$-200 \times 10^{-6}/^{\circ}$ C (typical)

Dissipation factors at $+20^{\circ}$ C: $\tan \delta$

at f	$C \leq 0.01 \mu\text{F}$
1 kHz	$\leq 4 \times 10^{-4}$
10 kHz	$\leq 4 \times 10^{-4}$
100 kHz	$\leq 6 \times 10^{-4}$

Voltage derating:

A voltage derating factor of 1.35 % per K must be applied from $+85^{\circ}$ C for DC voltages and from $+75^{\circ}$ C for AC voltages.

Reliability:

Operational life > 300 000 hours

Failure rate < 5 fit ($0.5 \times U_r$ 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/sec² 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.