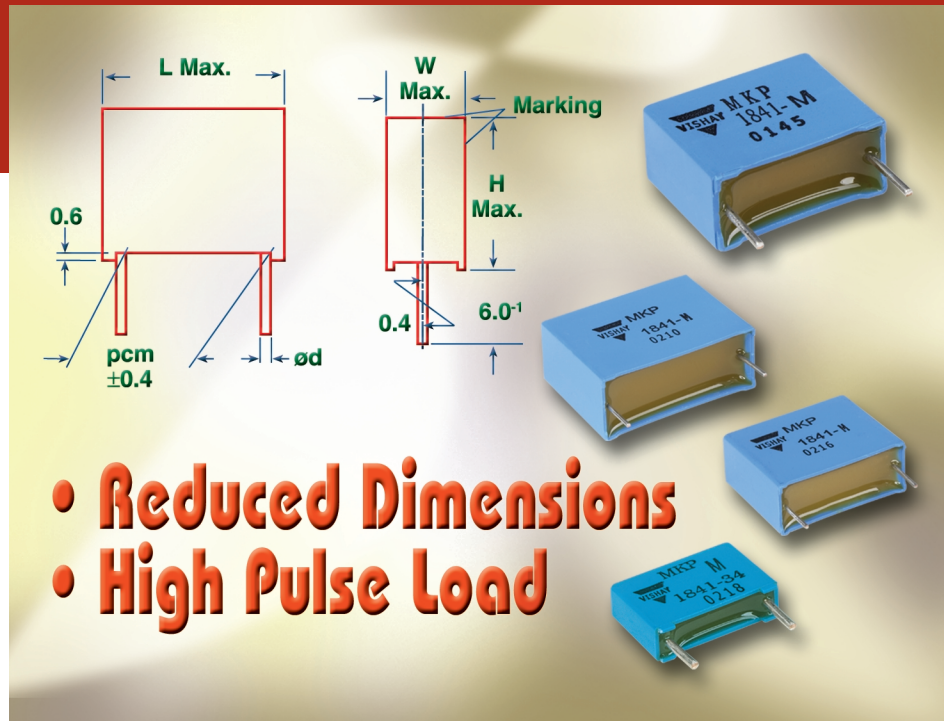




VISHAY INTERTECHNOLOGY, INC.

CAPACITORS



- Reduced Dimensions
- High Pulse Load

Model MKP 1841-M

Metallized Polypropylene Film Capacitor

FEATURES

- Double sided metallized film design
- **Wide Capacitance Range:** 470pF to 4.7 μ F
- **Wide Voltage Range:** 250VDC to 2000VDC
- **Small Sizes in Lead Spacings:** 7.5mm to 37.5mm
- **Pulse Rise Time:** up to 9610V/ μ s
- Excellent self-healing properties
- Environmentally friendly lead (Pb) free schooping layers and terminals

APPLICATIONS

- TV sets and monitors (fly-back tuning and S-correction)
- SMPS and snubber circuits
- Electronic ballasts and energy saving lamps



Metallized Polypropylene Capacitor, Mini-Version (-M)

Related Document: CECC 31 200

MAIN APPLICATIONS:

High voltage, high current and high pulse operations. Deflection circuits in TV-sets (S-correction and fly-back tuning). Protection circuits in SMPS's, snubber and electronic ballast circuits. Input and output filtering in SPS designs.

MARKING:

Manufacturer's logo/type/C-value/rated voltage/tolerance/date of manufacture

DIELECTRIC:

Polypropylene film

ELECTRODES:

Vacuum deposited aluminum

COATING:

Flame retardant plastic case UL-class 94 V-0, color blue, epoxy resin sealed

CONSTRUCTION:

Extended double sided metallized polyester film, internal series connection (630 VDC/400 VAC to 2000 VDC), double sided metallized polyester carrier film.

LEADS:

Tinned wire

IEC TEST CLASSIFICATION:

55/100/56, according to IEC 60068

OPERATING TEMPERATURE RANGE:

- 55°C to + 100°C

CAPACITANCE RANGE:

680pF to 4.7µF

CAPACITANCE TOLERANCES:

± 20% (M), ± 10% (K), ± 5% (J)

RATED VOLTAGES (U_R):

250 VDC, 400 VDC, 630 VDC, 1000 VDC, 1600 VDC, 2000 VDC

PERMISSIBLE AC VOLTAGES (RMS) UP TO 60Hz:

160 VAC, 220 VAC, 250 VAC, 400 VAC, 600 VAC, 650 VAC, 700 VAC

TEST VOLTAGE:

1.6 x U_R for 2 s

MAXIMUM PULSE RISE TIME

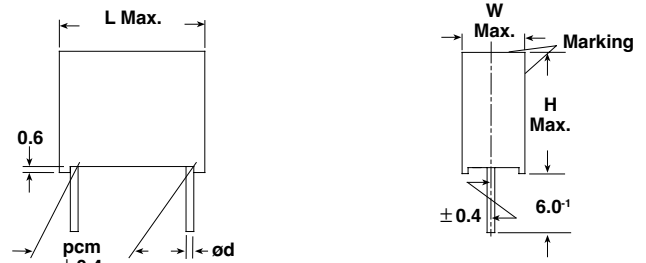
PCM (mm)	Maximum pulse rise time d_v/d_t [V/µs]						
	250 VDC	400 VDC	630/250 VDC	630 VDC	1000 VDC	1600 VDC	2000 VDC
7.5	1730	—	—	—	—	—	—
10	865	1297	2162	—	—	—	—
15	432	649	—	2703	3784	6683	9610
22.5	247	360	—	1441	2018	2827	3326
27.5	192	282	—	1081	1514	2042	2544
37.5	133	200	—	—	1044	1313	1602

If the maximum pulse voltage is less than the rated voltage higher d_v/d_t values can be permitted.

DISSIPATION FACTOR $\tan \delta$

MEASURED AT	C ≤ 0.1µF	0.1µF < C ≤ 1.0µF	C > 1.0µF
1kHz	0.3 x 10 ⁻³	0.3 x 10 ⁻³	0.3 x 10 ⁻³
10kHz	0.4 x 10 ⁻³	0.5 x 10 ⁻³	—
100kHz	1.5 x 10 ⁻³	—	—
		Maximum value	

Dimensions in millimeters



PCM	W	Ø d
7.5		0.6
10 - 37.5	< 16.0	0.8
10 - 37.5	≥ 16.0	1.0

INSULATION RESISTANCE:

Measured at 100 VDC after one minute

For C ≤ 0.33µF:

100,000 MΩ minimum value (150,000 MΩ typical value)

TIME CONSTANT:

Measured at 100 VDC after one minute

For C > 0.33µF:

30,000 s minimum value (50,000 s typical value)

TEMPERATURE COEFFICIENT:

- 250 x 10⁻⁶/°C (typical value)

CAPACITANCE DRIFT:

Up to + 40°C, ± 0.5% for a period of two years

DERATING FOR DC AND AC.

CATEGORY VOLTAGE U_C:

At + 85°C: U_C = 1.0 U_R

At + 100°C: U_C = 0.7 U_R

SELF INDUCTANCE:

~ 6 nH measured with 2mm long leads

PULL TEST ON LEADS:

≥ 30 N in direction of leads according to IEC 60068-2-21

RELIABILITY:

Operational life > 300,000 h

Failure rate < 2 FIT (40°C and 0.5 x U_R)

For further details, please refer to the general information provided in the Film Capacitors catalog.