

Polypropylene Film Capacitor

Related Document: IEC 60384-13, CECC 31 800

MAIN APPLICATIONS:

Oscillator, timing and LC/RC filter circuits, high frequency coupling of fast digital and analog IC's.

MARKING:

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

DIELECTRIC:

Polypropylene film

ELECTRODES:

Metal foil

COATING:

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

CONSTRUCTION:

Extended foil (refer to general information)

LEADS:

Tinned wire

IEC TEST CLASSIFICATION:

55/100/56, according to IEC 60068

OPERATING TEMPERATURE RANGE:

- 55°C to + 100°C

CAPACITANCE RANGE:

100pF to 0.033μF

CAPACITANCE TOLERANCES:

± 10% (K), ± 5% (J), ± 2.5% (H), ± 1% (F)

RATED VOLTAGES (U_R):

63 VDC, 250 VDC, 630 VDC

PERMISSIBLE AC VOLTAGES (RMS) UP TO 60Hz:

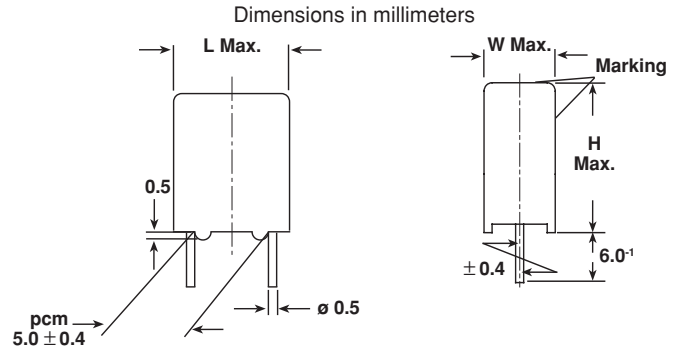
40 VAC, 160 VAC, 250 VAC

TEST VOLTAGE (ELECTRODE/ELECTRODE):

2 x U_R for 2 sec.

PULSE RISE TIME:

d_v/d_t = 1000 V/μs


INSULATION RESISTANCE:

Measured at 100 VDC (63 VDC series measured at 50 VDC) after one minute

500,000 MΩ minimum value (1000 GΩ typical value)

TEMPERATURE COEFFICIENT:

- 200 x 10⁻⁶/°C (typical value)

CAPACITANCE DRIFT:

Up to + 40°C, ± 0.3% 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

DIELECTRIC ABSORPTION:

0.05% (typical value) according to IEC 60384-1

RELIABILITY:

Operational life > 300,000 h

Failure rate < 1 FIT (0.5 x U_R and 40°C)

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

DISSIPATION FACTOR TAN δ

MEASURED AT	C ≤ 1000pF	C > 1000pF
1kHz	0.3 x 10 ⁻³	0.4 x 10 ⁻³
10kHz	0.3 x 10 ⁻³	0.4 x 10 ⁻³
100kHz	0.4 x 10 ⁻³	0.8 x 10 ⁻³
1 MHz	1 x 10 ⁻³	—
Maximum values		

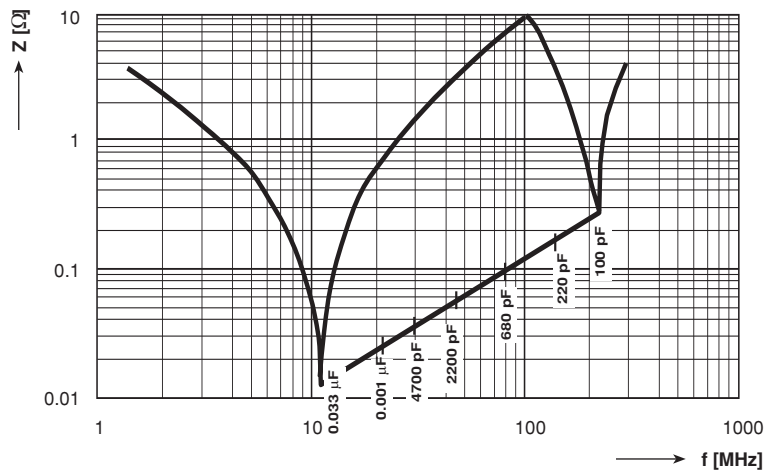
CAPACITANCE	CAPACITANCE CODE	VOLTAGE CODE 06 63 VDC/40 VAC			VOLTAGE CODE 25 250 VDC/160 VAC			VOLTAGE CODE 63 630 VDC/250 VAC		
		W	H	L	W	H	L	W	H	L
100 pF	- 110	—	—	—	—	—	—	4.5	6.0	7.2
150 pF	- 115	—	—	—	—	—	—	4.5	6.0	7.2
220 pF	- 122	—	—	—	—	—	—	4.5	6.0	7.2
330 pF	- 133	—	—	—	—	—	—	4.5	6.0	7.2
470 pF	- 147	—	—	—	—	—	—	4.5	6.0	7.2
680 pF	- 168	—	—	—	—	—	—	4.5	6.0	7.2
1000 pF	- 210	—	—	—	—	—	—	4.5	6.0	7.2
1500 pF	- 215	—	—	—	—	—	—	4.5	6.0	7.2
2200 pF	- 222	—	—	—	4.5	6.0	7.2	5.5	7.0	7.2
3300 pF	- 233	4.5	6.0	7.2	5.5	7.0	7.2	5.5	7.0	7.2
4700 pF	- 247	4.5	6.0	7.2	5.5	7.0	7.2	7.5	9.0	7.2
6800 pF	- 268	4.5	6.0	7.2	7.5	9.0	7.2	7.5	9.0	7.2
0.01 μF	- 310	5.5	7.0	7.2	7.5	9.0	7.2	9.0	10.0	7.2
0.015 μF	- 315	5.5	7.0	7.2	9.0	10.0	7.2	—	—	—
0.022 μF	- 322	7.5	9.0	7.2	—	—	—	—	—	—
0.033 μF	- 333	9.0	10.0	7.2	—	—	—	—	—	—

Further C-values upon request.

RECOMMENDED PACKAGING

LETTER CODE	TYPE OF PACKAGING	HEIGHT (H) (mm)	REEL DIAMETER (mm)	ORDERING CODE EXAMPLE	PCM 5
D	AMMO	16.5	S*	KP 1830-310-065-D	X
G	AMMO	18.5	S*	KP 1830-310-065-G	X
F	REEL	16.5	350	KP 1830-310-065-F	X
W	REEL	18.5	350	KP 1830-310-065-W	X
—	BULK	—	—	KP 1830-310-065	X

*S = box size 55 x 210 x 340mm (W x H x L)



Impedance versus Frequency $Z = f(f)$ (Lead length 2.0mm)