

## Polycarbonate Film Capacitor Related Document: IEC 60 384-12

**MAIN APPLICATIONS:**

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

**MARKING:**

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

**DIELECTRIC:**

Polycarbonate film

**ELECTRODES:**

Metal foil

**COATING:**

Flame retardant plastic case (UL-class 94 V-0), red, 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:**

220pF to 10,000pF

**CAPACITANCE TOLERANCES:**

± 20% (M), ± 10% (K), ± 5% (J)

**RATED VOLTAGES (U<sub>R</sub>):**

63 VDC, 100 VDC, 160 VDC

**PERMISSIBLE AC VOLTAGES (RMS) UP TO 60Hz:**

40 VAC, 63 VAC, 100 VAC

**TEST VOLTAGE (ELECTRODE/ELECTRODE):**

2 x U<sub>R</sub> for 2 s

**PULSE RISE TIME:**

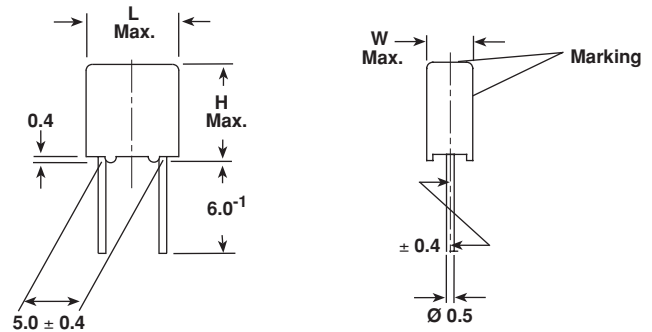
d<sub>v</sub>/d<sub>t</sub> = 1000 V/μs

**DISSIPATION FACTOR TAN δ**

MEASURED AT	C ≤ 0.1μF
1kHz	2 x 10 <sup>-3</sup>
10kHz	4 x 10 <sup>-3</sup>
100kHz	8 x 10 <sup>-3</sup>
	Maximum values

\*Please note: these capacitors are not recommended for new designs.

Dimensions in millimeters



**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)

**CAPACITANCE DRIFT:**

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

**DERATING FOR DC AND AC.  
CATEGORY VOLTAGE U<sub>C</sub>:**

At + 85°C: U<sub>C</sub> = 1.0 U<sub>R</sub>

At + 100°C: U<sub>C</sub> = 0.8 U<sub>R</sub>

**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 < 1 FIT (40°C and 0.5 x U<sub>R</sub>)

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

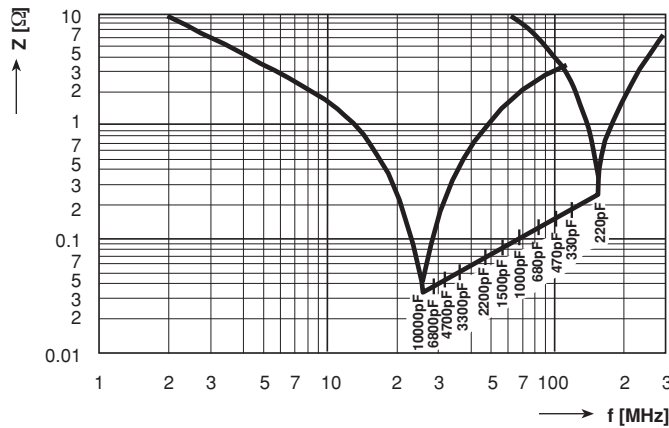
CAPACITANCE	CAPACITANCE CODE	VOLTAGE CODE 06 63 VDC/ 40 VAC			VOLTAGE CODE 01 100 VDC/ 63 VAC			VOLTAGE CODE 16 160 VDC/ 100 VAC		
		W	H	L	W	H	L	W	H	L
220 pF	- 122	—	—	—	—	—	—	2.5	6.5	7.2
330 pF	- 133	—	—	—	—	—	—	2.5	6.5	7.2
470 pF	- 147	—	—	—	—	—	—	2.5	6.5	7.2
680 pF	- 168	—	—	—	—	—	—	2.5	6.5	7.2
1000 pF	- 210	—	—	—	—	—	—	2.5	6.5	7.2
1500 pF	- 215	—	—	—	2.5	6.5	7.2	3.5	8.5	7.2
2200 pF	- 222	—	—	—	2.5	6.5	7.2	3.5	8.5	7.2
3300 pF	- 233	2.5	6.5	7.2	—	—	—	—	—	—
4700 pF	- 247	2.5	6.5	7.2	—	—	—	—	—	—
6800 pF	- 268	3.0	7.5	7.2	—	—	—	—	—	—
0.01 $\mu$ F	- 310	3.5	8.5	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*	KC 1850-210/165-D	X
G	AMMO	18.5	S*	KC 1850-210/165-G	X
F	REEL	16.5	350	KC 1850-210/165-F	X
W	REEL	18.5	350	KC 1850-210/165-W	X
—	BULK	—	—	KC 1850-210/165	X

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



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

\*Please note: these capacitors are not recommended for new designs.



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