

## Polycarbonate Film Capacitor

### Related Document: CECC 31 700

**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 ( $U_R$ ):**

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  $U_R$  for 2 s

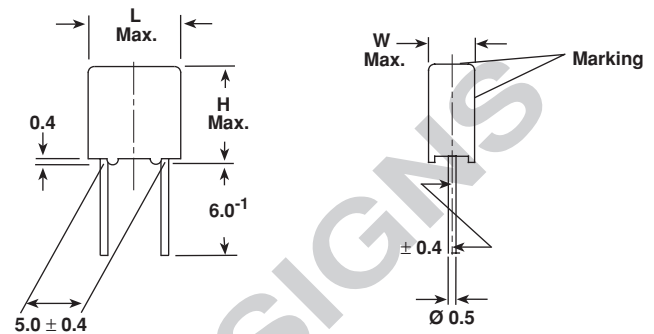
**PULSE RISE TIME:**

$d_v/d_t = 1000 \text{ V}/\mu\text{s}$

**DISSIPATION FACTOR TAN  $\delta$** 

MEASURED AT	$C \leq 0.1 \mu\text{F}$
1kHz	$2 \times 10^{-3}$
10kHz	$4 \times 10^{-3}$
100kHz	$8 \times 10^{-3}$
	Maximum values

Dimensions in millimeters


**INSULATION RESISTANCE:**

Measured at 100 VDC (63 VDC series measured at 50 VDC) after one minute  
500,000 M $\Omega$  minimum value (1000 G $\Omega$  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:  $U_C = 0.8 U_R$

**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 < 1 FIT (40°C and 0.5 x  $U_R$ )

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

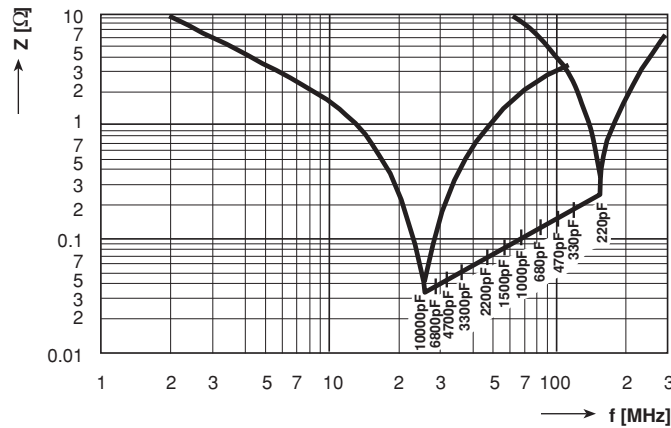
CAPACITANCE	CAPACITANCE CODE	VOLTAGE CODE 06 63 VDC/ 40 VAC			VOLTAGE CODE 01 100 VDC/ 63 VAC			VOLTAGE CODE 16 160 VDC/ 100 VAC		
		W	H	L	W	H	L	W	H	L
220 pF	- 122	—	—	—	—	—	—	2.5	6.5	7.2
330 pF	- 133	—	—	—	—	—	—	2.5	6.5	7.2
470 pF	- 147	—	—	—	—	—	—	2.5	6.5	7.2
680 pF	- 168	—	—	—	—	—	—	2.5	6.5	7.2
1000 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)