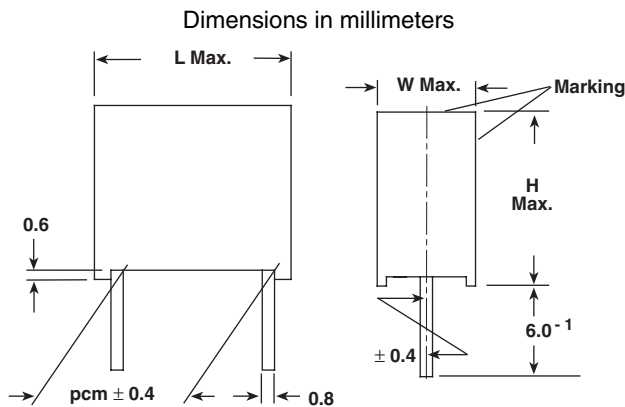


## Metallized Polycarbonate Film Capacitor

### Related Document: IEC 60384-6


**MAIN APPLICATIONS**

Storage, filter, timing and integrating circuits.

**MARKING**

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

**DIELECTRIC**

Polycarbonate film

**ELECTRODES**

Vacuum deposited aluminum

**COATING**

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

**CONSTRUCTION**

Extended metallized film (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 TOLERANCES**

± 20% (M), ± 10% (K), ± 5% (J)

**RATED VOLTAGES ( $U_R$ )**

63 VDC, 100 VDC, 250 VDC, 400 VDC

**MAXIMUM PULSE RISE TIME**

PCM (mm)	Maximum Pulse Rise Time $d_v/d_t$ [V/ $\mu$ s]			
	63 VDC	100 VDC	250 VDC	400 VDC
10	17	23	38	61
15	9	13	21	33
22.5	6	8	13	20
27.5	5	6	10	16

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

**FEATURES**

 Product is completely lead (Pb)-free.  
Product is RoHS compliant.

**DERATING FOR DC AND AC. CATEGORY VOLTAGE  $U_C$** 

 At + 85°C:  $U_C = 1.0 U_R$ 

 At + 100°C:  $U_C = 0.8 U_R$ 

**CAPACITANCE RANGE**

 0.01 $\mu$ F to 10 $\mu$ F

**RoHS**  
COMPLIANT

**PERMISSIBLE AC VOLTAGES (RMS) UP TO 60HZ**

40 VAC, 63 VAC, 160 VAC, 200 VAC

**TEST VOLTAGE (ELECTRODE/ELECTRODE)**

 1.6 x  $U_R$  for 2 s

**INSULATION RESISTANCE**

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

**For  $C \leq 0.33\mu$ F and  $U_R > 100$  VDC:**

 30,000 M $\Omega$  minimum value (100,000 M $\Omega$  typical value)

**For  $C \leq 0.33\mu$ F and  $U_R \leq 100$  VDC:**

 15,000 M $\Omega$  minimum value (50,000 M $\Omega$  typical value)

**TIME CONSTANT**

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

**For  $C > 0.33\mu$ F and  $U_R > 100$  VDC:**

10,000 s minimum value (40,000 s typical value)

**For  $C > 0.33\mu$ F and  $U_R \leq 100$  VDC:**

5000 s minimum value (15,000 s typical value)

**CAPACITANCE DRIFT**

Up to + 40°C, ± 1% for a period of two years

**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

**BEND TEST ON LEADS**

2 bends through 90° with half of the force used in pull test

**RELIABILITY**

Operational life &gt; 300,000 h

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

 For further details, please refer to the general information  
available at [www.vishay.com/doc?26033](http://www.vishay.com/doc?26033).



## DISSIPATION FACTOR TAN $\delta$

MEASURED AT	$C \leq 0.1\mu\text{F}$	$0.1\mu\text{F} < C \leq 1.0\mu\text{F}$	$C > 1.0\mu\text{F}$
1kHz	$3 \times 10^{-3}$	$3 \times 10^{-3}$	$3 \times 10^{-3}$
10kHz	$4 \times 10^{-3}$	$4 \times 10^{-3}$	—
100kHz	$10 \times 10^{-3}$	—	—
Maximum values			

CAPACITANCE	CAPACITANCE CODE	VOLTAGE CODE 06 63 VDC/40 VAC				VOLTAGE CODE 01 100 VDC/63 VAC				VOLTAGE CODE 25 250 VDC/160 VAC				VOLTAGE CODE 40 400 VDC/200 VAC			
		W	H	L	PCM	W	H	L	PCM	W	H	L	PCM	W	H	L	PCM
0.01 $\mu\text{F}$	- 310	—	—	—	—	—	—	—	—	—	—	—	—	4.0	9.0	13.0	10
0.015 $\mu\text{F}$	- 315	—	—	—	—	—	—	—	—	—	—	—	—	4.0	9.0	13.0	10
0.022 $\mu\text{F}$	- 322	—	—	—	—	—	—	—	—	4.0	9.0	13.0	10	4.0	9.0	13.0	10
0.033 $\mu\text{F}$	- 333	—	—	—	—	—	—	—	—	4.0	9.0	13.0	10	5.5	10.5	13.0	10
0.047 $\mu\text{F}$	- 347	—	—	—	—	—	—	—	—	4.0	9.0	13.0	10	5.5	10.5	18.0	15
0.068 $\mu\text{F}$	- 368	—	—	—	—	4.0	9.0	13.0	10	5.5	10.5	13.0	10	5.5	10.5	18.0	15
0.1 $\mu\text{F}$	- 410	—	—	—	—	4.0	9.0	13.0	10	5.5	10.5	18.0	15	6.5	12.5	18.0	15
0.15 $\mu\text{F}$	- 415	—	—	—	—	5.5	10.5	13.0	10	5.5	10.5	18.0	15	8.5	14.5	18.0	15
0.22 $\mu\text{F}$	- 422	4.0	9.0	13.0	10	6.5	11.5	13.0	10	6.5	12.5	18.0	15	7.5	15.5	26.5	22.5
0.33 $\mu\text{F}$	- 433	4.5	9.5	13.0	10	5.5	10.5	18.0	15	7.5	13.5	18.0	15	8.5	16.5	26.5	22.5
0.47 $\mu\text{F}$	- 447	5.5	10.5	13.0	10	6.5	12.5	18.0	15	7.5	15.5	26.5	22.5	10.5	18.5	26.5	22.5
0.68 $\mu\text{F}$	- 468	5.5	10.5	18.0	15	7.5	13.5	18.0	15	8.5	16.5	26.5	22.5	11.5	20.5	31.5	27.5
1.0 $\mu\text{F}$	- 510	6.5	12.5	18.0	15	8.5	14.5	18.0	15	8.5	16.5	26.5	22.5	13.5	23.5	31.5	27.5
1.5 $\mu\text{F}$	- 515	7.5	13.5	18.0	15	7.5	15.5	26.5	22.5	11.5	20.5	31.5	27.5	—	—	—	—
2.2 $\mu\text{F}$	- 522	8.5	14.5	18.0	15	8.5	16.5	26.5	22.5	11.5	20.5	31.5	27.5	—	—	—	—
3.3 $\mu\text{F}$	- 533	7.5	15.5	26.5	22.5	10.5	18.5	26.5	22.5	13.5	23.5	31.5	27.5	—	—	—	—
4.7 $\mu\text{F}$	- 547	8.5	16.5	26.5	22.5	11.5	20.5	31.5	27.5	16.5	29.5	31.5	27.5	—	—	—	—
6.8 $\mu\text{F}$	- 568	10.5	18.5	26.5	22.5	13.5	23.5	31.5	27.5	—	—	—	—	—	—	—	—
10.0 $\mu\text{F}$	- 610	11.5	20.5	31.5	27.5	15.0	24.5	31.5	27.5	—	—	—	—	—	—	—	—

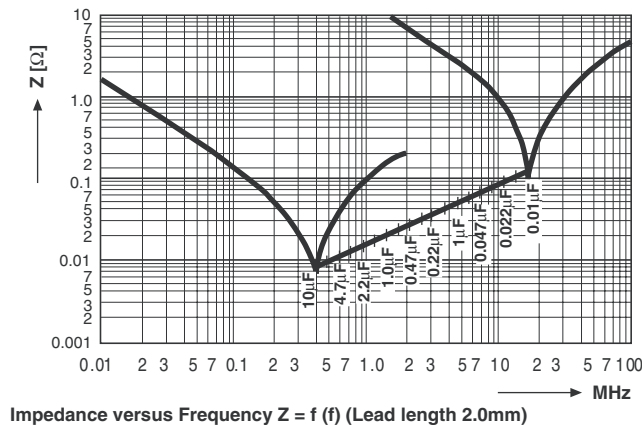
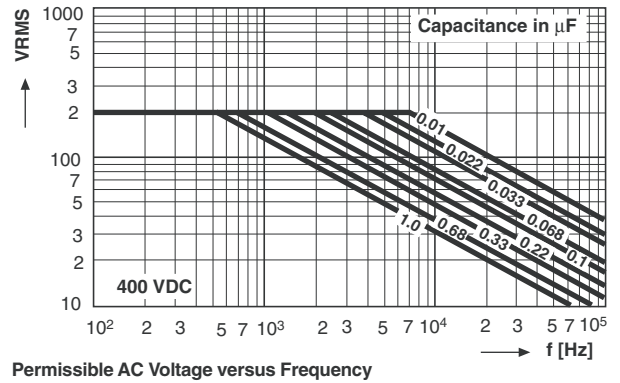
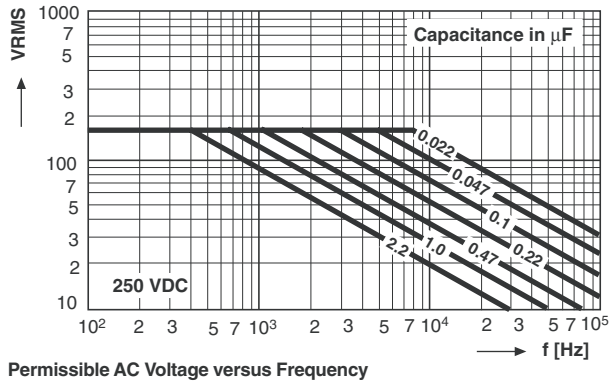
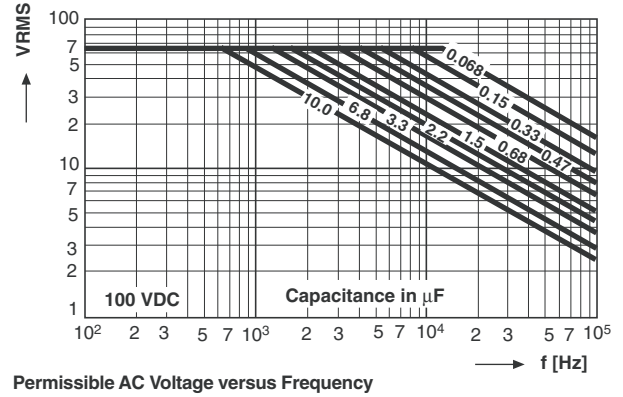
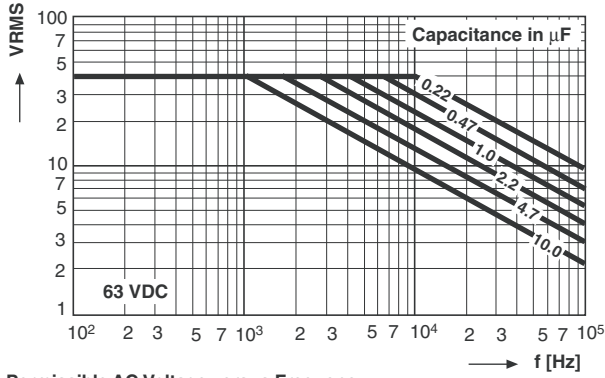
Further C-values upon request

## RECOMMENDED PACKAGING

LETTER CODE	TYPE OF PACKAGING	HEIGHT (H) (mm)	REEL DIAMETER (mm)	ORDERING CODE EXAMPLES	PCM 10	PCM 15	PCM 22.5 - 27.5
D	AMMO	16.5	S*	MKC 1862-310/405-D	X	X	—
G	AMMO	18.5	S*	MKC 1862-310/405-G	X	X	—
F	REEL	16.5	350	MKC 1862-310/405-F	X	X	—
W	REEL	18.5	350	MKC 1862-310/405-W	X	X	—
V	REEL	18.5	500	MKC 1862-522/255-V	—	X	X
G	AMMO	18.5	L*	MKC 1862-522/255-G	—	—	X
—	BULK	—	—	MKC 1862-522/255	X	X	X

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

\*L - box size 60 x 360 x 510mm (W x H x L)





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**Please note that some Vishay documentation may still make reference to RoHS Directive 2002/95/EC. We confirm that all the products identified as being compliant to Directive 2002/95/EC conform to Directive 2011/65/EU.**