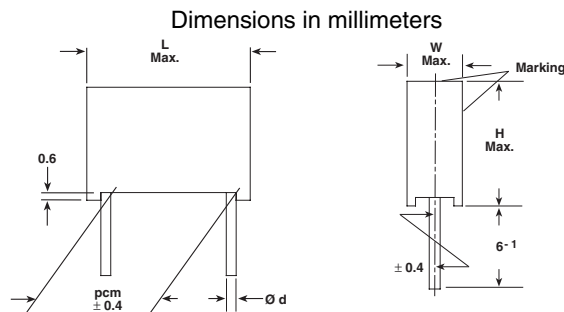


## Metallized Polypropylene Film Capacitor

### Related Document: IEC 60384-16



PCM	W	Ø D
5		0.5
7.5/10		0.6
15 - 37.5	< 16	0.8
15 - 37.5	≥ 16	1.0

#### MAIN APPLICATIONS

Pulse operations, deflection circuits in TV sets (S-correction), SMPS and thyristor circuits, storage, filter, timing, sample and hold circuits.

#### DIELECTRIC

Polypropylene film

#### ELECTRODES

Vacuum deposited aluminum

#### COATING

Flame retardant plastic case (UL-class 94 V-0), blue, epoxy resin sealed Flame class B according to IEC 60065 available on request

#### 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 RANGE

4700pF to 10µF

#### CAPACITANCE TOLERANCES

± 20% (M), ± 10% (K), ± 5% (J)

#### MAXIMUM PULSE RISE TIME

PCM (mm)	Maximum Pulse Rise Time $d_v/d_t$ [V/µs]				
	100 VDC	160 VDC	250 VDC	400 VDC	630 VDC
5	390	—	—	—	—
7.5	—	240	300	—	—
10	—	175	220	380	510
15	—	100	125	200	280
22.5	—	60	75	120	160
27.5	—	45	60	95	120
37.5	—	30	40	65	85

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



#### RATED VOLTAGES ( $U_R$ )

100 VDC, 160 VDC, 250 VDC, 400 VDC, 630 VDC



#### INSULATION RESISTANCE

Measured at 100 VDC after one minute

For  $C \leq 0.33\mu\text{F}$ :

100,000 MΩ minimum value

25,000 MΩ ( $U_R = 100$  VDC)

**RoHS**  
COMPLIANT

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

63 VAC, 100 VAC, 160 VAC, 220 VAC, 250 VAC

#### TEST VOLTAGE (ELECTODE/ELECTRODE)

1.6 x  $U_R$  for 2 s

#### MARKING

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

#### TIME CONSTANT

Measured at 100 VDC after one minute

For  $C > 0.33\mu\text{F}$ :

30,000 s minimum value

#### TEMPERATURE COEFFICIENT

- 250 x 10<sup>-6</sup>/°C (typical value)

#### CAPACITANCE DRIFT

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

#### DIELECTRIC ABSORPTION

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

#### 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 < 5 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	$0.4 \times 10^{-3}$	$0.4 \times 10^{-3}$	$1 \times 10^{-3}$
10kHz	$0.6 \times 10^{-3}$	$0.6 \times 10^{-3}$	—
100kHz	$4 \times 10^{-3}$	—	—
Maximum values			

CAPACITANCE	CAPACITANCE CODE	VOLTAGE CODE 01 100 VDC/63 VAC				VOLTAGE CODE 16 160 VDC/100 VAC				VOLTAGE CODE 25 250 VDC/160 VAC				VOLTAGE CODE 40 400 VDC/220 VAC*				VOLTAGE CODE 63 630 VDC/250 VAC*			
		W	H	L	PCM	W	H	L	PCM	W	H	L	PCM	W	H	L	PCM	W	H	L	PCM
4700pF	- 247	3.5	8.5	7.5	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6800pF	- 268	3.5	8.5	7.5	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
0.01 $\mu\text{F}$	- 310	3.5	8.5	7.5	5	—	—	—	—	4.0	9.0	10.0	7.5	4.0	9.0	13.0	10	4.5	9.5	13.0	10
0.015 $\mu\text{F}$	- 315	3.5	8.5	7.5	5	—	—	—	—	4.0	9.0	10.0	7.5	4.5	9.5	13.0	10	5.5	10.5	13.0	10
0.022 $\mu\text{F}$	- 322	3.5	8.5	7.5	5	—	—	—	—	4.0	9.0	10.0	7.5	5.5	10.5	13.0	10	6.5	11.5	13.0	10
0.033 $\mu\text{F}$	- 333	4.5	9.5	7.5	5	4.0	9.0	10.0	7.5	4.0	9.0	13.0	10	6.5	11.5	13.0	10	5.5	10.5	18.0	15
0.047 $\mu\text{F}$	- 347	4.5	9.5	7.5	5	4.5	9.5	10.0	7.5	4.5	9.5	13.0	10	5.5	10.5	18.0	15	6.5	12.5	18.0	15
0.068 $\mu\text{F}$	- 368	5.0	10.0	7.5	5	4.5	9.5	13.0	10	5.5	10.5	13.0	10	6.5	12.5	18.0	15	7.5	13.5	18.0	15
0.1 $\mu\text{F}$	- 410	5.5	11.5	7.5	5	5.5	10.5	13.0	10	6.5	11.5	13.0	10	7.5	13.5	18.0	15	8.5	17.5	18.0	15
0.15 $\mu\text{F}$	- 415	—	—	—	—	6.5	11.5	13.0	10	6.5	12.5	18.0	15	8.5	17.5	18.0	15	8.5	16.5	26.5	22.5
0.22 $\mu\text{F}$	- 422	—	—	—	—	6.5	12.5	18.0	15	7.5	13.5	18.0	15	10.5	17.5	18.0	15	10.5	18.5	26.5	22.5
0.33 $\mu\text{F}$	- 433	—	—	—	—	6.5	12.5	18.0	15	8.5	14.5	18.0	15	10.5	18.5	26.5	22.5	11.0	21.0	26.5	22.5
0.47 $\mu\text{F}$	- 447	—	—	—	—	7.5	13.5	18.0	15	8.5	17.5	18.0	15	11.0	21.0	26.5	22.5	13.5	23.5	31.5	27.5
0.68 $\mu\text{F}$	- 468	—	—	—	—	8.5	17.5	18.0	15	8.5	16.5	26.5	22.5	11.5	20.5	31.5	27.5	16.5	29.5	31.5	27.5
1.0 $\mu\text{F}$	- 510	—	—	—	—	7.5	15.5	26.5	22.5	10.5	18.5	26.5	22.5	13.5	23.5	31.5	27.5	16.5	29.5	31.5	27.5
1.5 $\mu\text{F}$	- 515	—	—	—	—	10.5	18.5	26.5	22.5	11.5	20.5	31.5	27.5	16.5	29.5	31.5	27.5	18.0	32.5	41.5	37.5
2.2 $\mu\text{F}$	- 522	—	—	—	—	11.5	20.5	31.5	27.5	13.5	23.5	31.5	27.5	16.0	28.5	41.5	37.5	20.0	40.0	42.5	37.5
3.3 $\mu\text{F}$	- 533	—	—	—	—	13.5	23.5	31.5	27.5	16.5	29.5	31.5	27.5	20.0	40.0	42.5	37.5	—	—	—	—
4.7 $\mu\text{F}$	- 547	—	—	—	—	12.5	22.5	41.5	37.5	16.0	28.5	41.5	37.5	20.0	40.0	42.5	37.5	—	—	—	—
6.8 $\mu\text{F}$	- 568	—	—	—	—	16.0	28.5	41.5	37.5	18.0	32.5	41.5	37.5	37.5	—	—	—	—	—	—	—
10.0 $\mu\text{F}$	- 610	—	—	—	—	18.0	32.5	41.5	37.5	20.0	40.0	42.5	37.5	—	—	—	—	—	—	—	—

Further C-values upon request.

\*Not suitable for mains applications.

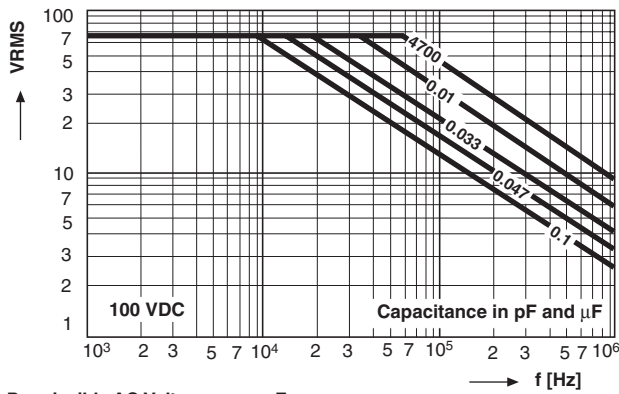
Please refer to X-capacitors in our catalog "RFI Suppression Components".

## RECOMMENDED PACKAGING

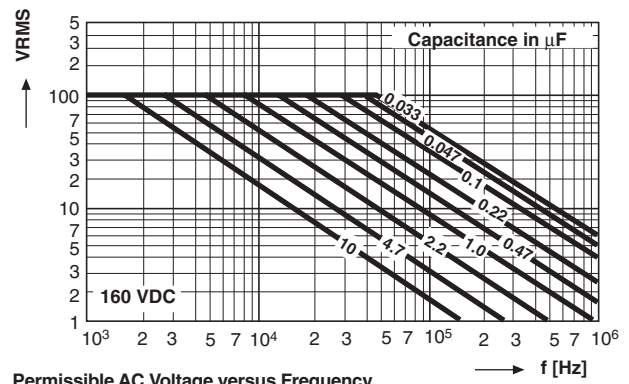
LETTER CODE	TYPE OF PACKAGING	HEIGHT (H) (mm)	REEL DIAMETER (mm)	ORDERING CODE EXAMPLES	PCM 5 - 10	PCM 15	PCM 22.5 - 27.5	PCM 37.55
D	AMMO	16.5	S*	MKP 1840-310-405-D	X	X	—	—
G	AMMO	18.5	S*	MKP 1840-310-405-G	X	X	—	—
F	REEL	16.5	350	MKP 1840-310-405-F	X	X	—	—
W	REEL	18.5	350	MKP 1840-310-405-W	X	X	—	—
V	REEL	18.5	500	MKP 1840-522-255-V	—	X	X	—
G	AMMO	18.5	L*	MKP 1840-522-255-G	—	—	X	—
—	BULK	—	—	MKP 1840-522-255	X	X	X	X

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

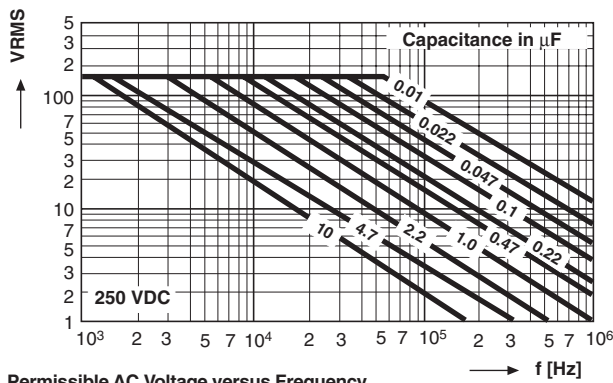
\*L = box size 60 x 360 x 510mm (W x H x L)



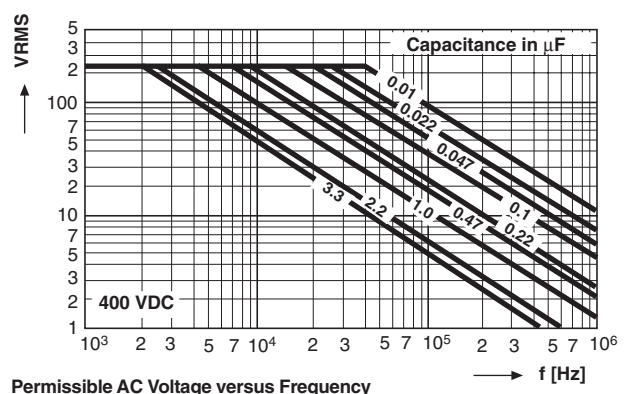
Permissible AC Voltage versus Frequency



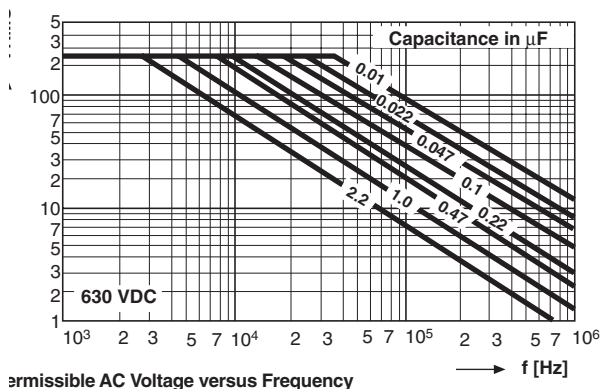
Permissible AC Voltage versus Frequency



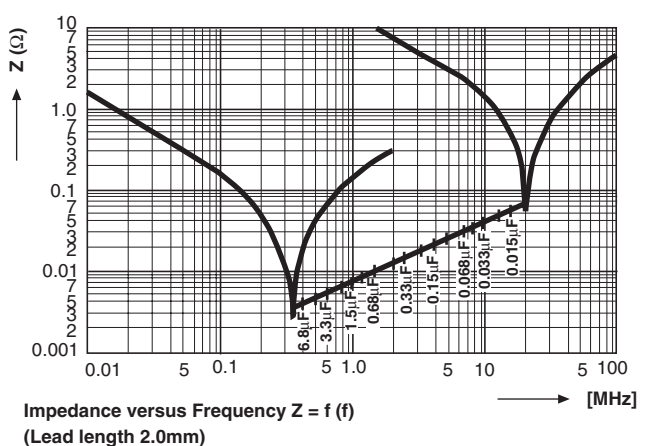
Permissible AC Voltage versus Frequency



Permissible AC Voltage versus Frequency



Permissible AC Voltage versus Frequency





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