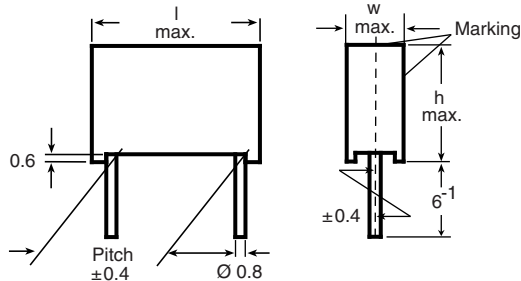


AC and Pulse Metallized Polypropylene Film Capacitors

MKP Radial Potted Type

Dimensions in millimeters



LEAD DIAMETER d_t (mm)	W (mm)	PITCH (mm)
0.5	-	5
0.6	-	7.5/10
0.8	< 16	15 to 37.5
1.0	≥ 16.5	15 to 37.5

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

Metallized

COATING

Flame retardant plastic case (class UL 94 V0), 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 RANGE

4700 pF to 10 μF

MAXIMUM PULSE RISE TIME

PCM (mm)	Maximum Pulse Rise Time dV/dt [V/μs]				
	100 V _{DC}	160 V _{DC}	250 V _{DC}	400 V _{DC}	630 V _{DC}
5	390	-	-	-	-
7.5	-	240	300	-	-
10	-	175	20	-	510
15	-	100	125	200	280
22.5	-	60	75	120	160
27.5	-	45	60	95	120
37.5	-	30	40	65	85

Note

• If the maximum pulse voltage is less than the rated voltage higher dV/dt values can be permitted.

FEATURES

• Compliant to RoHS Directive 2002/95/EC

CAPACITANCE TOLERANCES

± 20 % (M), ± 10 % (K), ± 5 % (J)

RATED VOLTAGES (U_R)

100 V_{DC}, 160 V_{DC}, 250 V_{DC}, 400 V_{DC}, 630 V_{DC}

INSULATION RESISTANCE

Measured at 100 V_{DC} after one minute

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

25 000 MΩ (U_R 100 V_{DC})

PERMISSIBLE AC VOLTAGES (RMS) UP TO 60 Hz

63 V_{AC}, 100 V_{AC}, 160 V_{AC}, 220 V_{AC}, 250 V_{AC}

TEST VOLTAGE (ELECTRODE/ELECTRODE)

1.6 x U_R for 2 s

TIME CONSTANT

Measured at 100 V_{DC} after one minute

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

30 000 s minimum value

TEMPERATURE COEFFICIENT

- 250 x 10⁻⁶/°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 60068-2-21

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 2 mm long leads

PULL TEST ON LEADS

≥ 30 N in direction of leads according to IEC 60068-2-21

For further details, please refer to the general information available at www.vishay.com/doc?26033.



RoHS
COMPLIANT

DISSIPATION FACTOR TAN δ

MEASURED AT	$C \leq 0.1 \mu\text{F}$	$0.1 \mu\text{F} < C \leq 1.0 \mu\text{F}$	$C > 1.0 \mu\text{F}$
1 kHz	0.3×10^{-3}	0.4×10^{-3}	1×10^{-3}
10 kHz	0.6×10^{-3}	0.6×10^{-3}	-
100 kHz	4×10^{-3}	-	-
Maximum values			

CAP.	CAP. CODE	VOLTAGE CODE 01 100 V _{DC} /63 V _{AC}				VOLTAGE CODE 16 160 V _{DC} /100 V _{AC}				VOLTAGE CODE 25 250 V _{DC} /160 V _{AC}				VOLTAGE CODE 40 400 V _{DC} /220 V _{AC}				VOLTAGE CODE 63 630 V _{DC} /250 V _{AC} ⁽¹⁾			
		W	H	L	PCM	W	H	L	PCM	W	H	L	PCM	W	H	L	PCM	W	H	L	PCM
4700 pF	- 247	3.5	8.5	7.5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6800 pF	- 268	3.5	8.5	7.5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.01 μF	- 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 μF	- 315	3.5	8.5	7.5	5	-	-	-	-	4.0	9.0	10.0	7.5	4.5	9.0	13.0	10	5.5	10.5	13.0	10
0.022 μF	- 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 μF	- 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 μF	- 375	4.5	9.5	7.5	5	4.0	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 μF	- 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 μF	- 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 μF	- 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 μF	- 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 μF	- 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 μF	- 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 μF	- 468	-	-	-	-	8.5	17.5	18.0	15	8.5	16.5	26.5	22.5	11.0	21.0	31.0	27.5	16.5	29.5	31.5	27.5
1.0 μF	- 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 μF	- 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 μF	- 522	-	-	-	-	11.0	21.0	31.0	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 μF	- 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 μF	- 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 μF	- 568	-	-	-	-	16.0	28.5	41.5	37.5	18.0	32.5	41.5	37.5	37.5	-	-	-	-	-	-	-
10.0 μF	- 610	-	-	-	-	18.0	32.5	41.5	37.5	20.0	40.0	42.5	37.5	-	-	-	-	-	-	-	-

Notes

- Further C-values upon request
- ⁽¹⁾ Not suitable for mains applications
Please refer to X-capacitors in our catalog "RFI Suppression Components"

RECOMMENDED PACKAGING

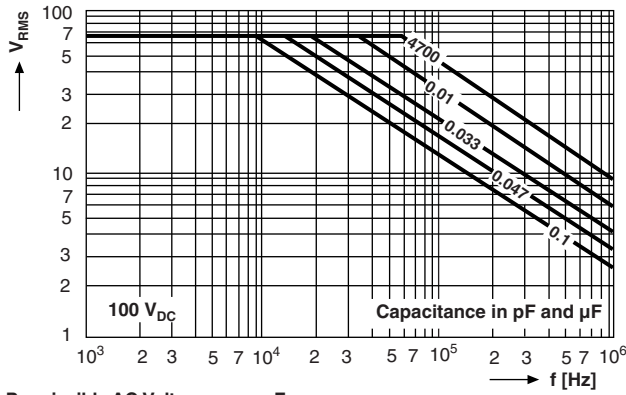
LETTER CODE	TYPE OF PACKAGING	HEIGHT (H) (mm)	REEL DIAMETER (mm)	ORDERING CODE EXAMPLES	PCM 7.5 to 10	PCM 15	PCM 22.5 to 27.5	PCM 37.5
D	Ammo	16.5	S ⁽¹⁾	MKP 1840-310-405-D	X	X	-	-
G	Ammo	18.5	S ⁽¹⁾	MKP 1840-310-405-G	X	X	-	-
F	Reel	16.5	350	MKP 1840-310-405-F	X	X	-	-
W	Reel	18.5	350	MKP 1840-310-405-W	X	X	-	-
V	Reel	18.5	500	MKP 1840-522-255-V	-	X	X	-
G	Ammo	18.5	L ⁽²⁾	MKP 1840-522-255-G	-	-	X	-
-	Bulk	-	-	MKP 1840-547-255	X	X	X	X

Notes

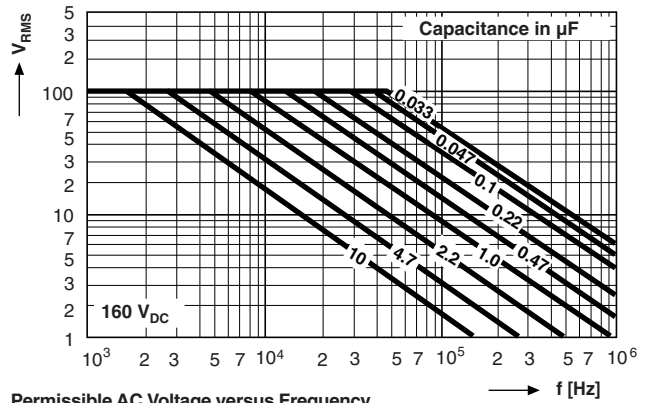
- ⁽¹⁾ S = Box size 55 mm x 210 mm x 340 mm (W x H x L)
- ⁽²⁾ L = Box size 60 mm x 510 mm x 360 mm (W x H x L)



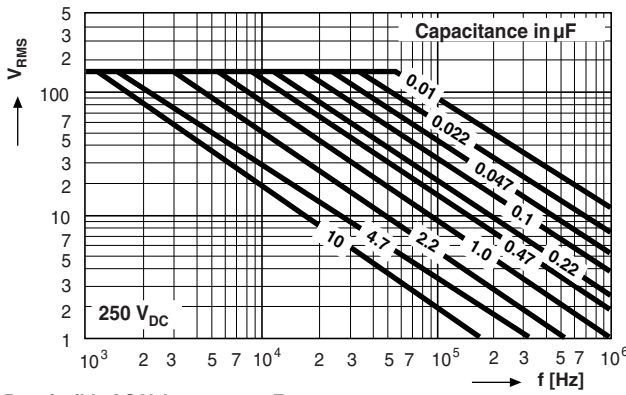
AC and Pulse Metallized Polypropylene Film Capacitors Vishay Roederstein
MKP Radial Potted Type



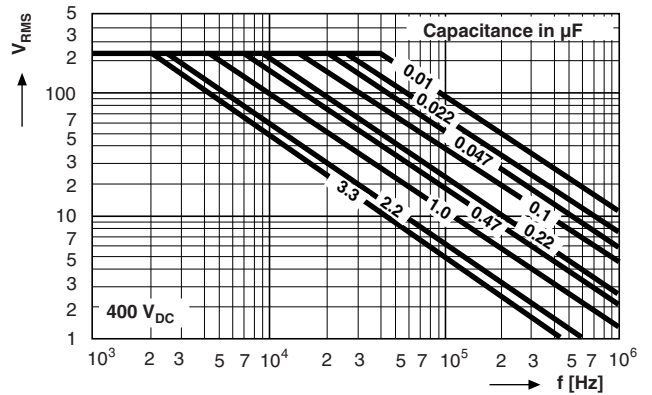
Permissible AC Voltage versus Frequency



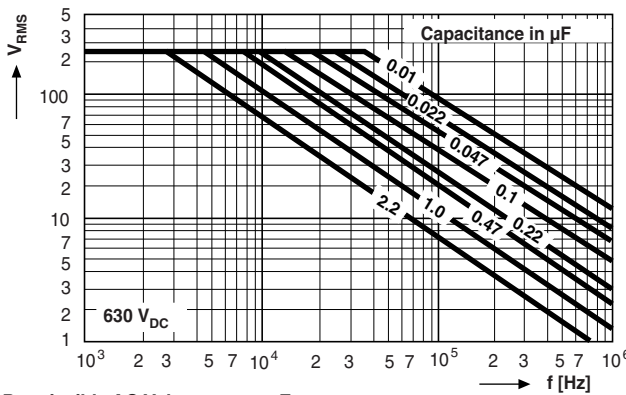
Permissible AC Voltage versus Frequency



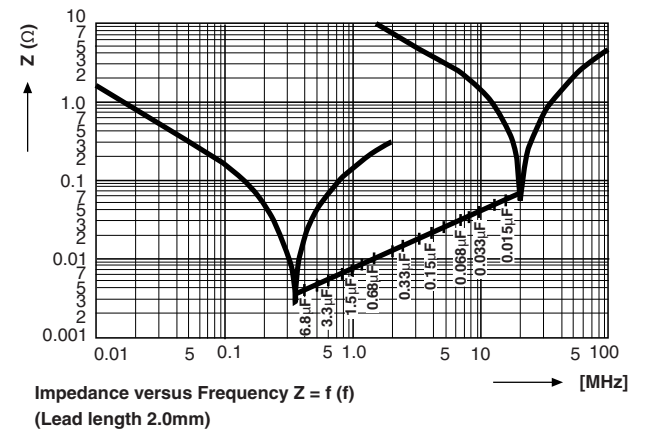
Permissible AC Voltage versus Frequency



Permissible AC Voltage versus Frequency



Permissible AC Voltage versus Frequency



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



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