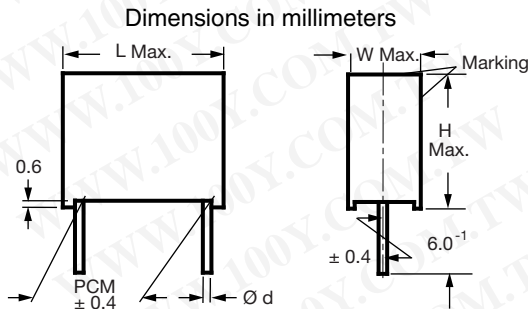


Metallized Polypropylene Film Capacitor Related Document: IEC 60384-16



PCM	W	Ø d
7.5		0.6
10 to 37.5	< 16.0	0.8
10 to 37.5	≥ 16.0	1.0

MAIN APPLICATIONS

High voltage, high current and high pulse operations, deflection circuits in TV sets (S-correction and fly-back tuning). Protection circuits in SMPS's. Snubber and electronic ballast circuits. Input and output filtering in SPS designs, storage, timing and integrating circuits.

MARKING

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

DIELECTRIC

Polypropylene film

ELECTRODES

Vacuum deposited aluminum

COATING

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

CONSTRUCTION

Extended double-sided metallized polyester film, internal series connection (630 V_{DC}/400 V_{AC} to 2000 V_{DC}), double-sided metallized polyester carrier film

LEADS

Tinned wire

IEC TEST CLASSIFICATION

55/100/56, according to IEC 60068

OPERATING TEMPERATURE RANGE

- 55 °C to + 100 °C

CAPACITANCE RANGE

470 pF to 6.8 µF

CAPACITANCE TOLERANCES

± 20 % (M), ± 10 % (K), ± 5 % (J)

RATED VOLTAGES (U_R)

160 V_{DC}, 250 V_{DC}, 400 V_{DC}, 630 V_{DC}, 1000 V_{DC}, 1600 V_{DC}, 2000 V_{DC}

FEATURES

- Compliant to RoHS directive 2002/95/EC



RoHS
COMPLIANT

勝特力材料 886-3-5753170
勝特力电子(上海) 86-21-34970699
勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

PERMISSIBLE AC VOLTAGES (RMS) UP TO 60 Hz

100 V_{AC}, 160 V_{AC}, 220 V_{AC}, 250 V_{AC}, 400 V_{AC}, 600 V_{AC}, 650 V_{AC}, 700 V_{AC}

TEST VOLTAGE (ELECTRODE/ELECTRODE)

1.6 x U_R for 2 s

INSULATION RESISTANCE

Measured at 100 V_{DC} after one minute

For C ≤ 0.33 µF:

100 000 MΩ minimum value (150 000 MΩ typical value)

TIME CONSTANT

Measured at 100 V_{DC} after one minute

For C > 0.33 µF:

30 000 s minimum value (50 000 s typical value)

TEMPERATURE COEFFICIENT

- 250 x 10⁻⁶/°C (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 = 0.7 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

RELIABILITY

Operational life > 300 000 h

Failure rate < 2 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.

MAXIMUM PULSE RISE TIME

PCM (mm)	Maximum Pulse Rise Time dV/dt [V/μs]						
	160 V _{DC}	250 V _{DC}	400 V _{DC}	630 V _{DC}	1000 V _{DC}	1600 V _{DC}	2000 V _{DC}
7.5	1800	2200	3600	4500	-	-	-
10	820	1140	1840	2280	-	-	-
15	410	560	910	3430	6600	11 100	20 300
22.5	260	320	520	2120	2800	3800	6200
27.5	202	240	400	1524	2000	2680	4200
37.5	140	170	280	980	1280	1690	2600

Note

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

DISSIPATION FACTOR TAN δ

MEASURED AT	C ≤ 0.1 μF	0.1 μF < C ≤ 1.0 μF	C > 1.0 μF
1 kHz	0.3 x 10 ⁻³	0.3 x 10 ⁻³	0.3 x 10 ⁻³
10 kHz	0.4 x 10 ⁻³	0.5 x 10 ⁻³	-
100 kHz	1.5 x 10 ⁻³	-	-
Maximum values			

CAP.	CAP. CODE	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}			
		W	H	L	PCM	W	H	L	PCM	W	H	L	PCM	W	H	L	PCM
470 pF	- 147	-	-	-	-	-	-	-	-	-	-	-	-	4.5	9.5	10.0	7.5
680 pF	- 168	-	-	-	-	-	-	-	-	-	-	-	-	3.0	8.5	10.0	7.5
1000 pF	- 210	-	-	-	-	-	-	-	-	-	-	-	-	3.0	8.5	10.0	7.5
1500 pF	- 215	-	-	-	-	-	-	-	-	-	-	-	-	3.0	8.5	10.0	7.5
2200 pF	- 222	-	-	-	-	-	-	-	-	-	-	-	-	3.0	8.5	10.0	7.5
3300 pF	- 233	-	-	-	-	-	-	-	-	-	-	-	-	4.0	9.0	10.0	7.5
4700 pF	- 247	-	-	-	-	-	-	-	-	4.5	9.5	10.0	7.5	-	-	-	-
6800 pF	- 268	-	-	-	-	4.0	9.0	10.0	7.5	5.0	10.5	10.3	7.5	-	-	-	-
0.01 μF	- 310	4.0	9.0	10.0	7.5	4.5	9.5	10.0	7.5	4.5	9.5	13.0	10	-	-	-	-
0.015 μF	- 315	5.0	10.5	10.3	7.5	4.5	9.5	10.0	7.5	5.5	10.5	13.0	10	-	-	-	-
0.022 μF	- 322	4.0	9.0	13.0	10	4.5	9.5	13.0	10	6.5	11.5	13.0	10	-	-	-	-
0.033 μF	- 333	4.5	9.5	13.0	10	5.5	10.5	13.0	10	5.5	10.5	18.0	15	-	-	-	-
0.047 μF	- 347	5.5	10.5	13.0	10	6.5	11.5	13.0	10	6.5	12.5	18.0	15	-	-	-	-
0.068 μF	- 368	6.5	11.5	13.0	10	5.5	10.5	18.0	15	7.5	13.5	18.0	15	-	-	-	-
0.10 μF	- 410	5.5	10.5	18.0	15	6.5	12.5	18.0	15	8.5	14.5	18.0	15	-	-	-	-
0.15 μF	- 415	6.5	12.5	18.0	15	7.5	13.5	18.0	15	8.5	16.5	26.5	22.5	-	-	-	-
0.22 μF	- 422	7.5	13.5	18.0	15	8.5	17.5	18.0	15	10.5	18.5	26.5	22.5	-	-	-	-
0.33 μF	- 433	8.5	17.5	18.0	15	8.5	16.5	26.5	22.5	11.0	21.0	26.5	22.5	-	-	-	-
0.47 μF	- 447	8.5	16.5	26.5	22.5	10.5	18.5	26.5	22.5	13.5	23.5	31.5	27.5	-	-	-	-
0.68 μF	- 468	9.0	17.0	26.5	22.5	11.0	21.0	26.5	22.5	15.0	24.5	31.5	27.5	-	-	-	-
1.0 μF	- 510	11.0	21.0	26.5	22.5	11.0	21.0	31.0	27.5	14.5	24.5	41.5	37.5	-	-	-	-
1.5 μF	- 515	13.5	23.5	31.5	27.5	15.0	24.5	31.5	27.5	18.0	32.5	41.5	37.5	-	-	-	-
2.2 μF	- 522	15.0	24.5	31.5	27.5	16.5	29.5	31.5	27.5	20.0	40.0	42.5	37.5	-	-	-	-
3.3 μF	- 533	18.0	33.0	31.5	27.5	20.0	35.0	31.5	27.5	-	-	-	-	-	-	-	-
4.7 μF	- 547	18.0	32.5	41.5	37.5	20.0	40.0	42.5	37.5	-	-	-	-	-	-	-	-
6.8 μF	- 568	20.0	40.0	42.5	37.5	-	-	-	-	-	-	-	-	-	-	-	-

Note

- Further C-values upon request



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 1841-310-405-D	X	X	-	-
G	Ammo	18.5	S ⁽¹⁾	MKP 1841-310-405-G	X	X	-	-
F	Reel	16.5	350	MKP 1841-310-405-F	X	X	-	-
W	Reel	18.5	350	MKP 1841-310-405-W	X	X	-	-
V	Reel	18.5	500	MKP 1841-522-165-V	-	X	X	-
G	Ammo	18.5	L ⁽²⁾	MKP 1841-522-165-G	-	-	X	-
-	Bulk	-	-	MKP 1841-547-255	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)

CAP.	CAP. CODE	VOLTAGE CODE 63 630 V _{DC} /400 V _{AC}				VOLTAGE CODE 10 1000 V _{DC} /600V _{AC}				VOLTAGE CODE 13 1600 V _{DC} /650 V _{AC}				VOLTAGE CODE 20 2000 V _{DC} /700 V _{AC}			
		W	H	L	PCM	W	H	L	PCM	W	H	L	PCM	W	H	L	PCM
470 pF	- 147	-	-	-	-	-	-	-	-	-	-	-	-	5.5	10.5	18.0	15
680 pF	- 168	-	-	-	-	-	-	-	-	-	-	-	-	5.5	10.5	18.0	15
1000 pF	- 210	-	-	-	-	-	-	-	-	5.5	10.5	18.0	15	6.5	14.5	26.5	22.5
1500 pF	- 215	-	-	-	-	-	-	-	-	5.5	10.5	18.0	15	6.5	14.5	26.5	22.5
2200 pF	- 222	-	-	-	-	5.5	10.5	18.0	15	5.5	10.5	18.0	15	6.5	14.5	26.5	22.5
3300 pF	- 233	-	-	-	-	5.5	10.5	18.0	15	6.5	14.5	26.5	22.5	6.5	14.5	26.5	22.5
4700 pF	- 247	5.5	10.5	18.0	15	5.5	10.5	18.0	15	6.5	14.5	26.5	22.5	6.5	14.5	26.5	22.5
6800 pF	- 268	5.5	10.5	18.0	15	7.5	13.5	18.0	15	6.5	14.5	26.5	22.5	7.5	15.5	26.5	22.5
0.010 μF	- 310	5.5	10.5	18.0	15	6.5	14.5	26.5	22.5	6.5	14.5	26.5	22.5	10.5	18.5	26.5	22.5
0.015 μF	- 315	6.5	12.5	18.0	15	6.5	14.5	26.5	22.5	7.5	15.5	26.5	22.5	9.0	18.5	31.5	27.5
0.022 μF	- 322	7.5	13.5	18.0	15	7.5	15.5	26.5	22.5	8.5	16.5	26.5	22.5	11.0	21.0	31.0	27.5
0.033 μF	- 333	7.5	15.5	26.5	22.5	10.5	18.5	26.5	22.5	9.0	18.5	31.5	27.5	13.5	23.5	31.5	27.5
0.047 μF	- 347	8.5	16.5	26.5	22.5	9.0	18.5	31.5	27.5	11.0	21.0	31.0	27.5	12.5	22.5	41.5	37.5
0.068 μF	- 368	10.5	18.5	26.5	22.5	11.0	21.0	31.0	27.5	12.5	22.5	41.5	37.5	14.5	24.5	41.5	37.5
0.10 μF	- 410	11.0	21.0	31.0	27.5	13.5	23.5	31.5	27.5	14.5	24.5	41.5	37.5	16.0	28.5	41.5	37.5
0.15 μF	- 415	13.5	23.5	31.5	27.5	12.5	22.5	41.5	37.5	16.0	28.5	41.5	37.5	-	-	-	-
0.22 μF	- 422	12.5	22.5	41.5	37.5	14.5	24.5	41.5	37.5	18.0	32.5	41.5	37.5	-	-	-	-
0.33 μF	- 433	14.5	24.5	41.5	37.5	16.0	28.5	41.5	37.5	-	-	-	-	-	-	-	-
0.47 μF	- 447	16.0	28.5	41.5	37.5	20.0	40.0	42.5	37.5	-	-	-	-	-	-	-	-
0.68 μF	- 468	20.0	40.0	42.5	37.5	-	-	-	-	-	-	-	-	-	-	-	-

Note

• Further C-values upon request

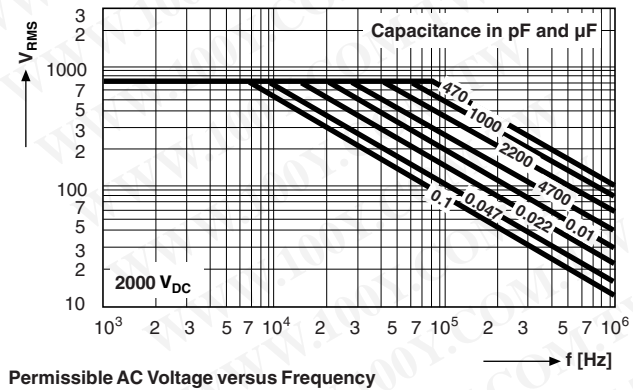
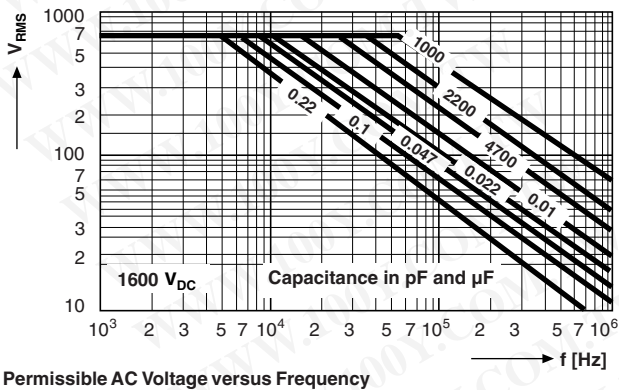
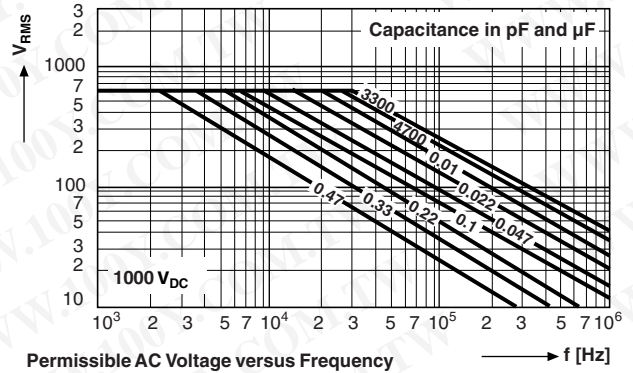
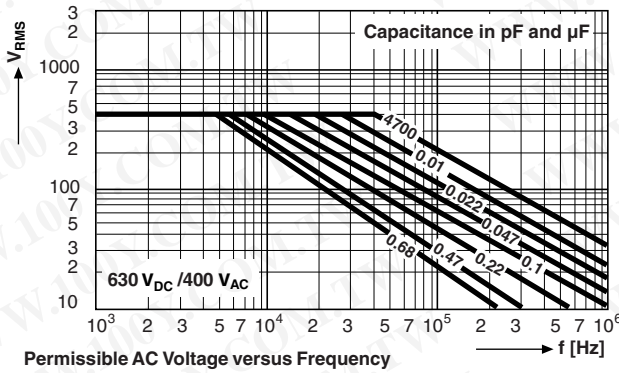
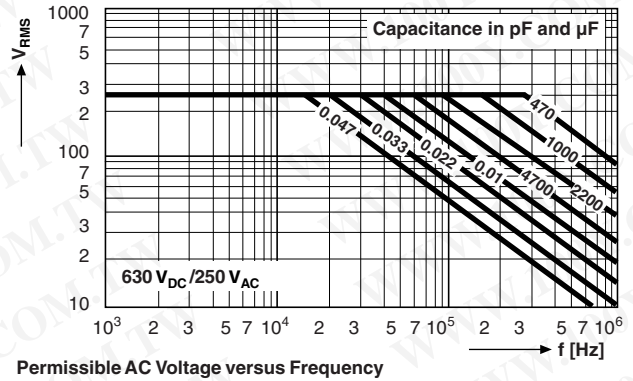
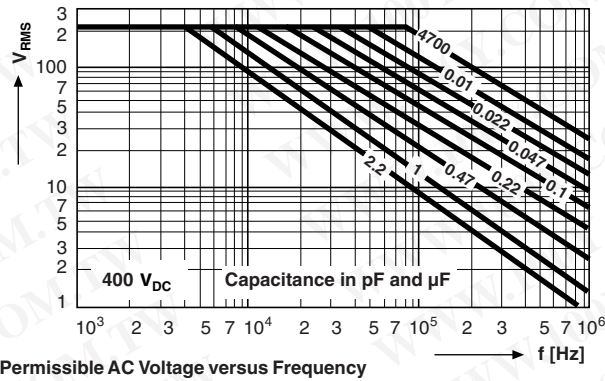
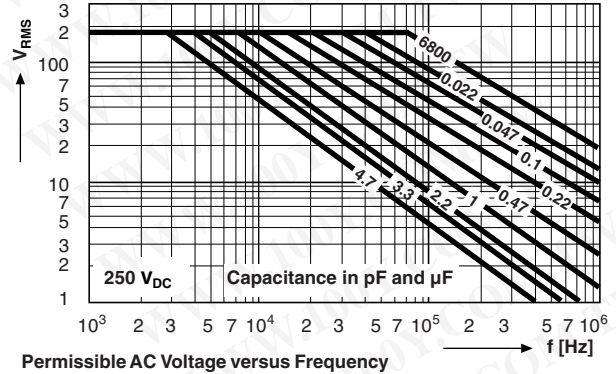
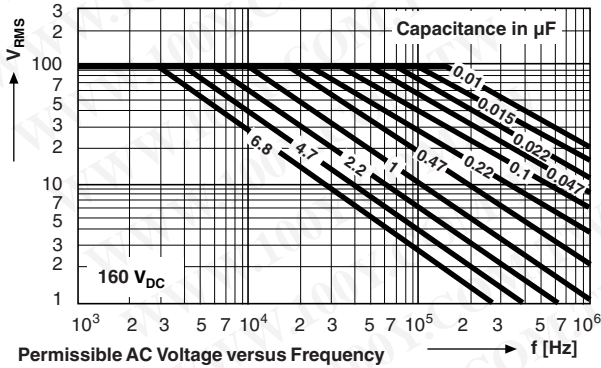
RECOMMENDED PACKAGING

LETTER CODE	TYPE OF PACKAGING	HEIGHT (H) (mm)	REEL DIAMETER (mm)	ORDERING CODE EXAMPLES	PCM 15	PCM 22.5 to 27.5	PCM 37.5
D	Ammo	16.5	S ⁽¹⁾	MKP 1841-315/635-D	X	-	-
G	Ammo	18.5	S ⁽¹⁾	MKP 1841-315/635-G	X	-	-
F	Reel	16.5	350	MKP 1841-315/635-F	X	-	-
W	Reel	18.5	350	MKP 1841-315/635-W	X	-	-
V	Reel	18.5	500	MKP 1841-410/105-V	X	X	-
G	Ammo	18.5	L ⁽²⁾	MKP 1841-410/105-G	-	X	-
-	Bulk	-	-	MKP 1841-447/105	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)





Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and/or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk and agree to fully indemnify and hold Vishay and its distributors harmless from and against any and all claims, liabilities, expenses and damages arising or resulting in connection with such use or sale, including attorneys fees, even if such claim alleges that Vishay or its distributor was negligent regarding the design or manufacture of the part. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.