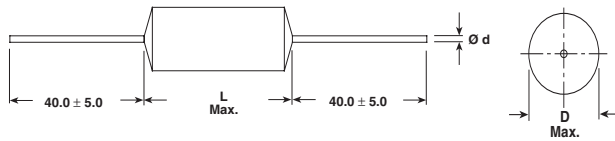


Metallized Polypropylene Film Capacitor

Related Document: IEC 60384-16

Dimensions in millimeters



D	D	L
0.6	≤ 9.0	≤ 19.0
0.8	< 16.5	> 26.5
1.0	≥ 16.5	≥ 26.5

MAIN APPLICATIONS

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

MARKING

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

DIELECTRIC

Polypropylene film

ELECTRODES

Vacuum deposited aluminum

COATING

Plastic-wrapped, 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

1000pF to 10µF

TEST VOLTAGE (ELECTRODE/ELECTRODE)

1.6 x U_R for 2 s

MAXIMUM PULSE RISE TIME

CAPACITOR LENGTH (mm)	Maximum Pulse Rise Time d _v /d _t [V/µs]			
	160 VDC	250 VDC	400 VDC	630 VDC
11	240	300	515	700
14	175	220	380	510
19	100	125	200	280
26.5	60	75	120	160
31.5	45	60	95	120
41.5	30	40	65	85

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

TEMPERATURE COEFFICIENT

- 250 x 10⁻⁶/°C (typical value)

RATED VOLTAGES (U_R)

160 VDC, 250 VDC, 400 VDC, 630 VDC

INSULATION RESISTANCE

Measured at 100 VDC after one minute

For C ≤ 0.33µF:

100,000 MΩ minimum value

TIME CONSTANT

Measured at 100 VDC for one minute

For C > 0.33µF:

30,000 s minimum value

CAPACITANCE TOLERANCES

± 10% (K), ± 5% (J), ± 2.5% (H), ± 1% (F)

± 1% only up to maximum body diameter of 14.5 x 31.5mm

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

~ 12 nH measured with 6mm long leads

PULL TEST ON LEADS

≥ 20 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

DIELECTRIC ABSORPTION

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

PERMISSIBLE AC VOLTAGES (RMS) UP TO 60HZ

100 VAC, 160 VAC, 220 VAC, 250 VAC

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.





DISSIPATION FACTOR TAN δ

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

CAPACITANCE	CAPACITANCE CODE	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*	
		D	L	D	L	D	L	D	L
1000pF	- 210	—	—	—	—	—	—	5.0	11.0
1500pF	- 215	—	—	—	—	—	—	5.0	11.0
2200pF	- 222	—	—	—	—	—	—	5.0	11.0
3300pF	- 233	—	—	—	—	—	—	5.0	11.0
4700pF	- 247	—	—	—	—	—	—	5.0	11.0
6800pF	- 268	—	—	—	—	5.0	11.0	5.5	11.0
0.01 μF	- 310	—	—	5.0	11.0	5.5	11.0	5.5	14.0
0.015 μF	- 315	—	—	5.0	11.0	6.0	11.0	6.5	14.0
0.022 μF	- 322	—	—	5.0	11.0	6.5	14.0	7.5	14.0
0.033 μF	- 333	5.0	11.0	5.5	11.0	7.0	14.0	7.0	19.0
0.047 μF	- 347	5.5	11.0	6.0	14.0	8.0	14.0	8.0	19.0
0.068 μF	- 368	6.0	11.0	6.5	14.0	8.5	19.0	9.0	19.0
0.1 μF	- 410	6.5	14.0	7.5	14.0	9.0	19.0	8.5	26.5
0.15 μF	- 415	7.5	14.0	7.0	19.0	8.0	26.5	10.5	26.5
0.22 μF	- 422	7.0	19.0	8.5	19.0	9.5	26.5	12.0	26.5
0.33 μF	- 433	8.0	19.0	8.0	26.5	11.5	26.5	14.5	26.5
0.47 μF	- 447	9.0	19.0	9.0	26.5	13.5	26.5	15.0	31.5
0.68 μF	- 468	8.5	26.5	11.0	26.5	14.0	31.5	18.0	31.5
1.0 μF	- 510	10.5	26.5	12.5	26.5	17.0	31.5	18.0	41.5
1.5 μF	- 515	12.0	26.5	13.0	31.5	20.5	31.5	22.0	41.5
2.2 μF	- 522	13.0	31.5	16.0	31.5	21.0	41.5	—	—
3.3 μF	- 533	15.5	31.5	19.0	31.5	—	—	—	—
4.7 μF	- 547	15.5	41.5	19.5	41.5	—	—	—	—
6.8 μF	- 568	18.5	41.5	23.0	41.5	—	—	—	—
10.0 μF	- 610	22.0	41.5	—	—	—	—	—	—

Further C-values upon request

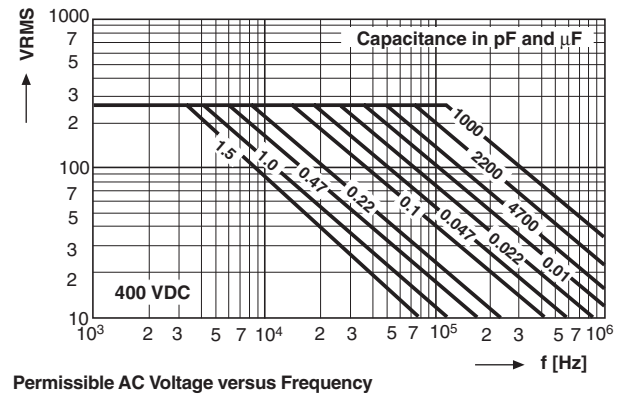
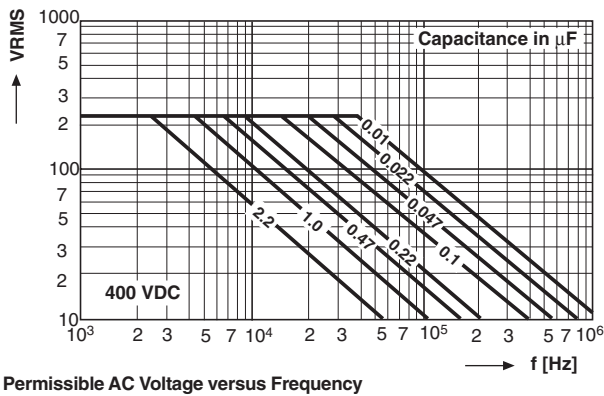
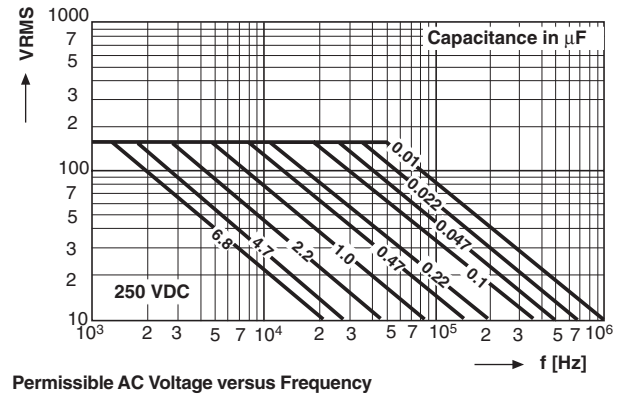
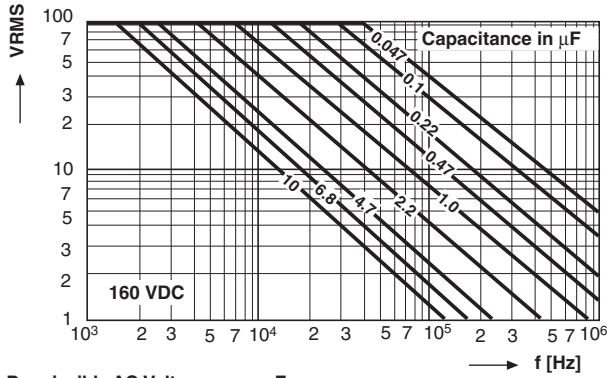
PCM = L + 3.5mm

*Not suitable for mains applications.

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

RECOMMENDED PACKAGING

LETTER CODE	TYPE OF PACKAGING	REEL DIAMETER (mm)	ORDERING CODE EXAMPLES	
G	AMMO	—	MKP 1839-422-403-G	X
R	REEL	350	MKP 1839-422-403-R	X
—	BULK for L > 31.5mm	—	MKP 1839-522-403	X





Disclaimer

All product specifications and data are subject to change without notice.

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 herein or in any other disclosure relating to any product.

Vishay disclaims any and all liability arising out of the use or application of any product described herein or of any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein, which apply to these products.

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.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Vishay products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay for any damages arising or resulting from such use or sale. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.