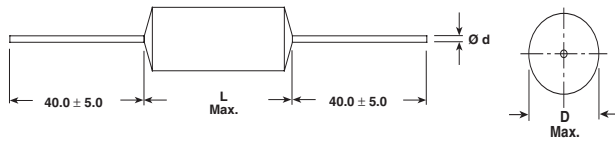


Metallized Polypropylene Film Capacitor

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 10 μ F

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/ μ s]			
	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 $C \leq 0.33\mu\text{F}$:

100,000 M Ω minimum value

TIME CONSTANT

Measured at 100 VDC for one minute

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

30,000 s minimum value

CAPACITANCE TOLERANCES

$\pm 10\%$ (K), $\pm 5\%$ (J), $\pm 2.5\%$ (H), $\pm 1\%$ (F)

$\pm 1\%$ 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

