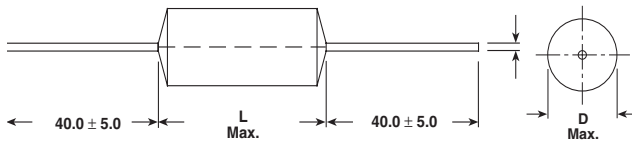


Metallized Polyester Film Capacitor

Related Document: IEC 60384-2

Dimensions in millimeters



d	D
0.6	≤ 5.0
0.7	> 5.0 ≤ 7.0
0.8	> 7.0 < 16.5
1.0	≥ 16.5

MAIN APPLICATIONS

Blocking, bypassing, filtering, timing, coupling and decoupling, interference suppression in low voltage applications.

MARKING

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

DIELECTRIC

Polyester film

ELECTRODES

Vacuum deposited aluminum

COATING

Plastic-wrapped, epoxy resin sealed. Also available as flame retardant version.

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

470pF to 22μF

CAPACITANCE TOLERANCES

± 20% (M), ± 10% (K), ± 5% (J)

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]					
	63 VDC	100 VDC	250 VDC	400 VDC	630 VDC	1000 VDC
11	12	18	32	56	84	—
14	11	13	22	37	66	175
19	7	8	13	21	33	65
26.5	4	5	8	13	19	34
31.5	3	4	6	10	15	25
41.5	2	3	5	7	10	17

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)

63 VDC, 100 VDC, 250 VDC, 400 VDC, 630 VDC, 1000 VDC


PERMISSIBLE AC VOLTAGES (RMS) UP TO 60Hz

40 VAC, 63 VAC, 160 VAC, 200 VAC, 220 VAC, 220 VAC

RoHS
COMPLIANT

INSULATION RESISTANCE

Measured at 100 VDC (63 VDC series measured at 50 VDC) after one minute

For C ≤ 0.33μF and U_R > 100 VDC
30,000 MΩ minimum value (60,000 MΩ typical value)
For C ≤ 0.33μF and U_R ≤ 100 VDC
15,000 MΩ minimum value (50,000 MΩ typical value)

TIME CONSTANT

Measured at 100 VDC (63 VDC series measured at 50 VDC) after one minute

For C > 0.33μF and U_R > 100 VDC
10,000 s minimum value (20,000 s typical value)
For C > 0.33μF and U_R ≤ 100 VDC
5000 s minimum value (15,000 s typical value)

CAPACITANCE DRIFT

Up to + 40°C, ± 1.5% 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 = 0.8 U_R

SELF INDUCTANCE

~ 12nH 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

Two bends through 90°C with half of the force used in pull test

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.

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	8×10^{-3}	8×10^{-3}	10×10^{-3}
10kHz	15×10^{-3}	15×10^{-3}	—
100kHz	25×10^{-3}	—	—
Maximum values			

CAPACITANCE	CAPACITANCE CODE	VOLTAGE CODE 06 63 VDC/ 40 VAC		VOLTAGE CODE 01 100 VDC/ 63 VAC		VOLTAGE CODE 25 250 VDC/ 160 VAC		VOLTAGE CODE 40 400 VDC/ 200 VAC		VOLTAGE CODE 63* 630 VDC/ 220 VAC		VOLTAGE CODE 10* 1000 VDC/ 220 VAC	
		D	L	D	L	D	L	D	L	D	L	D	L
470pF	- 147	—	—	—	—	—	—	—	—	5.0	11.0	—	—
680pF	- 168	—	—	—	—	—	—	—	—	5.0	11.0	—	—
1000pF	- 210	—	—	—	—	—	—	—	—	5.0	11.0	5.5	14.0
1500pF	- 215	—	—	—	—	—	—	—	—	5.0	11.0	6.0	14.0
2200pF	- 222	—	—	—	—	—	—	—	—	5.0	11.0	6.0	14.0
3300pF	- 233	—	—	—	—	—	—	—	—	5.0	11.0	7.0	14.0
4700pF	- 247	—	—	—	—	—	—	—	—	5.0	11.0	6.0	19.0
6800pF	- 268	—	—	—	—	—	—	5.0	11.0	6.0	14.0	6.0	19.0
0.01 μF	- 310	—	—	—	—	—	—	5.0	11.0	6.0	14.0	6.5	19.0
0.015 μF	- 315	—	—	—	—	5.0	11.0	6.0	14.0	6.5	14.0	7.5	19.0
0.022 μF	- 322	—	—	—	—	5.0	11.0	6.0	14.0	7.5	14.0	9.0	19.0
0.033 μF	- 333	—	—	—	—	5.0	11.0	6.0	14.0	6.5	19.0	10.5	19.0
0.047 μF	- 347	—	—	—	—	6.0	14.0	7.0	14.0	7.5	19.0	12.0	19.0
0.068 μF	- 368	—	—	5.0	11.0	6.0	14.0	8.0	14.0	8.5	19.0	11.0	26.5
0.1 μF	- 410	—	—	5.0	11.0	6.0	14.0	7.0	19.0	10.5	19.0	13.0	26.5
		—	—	—	—	—	—	—	—	9.5	19.0**	—	—
0.15 μF	- 415	5.0	11.0	5.5	11.0	7.0	14.0	8.5	19.0	10.0	26.5	13.5	31.5
0.22 μF	- 422	5.0	11.0	6.0	14.0	7.0	19.0	8.0	26.5	11.5	26.5	16.0	31.5
		—	—	—	—	—	—	8.0	19.0**	—	—	—	—
0.33 μF	- 433	6.0	14.0	6.0	19.0	8.0	19.0	9.5	26.5	13.5	26.5	16.0	41.5
		—	—	—	—	—	—	9.5	19.0**	—	—	—	—
0.47 μF	- 447	7.0	14.0	6.5	19.0	9.0	19.0	11.0	26.5	14.5	31.5	19.0	41.5
		—	—	—	—	—	—	—	—	14.0	26.5**	—	—
0.68 μF	- 468	6.5	19.0	7.0	19.0	8.5	26.5	11.5	31.5	14.5	41.5	—	—
		—	—	—	—	9.0	19.0**	—	—	—	—	—	—
1.0 μF	- 510	7.5	19.0	8.5	19.0	10.0	26.5	13.5	31.5	16.5	41.5	—	—



CAPACITANCE	CAPACITANCE CODE	VOLTAGE CODE 06 63 VDC/ 40 VAC		VOLTAGE CODE 01 100 VDC/ 63 VAC		VOLTAGE CODE 25 250 VDC/ 160 VAC		VOLTAGE CODE 40 400 VDC/ 200 VAC		VOLTAGE CODE 63* 630 VDC/ 220 VAC		VOLTAGE CODE 10* 1000 VDC/ 220 VAC	
		D	L	D	L	D	L	D	L	D	L	D	L
1.5µF	- 515	8.5	19.0	8.0	26.5	11.0	31.5	14.0	41.5	—	—	—	—
		—	—	8.0	19.0**	—	—	13.0	31.5**	—	—	—	—
2.2µF	- 522	8.5	26.5	9.5	26.5	13.0	31.5	16.5	41.5	—	—	—	—
		7.5	19.0**	9.5	19.0**	—	—	—	—	—	—	—	—
3.3µF	- 533	10.0	26.5	11.5	26.5	15.5	31.5	—	—	—	—	—	—
		8.5	19.0**	—	—	14.0	26.5**	—	—	—	—	—	—
4.7µF	- 547	11.5	26.5	12.0	31.5	15.5	41.5	—	—	—	—	—	—
		—	—	—	—	14.5	31.5**	—	—	—	—	—	—
6.8µF	- 568	12.0	31.5	14.0	31.5	17.5	41.5	—	—	—	—	—	—
10.0µF	- 610	14.5	31.5	16.5	31.5	21.0	41.5	—	—	—	—	—	—
		—	—	13.5	31.5**	—	—	—	—	—	—	—	—
15.0µF	- 615	18.0	31.5	20.5	31.5	—	—	—	—	—	—	—	—
22.0µF	- 622	17.5	41.5	—	—	—	—	—	—	—	—	—	—

Further C-values upon request.

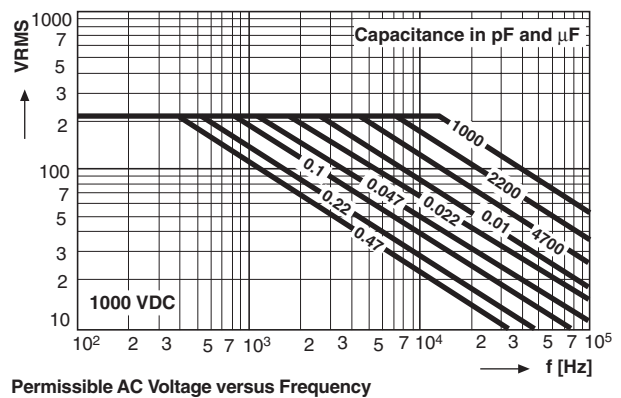
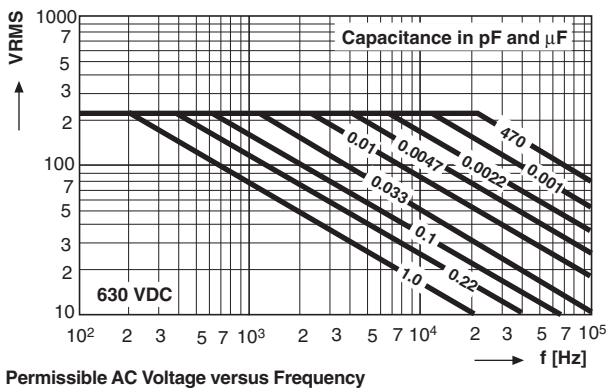
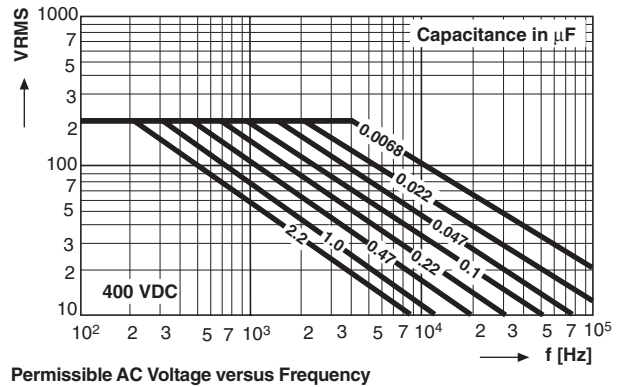
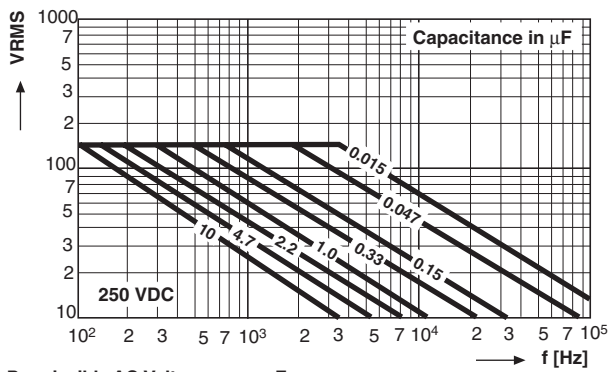
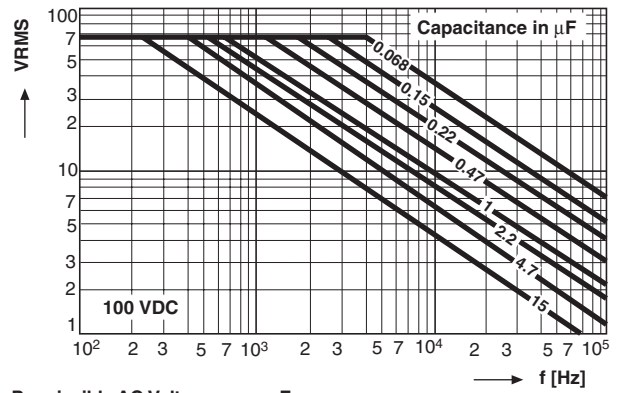
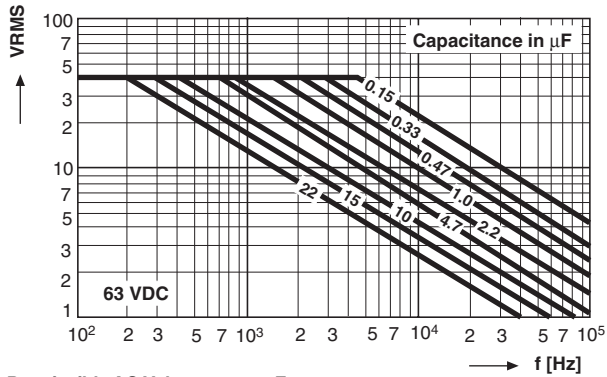
PCM = L + 3.5

*Not suitable for mains applications. Please refer to X-capacitors in our catalog "RFI Suppression Capacitors".

**For the smaller size please add - M at the end of the type designation (e.g. MKT 1813-510/255-M). Not CECC approved.

RECOMMENDED PACKAGING

LETTER CODE	TYPE OF PACKAGING	REEL DIAMETER (mm)	ORDERING CODE EXAMPLES	
G	AMMO	—	MKT 1813-422-014-G	X
R	REEL	350	MKT 1813-422-014-R	X
—	BULK for L > 31.5mm	—	MKT 1813-422-014	X





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