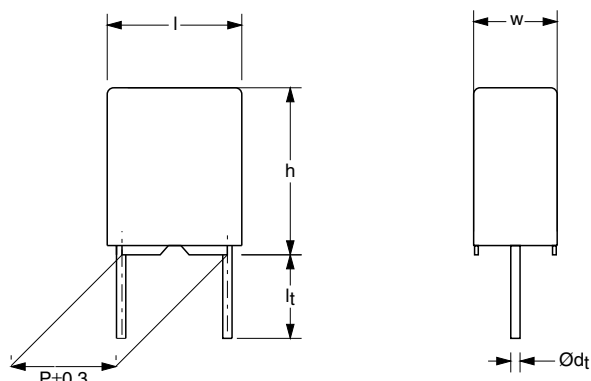


# Metallized Polypropylene Filter Film Capacitors

## MKP Radial Potted Type

### for Surge Voltage Applications



Dimensions in mm

#### APPLICATIONS

Low losses due to low contact resistance and low loss dielectric result in applications where high frequency occur or high stability is preferred. Their small dimensions make them suitable for circuits with high packaging density.

#### MARKING

C-value; rated voltage; tolerance; code for manufacturer; year and week of manufacture; manufacturers type designation

#### DIELECTRIC

Polypropylene film

#### ELECTRODES

Vacuum deposited aluminum

#### ENCAPSULATION

Flame retardant plastic case and epoxy resin (UL-class 94 V-0)

#### CONSTRUCTION

Wound mono construction

#### LEADS

Tinned wire

#### CAPACITANCE RANGE (E24 SERIES)

0.001 to 0.047  $\mu$ F

#### FEATURES

7.5 and 10 mm lead pitch. Supplied loose in box and ammopack. Withstand surge voltages up to 1.5 kV.

Lead (Pb)-free product

RoHS-compliant product

#### CAPACITANCE TOLERANCE

$\pm 5\%$ ;  $\pm 2\%$

#### RATED (DC) VOLTAGE

630 V

#### RATED (AC) VOLTAGE

160 V

#### RATED PEAK-TO-PEAK VOLTAGE

450 V

#### CLIMATIC CATEGORY

55/085/56

#### RATED TEMPERATURE (DC)

85 °C

#### RATED TEMPERATURE (AC)

85 °C

#### MAXIMUM APPLICATION TEMPERATURE

85 °C

#### REFERENCE SPECIFICATIONS

IEC 60384-16

#### PERFORMANCE GRADE

Grade 1 (long life)

#### STABILITY GRADE

Grade 1

#### DETAIL SPECIFICATION

For more detailed data and test requirements contact: [filmcaps.roeselare@vishay.com](mailto:filmcaps.roeselare@vishay.com)



**RoHS**  
COMPLIANT



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**COMPOSITION OF CATALOG NUMBER**

TYPE AND PITCHES	
422	7.5 mm
	10.0 mm

CAPACITANCE (numerically)
------------------------------

MULTIPLIER (nF)	
0.01	2
0.1	3

Example:  
103 = 100 x 1 = 100 nF

2222	422	XX	XX	X
BFC2*	422	XX	XX	X

\* Use this partnumber for those with access to the Vishay's SAP system and Partners website within the Americas

TYPE	PACKAGING	LEAD CONFIGURATION	PREFERRED TYPES	
			C-TOL	630 V
422	Ammopack	H = 18.5 mm; P <sub>0</sub> = 12.7 mm	± 2 %	1
				ON REQUEST
422	Ammopack	H = 18.5 mm; P <sub>0</sub> = 12.7 mm	± 5 %	0
	Loose in box	lead length 4.0 +1.0/-0.5 mm	± 5 %	3
			± 2 %	4

**SPECIFIC REFERENCE DATA**

DESCRIPTION	VALUE	
Tangent of loss angle: C ≤ 0.0047 μF	at 10 kHz	at 100 kHz
	≤ 5 × 10 <sup>-4</sup>	≤ 15 × 10 <sup>-4</sup>
Rated voltage pulse slope (dU/dt) <sub>R</sub> at 630 V (DC)	50 V/μs	
R between leads at 500 V; 1 minute	> 100000 MΩ	
R between interconnected leads and case at 500 V; 1 minute	> 100000 MΩ	
Withstanding (DC) voltage (cut off current 10 mA); rise time 100 V/s	1000 V; 1 minute	
Withstanding (DC) voltage between leads and case	2840 V; 1 minute	

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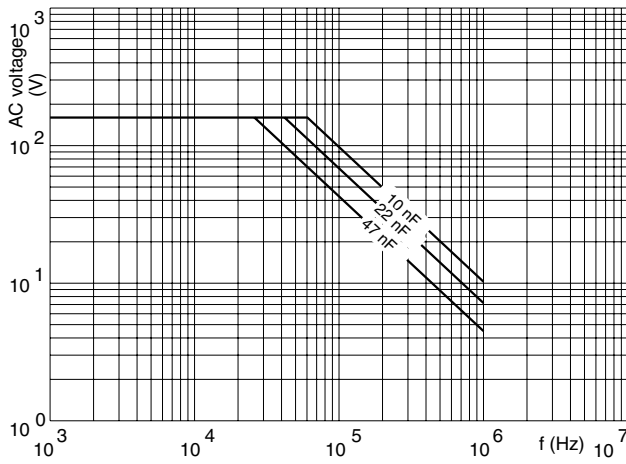
$U_{Rdc} = 630 \text{ V}$ ;  $U_{Rac} = 160 \text{ V}$ ;  $U_{p-p} = 450 \text{ V}$

C (E 24) (μF)	DIMENSIONS b × h × l (mm)	MASS (g)	CATALOGUE NUMBER AND PACKAGING		
			AMMOPACK		LOOSE IN BOX
			H = 18.5 mm		It = 4.0 + 1.0/– 0.5 mm
			C-tol = ± 2 %	SPQ	SPQ
			last 5 digits of catalog number		
Pitch = 7.5 ± 0.4 mm; d <sub>t</sub> = 0.50 ± 0.05 mm					
0.001 0.0011 0.0012 0.0013 0.0015 0.0016 0.0018 0.002 0.0022 0.0024 0.0027	4.0 × 9.0 × 10.0	0.50	11002 11102 11202 11302 11502 11602 11802 12002 12202 12402 12702	1250	1500
0.003 0.0033 0.0036 0.0039	5.0 × 10.5 × 10.0	0.90	13002 13302 13602 13902	1000	1000
0.0043 0.0047	6.0 × 11.5 × 10.0	1.0	14302 14702	750	750
Pitch = 10.0 ± 0.4 mm; d <sub>t</sub> = 0.60 ± 0.06 mm					
0.0051 0.0056 0.0062 0.0068 0.0075 0.0082 0.01 0.011 0.012 0.013 0.015 0.016	4.0 × 10.0 × 12.5	0.60	15102 15602 16202 16802 17502 18202 11003 11103 11203 11303 11503 11603	750	1000
0.018 0.02 0.022 0.024	5.0 × 11.0 × 12.5	0.85	11803 12003 12203 12403	600	1000
0.027 0.03 0.033 0.036 0.039 0.043 0.047	6.0 × 12.0 × 12.5	1.10	12703 13003 13303 13603 13903 14303 14703	500	750

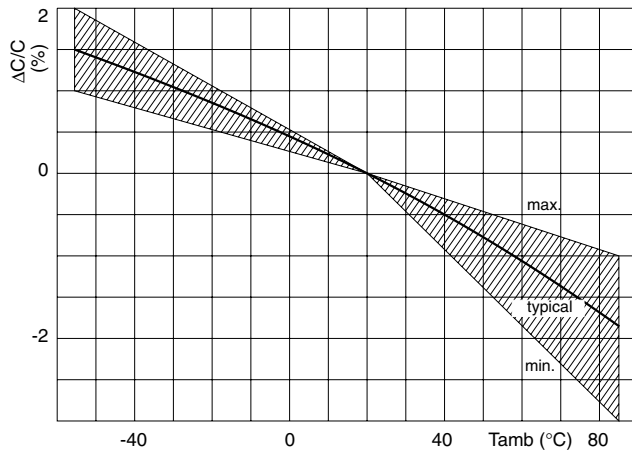


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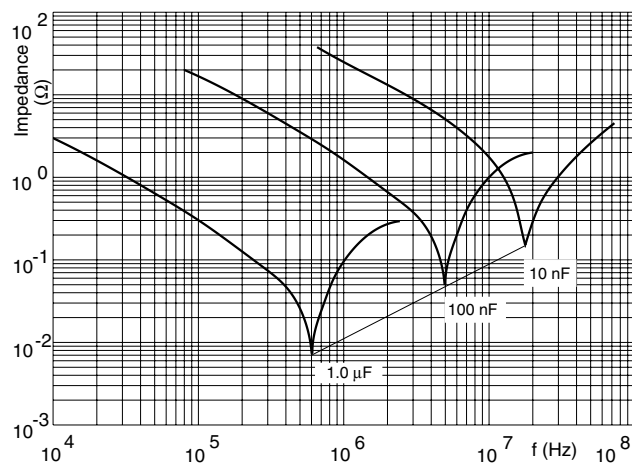
**MAXIMUM RMS VOLTAGE (SINEWAVE) AS A FUNCTION OF FREQUENCY**



**CAPACITANCE**



**IMPEDANCE**





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