Metallized Polypropylene Film Capacitors
MKP Radial Potted Type

Dimensions in mm

FEATURES

5, 10 and 15 mm lead pitch. Supplied loose in box, in ammopack and taped on reel. Intermediate values are available of the E96 series

Lead (Pb)-free product

RoHS-compliant product

CAPACITANCE TOLERANCE

± 5 %; ± 2 %

RATED (DC) VOLTAGE

63 V; 160 V; 250 V; 400 V; 630 V

RATED (AC) VOLTAGE

25 V; 63 V;100 V; 125 V; 160 V

RATED PEAK-TO-PEAK VOLTAGE

70 V; 180 V; 280 V; 350 V; 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

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 1.2 µF

Metallized Polypropylene Film Capacitors
MKP Radial Potted Type

COMPOSITION OF CATALOG NUMBER

TYPE AND PITCHES

416	5.0/10.0/15.0 mm
417	5.0/10.0/15.0 mm
418	5.0/10.0/15.0 mm
419	5.0/10.0/15.0 mm
420	5.0/10.0/15.0 mm

CAPACITANCE

(numerically)

MULTIPLIER (nF)

0.01	2
0.1	3
1	4

Example:

$1004 = 100 \times 1 = 100$ nF

2222	4..	XX	XX	X
BFC2*	4..	XX	XX	X

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

TYPE	PACKAGING	PITCH (mm)	LEAD CONFIGURATION	PREFERRED TYPES					
				C-TOL	63 V	160 V	250 V	400 V	630 V
416	Taped; see note	5/10/15	H = 18.5 mm; P_0 = 12.7 mm	± 2 %	1				
	Loose in box	15	lead length 3.5 ± 0.3 mm	± 2 %	7				
417	Taped; see note	5/10/15	H = 18.5 mm; P_0 = 12.7 mm	± 2 %		1			
	Loose in box	15	lead length 3.5 ± 0.3 mm	± 2 %		7			
418	Taped; see note	5/10/15	H = 18.5 mm; P_0 = 12.7 mm	± 2 %			1		
	Loose in box	15	lead length 3.5 ± 0.3 mm	± 2 %			7		
419	Taped; see note	5/10/15	H = 18.5 mm; P_0 = 12.7 mm	± 2 %				1	
	Loose in box	15	lead length 3.5 ± 0.3 mm	± 2 %				7	
420	Taped; see note	5/10/15	H = 18.5 mm; P_0 = 12.7 mm	± 2 %					1
	Loose in box	15	lead length 3.5 ± 0.3 mm	± 2 %					7
				ON REQUEST					
416	Taped; see note	5/10/15	H = 18.5 mm; P_0 = 12.7 mm	± 5 %	0				
	Loose in box	5/10	lead length 4.0 + 1.0/− 0.5 mm	± 5 %	3				
				± 2 %	4				
		15	lead length 3.5 ± 0.3 mm	± 5 %	6				
417	Taped; see note	5/10/15	H = 18.5 mm; P_0 = 12.7 mm	± 5 %		0			
	Loose in box	5/10	lead length 4.0 + 1.0/− 0.5 mm	± 5 %		3			
				± 2 %		4			
		15	lead length 3.5 ± 0.3 mm	± 5 %		6			
418	Taped; see note	5/10/15	H = 18.5 mm; P_0 = 12.7 mm	± 5 %			0		
	Loose in box	5/10	lead length 4.0 + 1.0/− 0.5 mm	± 5 %			3		
				± 2 %			4		
		15	lead length 3.5 ± 0.3 mm	± 5 %			6		
419	Taped; see note	5/10/15	H = 18.5 mm; P_0 = 12.7 mm	± 5 %				0	
	Loose in box	5/10	lead length 4.0 + 1.0/− 0.5 mm	± 5 %				3	
				± 2 %				4	
		15	lead length 3.5 ± 0.3 mm	± 5 %				6	
420	Taped; see note	5/10/15	H = 18.5 mm; P_0 = 12.7 mm	± 5 %					0
	Loose in box	5/10	lead length 4.0 + 1.0/− 0.5 mm	± 5 %					3
				± 2 %					4
		15	lead length 3.5 ± 0.3 mm	± 5 %					6

Note:
Pitch = 5 and 10 mm: taped on ammopack
Pitch = 15 mm: taped on reel with diameter = 356 mm

For technical questions contact: filmcaps.roeselare@vishay.com

SPECIFIC REFERENCE DATA

DESCRIPTION	VALUE				
Tangent of loss angle:	at 10 kHz			at 100 kHz	
C ≤ 0.0091 µF	$\leq 5 \times 10^{-4}$			$\leq 10 \times 10^{-4}$	
0.0091 µF < C ≤ 0.027 µF	$\leq 5 \times 10^{-4}$			$\leq 15 \times 10^{-4}$	
0.027 µF < C ≤ 0.075 µF	$\leq 5 \times 10^{-4}$			$\leq 20 \times 10^{-4}$	
0.075 µF < C ≤ 0.11 µF	$\leq 5 \times 10^{-4}$			$\leq 25 \times 10^{-4}$	
0.11 µF < C ≤ 0.18 µF	$\leq 10 \times 10^{-4}$			$\leq 30 \times 10^{-4}$	
0.18 µF < C ≤ 0.27 µF	$\leq 10 \times 10^{-4}$			$\leq 35 \times 10^{-4}$	
0.27 µF < C ≤ 0.39 µF	$\leq 10 \times 10^{-4}$			$\leq 40 \times 10^{-4}$	
0.39 µF < C ≤ 0.56 µF	$\leq 10 \times 10^{-4}$			$\leq 45 \times 10^{-4}$	
0.56 µF < C ≤ 0.75 µF	$\leq 10 \times 10^{-4}$			$\leq 50 \times 10^{-4}$	
0.75 µF < C ≤ 1.1 µF	$\leq 10 \times 10^{-4}$			$\leq 60 \times 10^{-4}$	
Rated voltage pulse slope $(dU/dt)_R$:	at 63 V (DC)	at 100 V (DC)	at 250 V (DC)	at 400 V (DC)	at 630 V (DC)
P = 5 mm	50 V/µs	50 V/µs	50 V/µs	50 V/µs	50 V/µs
P = 10 mm	20 V/µs	20 V/µs	20 V/µs	20 V/µs	50 V/µs
P = 15 mm	50 V/µs	50 V/µs	50 V/µs	50 V/µs	50 V/µs
R between leads, for C ≤ 0.33 µF:					
at 50 V; 1 minute	> 100000 MΩ				
at 100 V; 1 minute		> 100000 MΩ	> 100000 MΩ	> 100000 MΩ	> 100000 MΩ
RC between leads, for C > 0.33 µF at 10 V; 1 minute	> 30000 s	>30000 s	>30000 s	>30000 s	
R between interconnecting leads and casing; 50 V; 1 minute	> 100000 MΩ	> 100000 MΩ	> 100000 MΩ	> 100000 MΩ	> 100000 MΩ
Withstanding (DC) voltage (cut off current 10 mA); rise time 100 V/s	100 V; 1 minute	260 V; 1 minute	400 V; 1 minute	640 V; 1 minute	1 000 V; 1 minute
Withstanding (DC) voltage between leads and case	2840 V; 1 minute	2840 V; 1 minute	2840 V; 1 minute	2840 V; 1 minute	1 260 V; 1 minute

MKP 416 to 420

Vishay BCcomponents Metallized Polypropylene Film Capacitors
MKP Radial Potted Type

U_{Rdc} = 63 V; U_{Rac} = 25 V; U_{p-p} = 70 V

C (E 24) (µF)	DIMENSIONS w × h × l (mm)	MASS (g)	AMMOPACK H = 18.5 mm; P_0 = 12.7 mm; C-tol = ± 2 %; last 5 digits of catalog number	SPQ	LOOSE IN BOX lt = 4.0 + 1.0/− 0.5 mm; C-tol = ± 2 %; last 5 digits of catalog number	SPQ	REEL H = 18.5 mm; P_0 = 12.7 mm; C-tol = ± 2 %; last 5 digits of catalog number	SPQ	LOOSE IN BOX lt = 3.5 ± 0.3 mm; C-tol = ± 2 %; last 5 digits of catalog number	SPQ
Pitch = 5.0 ± 0.3 mm; d_t = 0.50 ± 0.05 mm										
0.036	4.5 × 9.0 × 7.2	0.45	13603	1000	43603	2000				
0.039			13903		43903					
0.043			14303		44303					
0.047			14703		44703					
0.051	6.0 × 11.0 × 7.2	0.60	15103	750	45103	1500				
0.056			15603		45603					
0.062			16203		46203					
0.068			16803		46803					
0.075			17503		47503					
0.082			18203		48203					
0.091			19103		49103					
0.1			11004		41004					
0.11			11104		41104					
0.12			11204		41204					
Pitch = 10.0 ± 0.4 mm; d_t = 0.60 ± 0.06 mm										
0.13	5.0 × 11.0 × 12.5	0.85	11304	600	41304	1000				
0.15			11504		41504					
0.16	6.0 × 12.0 × 12.5	1.10	11604	500	41604	750				
0.18			11804		41804					
0.20			12004		42004					
0.22			12204		42204					
0.24			12404		42404					
0.27			12704		42704					
Pitch = 15.0 ± 0.4 mm; d_t = 0.60 ± 0.06 mm										
0.3	6.0 × 12.0 × 17.5	1.4					13004	900	73004	1000
0.33							13304		73304	
0.36							13604		73604	
0.39							13904		73904	
Pitch = 15.0 ± 0.4 mm; d_t = 0.80 ± 0.08 mm										
0.43	7.0 × 13.5 × 17.5	1.9					14304	800	74304	750
0.47							14704		74704	
0.51							15104		75104	
0.56							15604		75604	
0.62	8.5 × 15.0 × 17.5	2.6					16204	650	76204	750
0.68							16804		76804	
0.75							17504		77504	
0.82							18204		78204	
0.91	10.0 × 16.5 × 17.5	3.1					19104	600	79104	500
1.0							11005		71005	
1.1							11105		71105	

For technical questions contact: filmcaps.roeselare@vishay.com

Metallized Polypropylene Film Capacitors   Vishay BCcomponents
MKP Radial Potted Type

U_{Rdc} = 160 V; U_{Rac} = 63 V; $U_{p\text{-}p}$ = 180 V

C (E 24) (μF)	DIMENSIONS w × h × l (mm)	MASS (g)	CATALOG NUMBER 2222 417 ..... AND PACKAGING							
			AMMOPACK		LOOSE IN BOX		REEL		LOOSE IN BOX	
			H = 18.5 mm; P_0 = 12.7 mm		lt = 4.0 + 1.0/− 0.5 mm		H = 18.5 mm; P_0 = 12.7 mm		lt = 3.5 ± 0.3 mm	
			C-tol = ± 2 %		C-tol = ± 2 %		C-tol = ± 2 %		C-tol = ± 2 %	
			last 5 digits of catalog number	SPQ	last 5 digits of catalog number	SPQ	last 5 digits of catalog number	SPQ	last 5 digits of catalog number	SPQ
Pitch = 5.0 ± 0.3 mm; d_t = 0.50 ± 0.05 mm										
0.024	4.5 × 9.0 × 7.2	0.45	12403	1000	42403	2000				
0.027			12703		42703					
0.03			13003		43003					
0.033			13303		43303					
0.036	6.0 × 11.0 × 7.2	0.60	13603	750	43603	1500				
0.039			13903		43903					
0.043			14303		44303					
0.047			14703		44703					
0.051			15103		45103					
0.056			15603		45603					
0.062			16203		46203					
0.068			16803		46803					
Pitch = 10.0 ± 0.4 mm; d_t = 0.60 ± 0.06 mm										
0.075	4.0 × 10.0 × 12.5	0.60	17503	750	47503	1000				
0.082			18203		48203					
0.091			19103		49103					
0.1			11004		41004					
0.11	5.0 × 11.0 × 12.5	0.85	11104	600	41104	1000				
0.12			11204		41204					
0.13			11304		41304					
0.15			11504		41504					
0.16	6.0 × 12.0 × 12.5	1.10	11604	500	41604	750				
0.18			11804		41804					
0.20			12004		42004					
0.22			12204		42204					
0.24			12404		42404					
Pitch = 15.0 ± 0.4 mm; d_t = 0.60 ± 0.06 mm										
0.27	5.0 × 11.0 × 17.5	1.2					12704	1100	72704	1250
0.3	6.0 × 12.0 × 17.5	1.4					13004	900	73004	1000
0.33							13304		73304	
0.36							13604		73604	
0.39							13904		73904	
Pitch = 15.0 ± 0.4 mm; d_t = 0.80 ± 0.08 mm										
0.43	7.0 × 13.5 × 17.5	1.9					14304	800	74304	750
0.47							14704		74704	
0.51							15104		75104	
0.56							15604		75604	
0.62	8.5 × 15.0 × 17.5	2.6					16204	650	76204	750
0.68							16804		76804	
0.75							17504		77504	
0.82							18204		78204	
0.91	10.0 × 16.5 × 17.5	3.1					19104	600	79104	500
1.0							11005		71005	
1.1							11105		71105	

MKP 416 to 420

Vishay BCcomponents Metallized Polypropylene Film Capacitors
MKP Radial Potted Type

$U_{Rdc} = 250$ V; $U_{Rac} = 25$ V; $U_{p-p} = 70$ V

C (E 24) (µF)	DIMENSIONS w × h × l (mm)	MASS (g)	CATALOG NUMBER 2222 418 ..... AND PACKAGING							
			AMMOPACK		LOOSE IN BOX		REEL		LOOSE IN BOX	
			H = 18.5 mm; P0 = 12.7 mm		lt = 4.0 + 1.0/– 0.5 mm		H = 18.5 mm; P0 = 12.7 mm		lt = 3.5 ± 0.3 mm	
			C-tol = ± 2 %		C-tol = ± 2 %		C-tol = ± 2 %		C-tol = ± 2 %	
			last 5 digits of catalog number	SPQ	last 5 digits of catalog number	SPQ	last 5 digits of catalog number	SPQ	last 5 digits of catalog number	SPQ
Pitch = 5.0 ± 0.3 mm; d_t = 0.50 ± 0.05 mm										
0.01			11003		41003					
0.011			11103		41103					
0.012	3.5 × 8.0 × 7.2	0.35	11203	1500	41203	3000				
0.013			11303		41303					
0.015			11503		41503					
0.016			11603		41603					
0.018			11803		41803					
0.02	4.5 × 9.0 × 7.2	0.45	12003	1000	42003	2000				
0.022			12203		42203					
0.024			12403		42403					
0.027			12703		42703					
0.03			13003		43003					
0.033			13303		43303					
0.036	6.0 × 11.0 × 7.2	0.60	13603	750	43603	1500				
0.039			13903		43903					
0.043			14303		44303					
Pitch = 10.0 ± 0.4 mm; d_t = 0.60 ± 0.06 mm										
0.047			14703		44703					
0.051			15103		45103					
0.056	4.0 × 10.0 × 12.5	0.60	15603	750	45603	1000				
0.062			16203		46203					
0.068			16803		46803					
0.075			17503		47503					
0.082	5.0 × 11.0 × 12.5	0.85	18203	600	48203	1000				
0.091			19103		49103					
0.1			11004		41004					
0.11			11104		41104					
0.12	6.0 × 12.0 × 12.5	1.10	11204	500	41204	750				
0.13			11304		41304					
Pitch = 15.0 ± 0.4 mm; d_t = 0.60 ± 0.06 mm										
0.15	5.0 × 11.0 × 17.5	1.2					11504	1100	71504	1250
0.16							11604		71604	
0.18							11804		71804	
0.2	6.0 × 12.0 × 17.5	1.4					12004	900	72004	1000
0.22							12204		72204	
0.24							12404		72404	
Pitch = 15.0 ± 0.4 mm; d_t = 0.80 ± 0.08 mm										
0.27							12704		72704	
0.3	7.0 × 13.5 × 17.5	1.9					13004	800	73004	750
0.33							13304		73304	
0.36							13604		73604	
0.39							13904		73904	
0.43	8.5 × 15.0 × 17.5	2.6					14304	650	74304	750
0.47							14704		74704	
0.51							15104		75104	
0.56							15604		75604	
0.62	10.0 × 16.5 × 17.5	3.1					16204	600	76204	500
0.68							16804		76804	

For technical questions contact: filmcaps.roeselare@vishay.com

Metallized Polypropylene Film Capacitors   Vishay BCcomponents
MKP Radial Potted Type

U_{Rdc} = 400 V; U_{Rac} = 125 V; U_{p-p} = 350 V

C (E 24) (µF)	DIMENSIONS w × h × l (mm)	MASS (g)	CATALOG NUMBER 2222 419 ..... AND PACKAGING							
			AMMOPACK		LOOSE IN BOX		REEL		LOOSE IN BOX	
			H = 18.5 mm; P_0 = 12.7 mm		lt = 4.0 + 1.0/− 0.5 mm		H = 18.5 mm; P_0 = 12.7 mm		lt = 3.5 ± 0.3 mm	
			C-tol = ± 2 %		C-tol = ± 2 %		C-tol = ± 2 %		C-tol = ± 2 %	
			last 5 digits of catalog number	SPQ	last 5 digits of catalog number	SPQ	last 5 digits of catalog number	SPQ	last 5 digits of catalog number	SPQ
Pitch = 5.0 ± 0.3 mm; d_t = 0.50 ± 0.05 mm										
0.001			11002		41002					
0.0011			11102		41102					
0.0012			11202		41202					
0.0013			11302		41302					
0.0015			11502		41502					
0.0016			11602		41602					
0.0018			11802		41802					
0.002	3.5 × 8.0 × 7.2	0.35	12002	1500	42002	3000				
0.0022			12202		42202					
0.0024			12402		42402					
0.0027			12702		42702					
0.003			13002		43002					
0.0033			13302		43302					
0.0036			13602		43602					
0.0039			13902		43902					
0.0043			14302		44302					
0.0047			14702		44702					
0.0051			15102		45102					
0.0056			15602		45602					
0.0062			16202		46202					
0.0068			16802		46802					
0.0075	4.5 × 9.0 × 7.2	0.45	17502	1000	47502	2000				
0.0082			18202		48202					
0.0091			19102		49102					
0.01			11003		41003					
0.011			11103		41103					
0.012			11203		41203					
0.013			11303		41303					
0.015			11503		41503					
0.016	6.0 × 11.0 × 7.2	0.60	11603	750	41603	1500				
0.018			11803		41803					
0.02			12003		42003					
Pitch = 10.0 ± 0.4 mm; d_t = 0.60 ± 0.06 mm										
0.022			12203		42203					
0.024			12403		42403					
0.027	4.0 × 10.0 × 12.5	0.60	12703	750	42703	1000				
0.03			13003		43003					
0.033			13303		43303					
0.036			13603		43603					
0.039	5.0 × 11.0 × 12.5	0.85	13903	600	43903	1000				
0.043			14303		44303					

Document Number: 28128
Revision: 21-Nov-05
For technical questions contact: filmcaps.roeselare@vishay.com
www.vishay.com
281

C (E 24) (µF)	DIMENSIONS w × h × l (mm)	MASS (g)	CATALOG NUMBER 2222 419 ..... AND PACKAGING							
			AMMOPACK H = 18.5 mm; P$_0$ = 12.7 mm		**LOOSE IN BOX** lt = 4.0 + 1.0/− 0.5 mm		**REEL** H = 18.5 mm; P$_0$ = 12.7 mm		**LOOSE IN BOX** lt = 3.5 ± 0.3 mm	
			C-tol = ± 2 % last 5 digits of catalog number	SPQ	C-tol = ± 2 % last 5 digits of catalog number	SPQ	C-tol = ± 2 % last 5 digits of catalog number	SPQ	C-tol = ± 2 % last 5 digits of catalog number	SPQ
0.047	6.0 × 12.0 × 12.5	1.10	14703	500	44703	750				
0.051			15103		45103					
0.056			15603		45603					
0.062			16203		46203					
0.068			16803		46803					
Pitch = 15.0 ± 0.4 mm; d$_t$ = 0.60 ± 0.06 mm										
0.075	5.0 × 11.0 × 17.5	1.2					17503	1100	77503	1250
0.082							18203		78203	
0.091	6.0 × 12.0 × 17.5	1.4					19103	900	79103	1000
0.1							11004		71004	
0.11							11104		71104	
0.12							11204		71204	
0.13							11304		71304	
Pitch = 15.0 ± 0.4 mm; d$_t$ = 0.80 ± 0.08 mm										
0.15	7.0 × 13.5 × 17.5	1.9					11504	800	71504	750
0.16							11604		71604	
0.18							11804		71804	
0.2	8.5 × 15.0 × 17.5	2.6					12004	650	72004	750
0.22							12204		72204	
0.24							12404		72404	
0.27							12704		72704	
0.3	10.0 × 16.5 × 17.5	3.1					13004	600	73004	500
0.33							13304		73304	
0.36							13604		73604	

For technical questions contact: filmcaps.roeselare@vishay.com
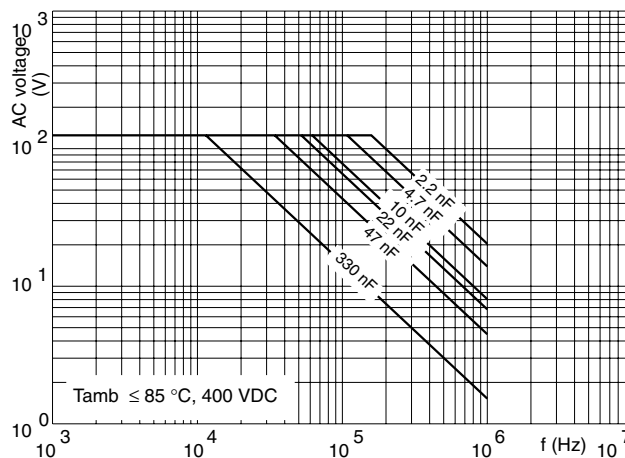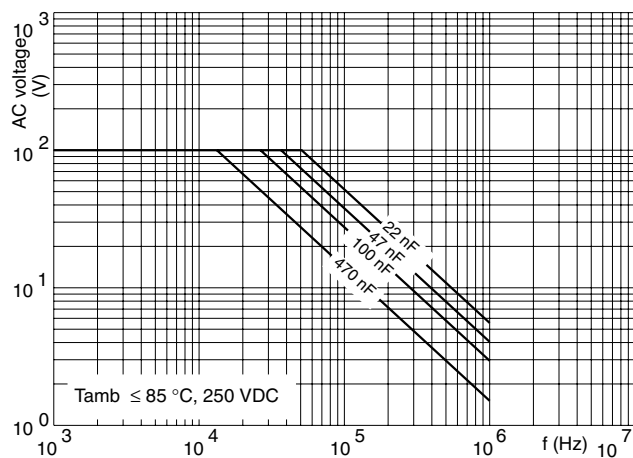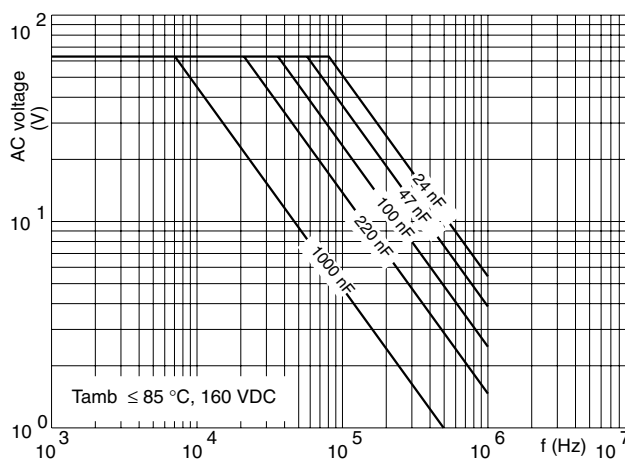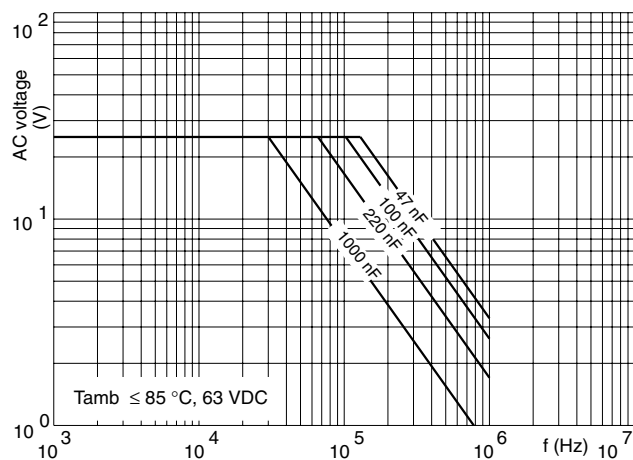
![Vishay logo]

Metallized Polypropylene Film Capacitors   Vishay BCcomponents
MKP Radial Potted Type

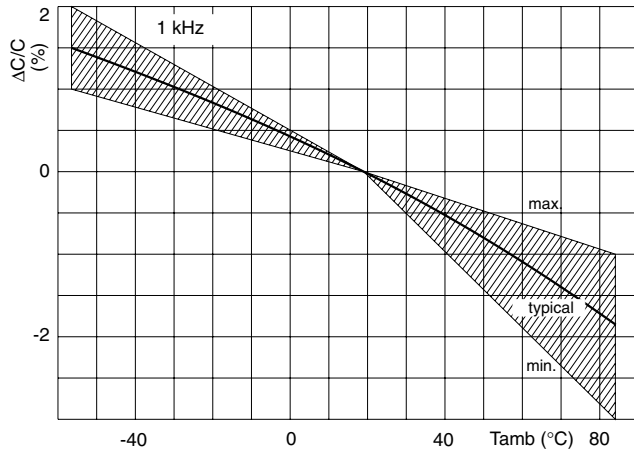**U$_{Rdc}$ = 630 V; U$_{Rac}$ = 160 V; U$_{p-p}$ = 450 V**

C (E 24) (µF)	DIMENSIONS w × h × l (mm)	MASS (g)	CATALOG NUMBER 2222 420 ..... AND PACKAGING							
			AMMOPACK H = 18.5 mm; P$_0$ = 12.7 mm C-tol = ± 2 % last 5 digits of catalog number	SPQ	LOOSE IN BOX lt = 4.0 + 1.0/− 0.5 mm C-tol = ± 2 % last 5 digits of catalog number	SPQ	REEL H = 18.5 mm; P$_0$ = 12.7 mm C-tol = ± 2 % last 5 digits of catalog number	SPQ	LOOSE IN BOX lt = 3.5 ± 0.3 mm C-tol = ± 2 % last 5 digits of catalog number	SPQ
Pitch = 5.0 ± 0.3 mm; d$_t$ = 0.50 ± 0.05 mm										
0.0015 0.0016 0.0018 0.002 0.0022 0.0024 0.0027	3.5 × 8.0 × 7.2	0.35	11502 11602 11802 12002 12202 12402 12702	1500	41502 41602 41802 42002 42202 42402 42702	3000				
0.003 0.0033 0.0036 0.0039	4.5 × 9.0 × 7.2	0.45	13002 13302 13602 13902	1000	43002 43302 43602 43902	2000				
0.0043 0.0047 0.0051 0.0056 0.0062 0.0068	6.0 × 11.0 × 7.2	0.60	14302 14702 15102 15602 16202 16802	750	44302 44702 45102 45602 46202 46802	1500				
Pitch = 10.0 ± 0.4 mm; d$_t$ = 0.60 ± 0.06 mm										
0.01 0.011 0.012 0.013 0.015 0.016	4.0 × 10.0 × 12.5	0.60	11003 11103 11203 11303 11503 11603	750	41003 41103 41203 41303 41503 41603	1000				
0.018 0.02 0.022 0.024	5.0 × 11.0 × 12.5	0.85	11803 12003 12203 12403	600	41803 42003 42203 42403	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	42703 43003 43303 43603 43903 44303 44703	750				
Pitch = 15.0 ± 0.4 mm; d$_t$ = 0.60 ± 0.06 mm										
0.051 0.056	6.0 × 12.0 × 17.5	1.4					15103 15603	900	75103 75603	1000
Pitch = 15.0 ± 0.4 mm; d$_t$ = 0.80 ± 0.08 mm										
0.062 0.068 0.075 0.082	7.0 × 13.5 × 17.5	1.9					16203 16803 17503 18203	800	76203 76803 77503 78203	750
0.091 0.1 0.11 0.12	8.5 × 15.0 × 17.5	2.6					19103 11004 11104 11204	650	79103 71004 71104 71204	750
0.13 0.15 0.16	10.0 × 16.5 × 17.5	3.1					11304 11504 11604	600	71304 71504 71604	500

MAXIMUM RMS VOLTAGE (SINEWAVE) AS A FUNCTION OF FREQUENCY

Tamb ≤ 85 °C, 63 VDC

Tamb ≤ 85 °C, 160 VDC

Tamb ≤ 85 °C, 250 VDC

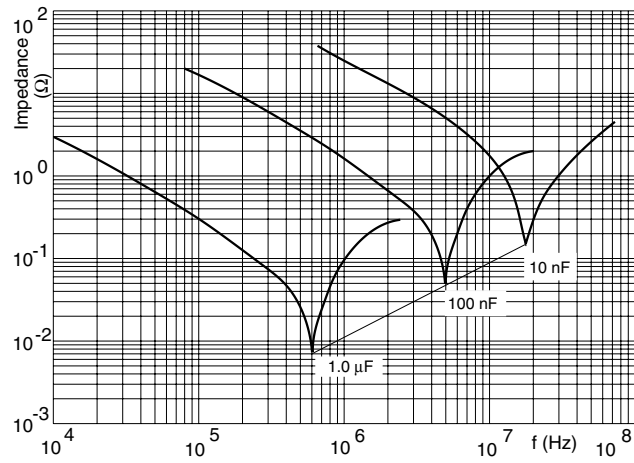Tamb ≤ 85 °C, 400 VDC

Tamb ≤ 85 °C, 630 VDC
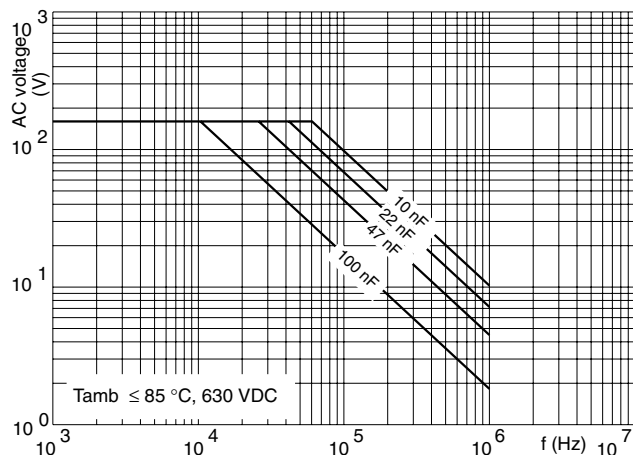
CAPACITANCE

IMPEDANCE

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.

Hyperlinks included in this datasheet may direct users to third-party websites. These links are provided as a convenience and for informational purposes only. Inclusion of these hyperlinks does not constitute an endorsement or an approval by Vishay of any of the products, services or opinions of the corporation, organization or individual associated with the third-party website. Vishay disclaims any and all liability and bears no responsibility for the accuracy, legality or content of the third-party website or for that of subsequent links.

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. 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.

For technical questions, contact:
THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE. THE PRODUCTS DESCRIBED HEREIN AND THIS DOCUMENT ARE SUBJECT TO SPECIFIC DISCLAIMERS, SET FORTH AT www.vishay.com/doc?91000