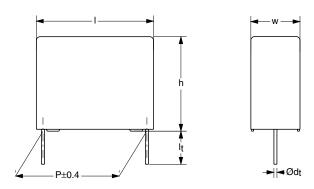


**Vishay BCcomponents** 

# AC and Pulse Metallized Polypropylene Film Capacitors KP/MMKP Radial Potted Type



Dimensions in mm

#### **APPLICATIONS**

Where high currents and steep pulses occur. Power supplies

#### MARKING

C-value; tolerance; rated voltage; manufacturer's type designation; code for dielectric material; manufacturer's emblem; code for factory of origin; year and week of manufacture

# DIELECTRIC

Polypropylene film

## ELECTRODES

Metallized film and aluminium foil

#### ENCAPSULATION

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

# CONSTRUCTION

Internal serial construction

## LEADS

Tinned wire

## **CAPACITANCE RANGE (E24 SERIES)**

0.0047 to 0.27  $\mu\text{F}$ 

# FEATURES

15 to 27.5 mm pitch. Supplied loose and taped on reel

Lead (Pb)-free product

**RoHS-compliant product** 



COMPLIANT

#### **CAPACITANCE TOLERANCE**

 $\pm\,5$  %;  $\pm\,3.5$  %

RATED (DC) VOLTAGE

630 V; 1000 V

RATED (AC) VOLTAGE

300 V; 400 V

RATED PEAK-TO-PEAK VOLTAGE 850 V; 1100 V

CLIMATIC CATEGORY 55/100/56

RATED TEMPERATURE

MAXIMUM APPLICATION TEMPERATURE 100 °C

REFERENCE SPECIFICATIONS IEC 60384-17

## PERFORMANCE GRADE

for C > 4.7 nF: grade 1 (long life) for C  $\leq$  4.7 nF: grade 2

## STABILITY GRADE

Grade 2

# DETAIL SPECIFICATION

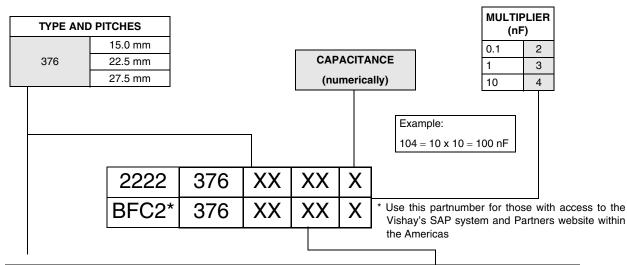
For more detailed data and test requirements see "Type detail specification HQN-384-17/101"

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# **COMPOSITION OF CATALOG NUMBER**



TYPE	PACKAGING	LEAD CONFIGURATION	ON REQUEST			
	PACKAGING	LEAD CONFIGURATION	C-TOL	630 V	1000 V	
376	loose in box	lead length 5.0 $\pm$ 1.0 mm	$\pm$ 5 %	62	72	
			$\pm$ 3.5 %	63	73	
		lead length 3.5 $\pm$ 0.3 mm	$\pm$ 5 %	68	78	
		lead length 3.5 ± 0.5 mm	$\pm$ 3.5 %	69	79	
	taped on reel		±5%	65	75	
			$\pm$ 3.5 %	66	76	

## **SPECIFIC REFERENCE DATA (630 VDC)**

DESCRIPTION	VA	LUE	
Tangent of loss angle:	at 10 kHz	at 100 kHz	
P = 15.0 mm	$\leq 3 \times 10^{-4}$	$\leq 10 \times 10^{-4}$	
P = 22.5 mm	$\leq$ 3 $\times$ 10 <sup>-4</sup>	$\leq 15  imes 10^{-4}$	
P = 27.5 mm	$\leq 4 \times 10^{-4}$	$\leq$ 20 $\times$ 10 <sup>-4</sup>	
Rated voltage pulse slope (dU/dt) <sub>R</sub> :			
P = 15.0 mm	4000	Ο V/μs	
P = 22.5 mm	1400 V/µs		
P = 27.5 mm	900 V/μs		
R between leads at 500 V; 1 minute	> 100000 MΩ		
R between interconnected leads and case; 500 V; 1 minute	> 1000	000 MΩ	
Ionization (AC) voltage (typical value) at 50 pC peak discharge	> 4	00 V	
Withstanding (DC) voltage (cut off current 10 mA); rise time 100 V/s	1008 V;	1 minute	
Withstanding (DC)voltage between leads and case	2840 V;	1 minute	



# AC and Pulse Metallized Polypropylene Film Capacitors KP/MMKP Radial Potted Type

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# $U_{Rdc} = 630 \ V; \ U_{Rac} = 300 \ V; \ U_{p\text{-}p} = 850 \ V$

			CATALOG NUMBER	ACKAGING	
	DIMENSIONS		LOOSE IN BOX		REEL
с		MASS	$I_t = 5.0 \pm 1.0 \text{ mm}$	ALL LEADS	SPQ
(μF)	W × H × L (mm)	(g)	C-tol = ± 5 %		
	()		LAST 5 DIGITS OF CATALOG NUMBER	SPQ	
$\text{Pitch} = 15.0 \pm 0.4 \text{ m}$	m; d <sub>t</sub> = 0.60 $\pm$ 0.06 mm				
0.0068			62682		
0.0075			62752	1000	1100
0.0082	$5.0\times11.0\times17.5$	1.1	62822	1000	1100
0.0091			62912		
0.01			62103		
0.011	0.0 40.0 47.5		62113	4000	
0.012	$6.0\times12.0\times17.5$	1.5	62123	1000	900
0.013			62133		
	m; d <sub>t</sub> = 0.80 $\pm$ 0.08 mm	I		I	
0.015			62153		
0.016	$7.0\times13.5\times17.5$	2.0	62163	1000	800
0.018			62183		
0.02	05 (50 )==		62203	1000	055
0.022	$8.5\times15.0\times17.5$	2.6	62223	1000	650
	m; d <sub>t</sub> = 0.80 ± 0.08 mm	I	-	I	
0.024			62243		
0.027	$6.0\times15.5\times26.0$	2.8	62273	300	600
0.03			62303		
0.033			62333		
0.036	7.0  imes 16.5  imes 26.0	3.5	62363	200	550
0.039			62393		
0.043		4.5	62433		
0.047		4.5	62473		
0.051	$8.5\times18.0\times26.0$	4.5	62513	200	450
0.056		5.1	62563		
	m; d <sub>t</sub> = 0.80 ± 0.08 mm	I			
0.062			62623		
0.068	$9.0\times19.0\times31.0$	6.2	62683	100	
0.075			62753		
0.082			62823		
0.091	11.0 01.0 01.0		62913	100	
0.1	$11.0\times21.0\times31.0$	8.3	62104	100	
0.11			62114		
0.12			62124		
0.13		10.0	62134	100	
0.15	$13.0\times23.0\times31.0$	10.8	62154	100	
0.16			62164		
0.18		10.0	62184	100	
0.2	$15.0\times25.0\times31.0$	13.0	62204	100	
0.22		<u> </u>	62224		
0.24	$18.0\times28.0\times31.0$	19.0	62244	100	
0.27			62274		

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# SPECIFIC REFERENCE DATA (630 VDC)

DESCRIPTION	VALUE		
Tangent of loss angle:	at 10 kHz	at 100 kHz	
P = 15.0 mm	$\leq 3 \times 10^{-4}$	$\leq 10 \times 10^{-4}$	
P = 22.5 mm	$\leq 3  imes 10^{-4}$	$\leq 10  imes 10^{-4}$	
P = 27.5 mm	$\leq 3  imes 10^{-4}$	$\leq 15  imes 10^{-4}$	
Rated voltage pulse slope (dU/dt) <sub>R</sub> :			
P = 15.0 mm	7000 V/µs		
P = 22.5 mm	2500 V/μs		
P = 27.5 mm	1600 V/µs		
R between leads at 500 V; 1 minute	> 100000 MΩ		
R between interconnected leads and case; 500 V; 1 minute	> 100000 MΩ		
Ionization (AC) voltage (typical value) at 50 pC peak discharge	> 500 V		
Withstanding (DC) voltage (cut off current 10 mA); rise time 100 V/s			
for C $\leq$ 47 nF	1600 V; 1 minute		
for $C > 47 \text{ nF}$	$[1, 6 - (0, 0364 \cdot \sqrt{C - 47})] \times 1000V$ ; 1 minute		
Withstanding (DC)voltage between leads and case	2840 V; 1 minute		

# $U_{Rdc}=1\,000$ V; $U_{Rac}=400$ V/U\_{p-p}=1\,100 V

С	DIMENSIONS W × H × L (mm)		CATALOG NUMBER 2222 376 AND PACKAGING		
			LOOSE IN BOX		REEL
		MASS	$\textbf{l}_{t}=\textbf{5.0}\pm\textbf{1.0}~\textbf{mm}$	ALL LEADS	SPQ
(µF)		(g) 	C-tol = ± 5 %		
			LAST 5 DIGITS OF CATALOG NUMBER	SPQ	
$Pitch = 15.0 \pm 0.4$	mm; d <sub>t</sub> = 0.60 $\pm$ 0.06 mm			· · · · ·	
0.0047			72472		
0.0051	$5.0\times11.0\times17.5$	1.1	72512	1000	1100
0.0056			72562		
0.0062			72622	1000	
0.0068	6.0 × 12.0 × 17.5	1.5	72682		900
0.0075	8.0 × 12.0 × 17.5	1.5	72752	1000	900
0.0082			72822		
$\textbf{Pitch} = \textbf{15.0} \pm \textbf{0.4}$	mm; d <sub>t</sub> = 0.80 $\pm$ 0.08 mm				
0.0091			72912		
0.01	70.125.175	2.0	72103	1000	800
0.011	$7.0\times13.5\times17.5$	2.0	72113	1000	800
0.012			72123		
$Pitch=22.5\pm0.4$	mm; dt = 0.80 $\pm$ 0.08 mm				
0.013	$6.0\times15.5\times26.0$	2.8	72133	300	600
0.015			72153		
0.016	$7.0\times16.5\times26.0$	3.5	72163	200	550
0.018			72183		



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	DIMENSIONS W × H × L (mm)	MASS (g)	CATALOG NUMBER 2222 376 AND PACKAGING		
			LOOSE IN BOX		REEL
с			$I_t$ = 5.0 $\pm$ 1.0 mm	ALL LEADS	
(µF)			<b>C-tol</b> = ± 5 %		
			LAST 5 DIGITS OF CATALOG NUMBER	SPQ	SPQ
0.02			72203		
0.022			72223		
0.024			72243		
0.027	$8.5\times18.0\times26.0$	4.5	72273	200	450
0.03			72303		
0.033			72333		
0.036			72363		
0.039	$10.0\times19.5\times26.0$	5.4	72393	200	350
$\text{Pitch}=\text{27.5}\pm\text{0.4}\text{ n}$	nm; d <sub>t</sub> = 0.80 $\pm$ 0.08 mm			• • •	
0.043			72433		
0.047	$9.0\times19.0\times31.0$	6.2	72473	100	
0.051			72513		
0.056			72563		
0.062			72623	100	
0.068	$11.0\times21.0\times31.0$	8.3	72683	100	
0.075			72753		
0.082			72823		
0.091	$13.0\times23.0\times31.0$	10.8	72913	100	
0.1			72104		
0.11			72114		
0.12			72124	100	
0.13	15.0 × 25.0 × 31.0	13.0	72134	100	
0.15			72154		
0.16		10.0	72164	100	
0.18	$18.0\times28.0\times31.0$	19.0	72184	100	



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