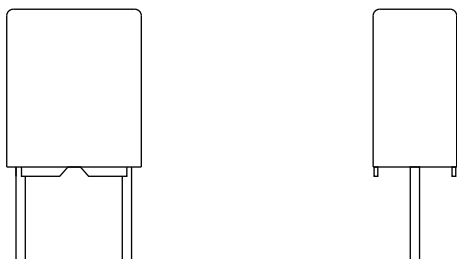




## AC and Pulse Metallized Polypropylene Film Capacitors MKP Radial Potted Type



### FEATURES

- 5 mm pitch
- Material categorization:  
for definitions of compliance please see  
[www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS  
COMPLIANT**

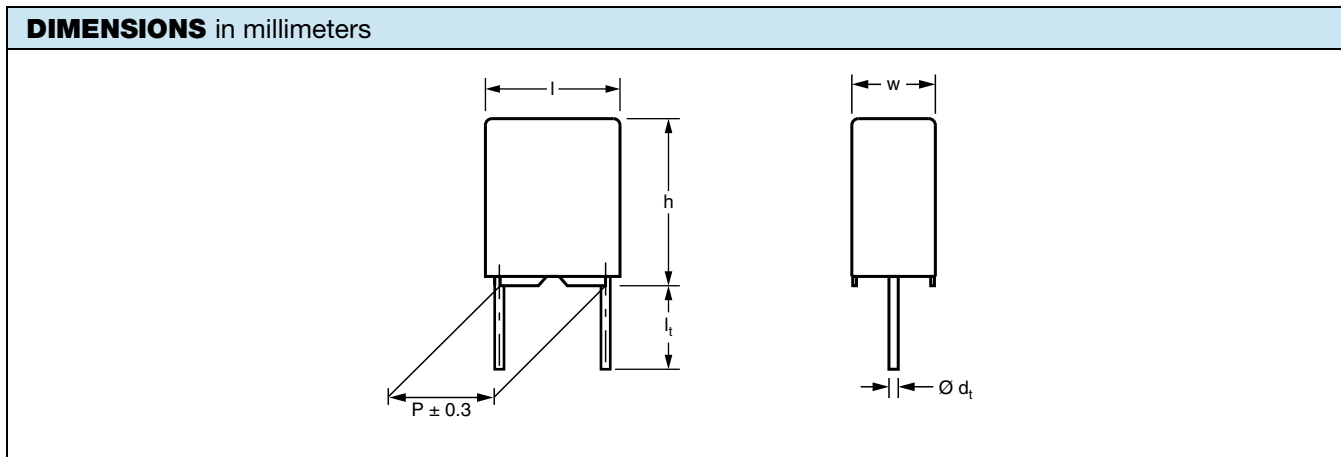
### APPLICATIONS

Low losses due to low contact resistance and low loss dielectric make these products suitable for applications where high currents at high frequency occur or high stability is preferred.

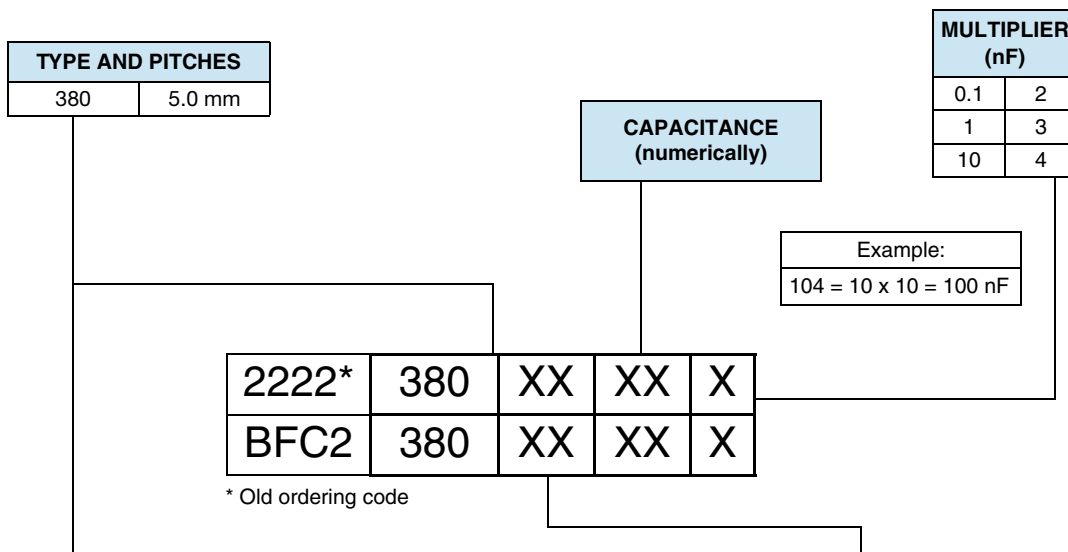
QUICK REFERENCE DATA	
Capacitance range (E24 series)	0.0022 $\mu$ F to 0.1 $\mu$ F
Capacitance tolerance	$\pm 10\%$ , $\pm 5\%$
Climatic category	55/085/56
Maximum application temperature	85 $^{\circ}$ C
Reference specifications	IEC 60384-17
Dielectric	Polypropylene film
Electrodes	Metallized film
Construction	Wound mono construction
Encapsulation	Flame retardant plastic case and epoxy resin UL-class 94 V-0
Leads	Tinned wire
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
Rated DC voltage	100 V <sub>DC</sub> ; 160 V <sub>DC</sub> ; 250 V <sub>DC</sub> ; 400 V <sub>DC</sub> ; 630 V <sub>DC</sub>
Rated AC voltage	63 V <sub>AC</sub> ; 100 V <sub>AC</sub> ; 160 V <sub>AC</sub> ; 200 V <sub>AC</sub>
Rated peak-to-peak voltage	180 V; 280 V; 450 V; 560 V
Rated temperature	85 $^{\circ}$ C
Performance grade	Grade 1 (long life)
Stability grade	Grade 2

#### Note

- For more detailed data and test requirements contact: [dc-film@vishay.com](mailto:dc-film@vishay.com)



**COMPOSITION OF CATALOG NUMBER**



TYPE	PACKAGING	LEAD CONFIGURATION	PREFERRED TYPES					
			C-TOL.	100 V	160 V	250 V	400 V	630 V
380	Ammopack	H = 18.5 mm; P <sub>0</sub> = 12.7 mm	± 10 %	25	35	45	55	65
TYPE	PACKAGING	LEAD CONFIGURATION	ON REQUEST					
380	Ammopack	H = 18.5 mm; P <sub>0</sub> = 12.7 mm	± 5 %	26	36	46	56	66
	Loose in box	Lead length 4.0 mm + 1.0 mm / - 0.5 mm	± 10 %	21	31	41	51	61
			± 5 %	22	32	42	52	62



SPECIFIC REFERENCE DATA - 100 V <sub>DC</sub>		
DESCRIPTION	VALUE	
Tangent of loss angle:	at 10 kHz	at 100 kHz
0.018 μF ≤ C ≤ 0.027 μF	≤ 10 x 10 <sup>-4</sup>	≤ 15 x 10 <sup>-4</sup>
0.027 μF < C ≤ 0.075 μF	≤ 10 x 10 <sup>-4</sup>	≤ 20 x 10 <sup>-4</sup>
0.075 μF < C ≤ 0.1 μF	≤ 10 x 10 <sup>-4</sup>	≤ 25 x 10 <sup>-4</sup>
Rated voltage pulse slope (dU/dt) <sub>R</sub> at 100 V (DC)	80 V/μs	
R between leads for C ≤ 1.0 μF at 100 V; 1 min	> 100 000 MΩ	
R between interconnected leads and case; 100 V; 1 min	> 100 000 MΩ	
Withstanding (DC) voltage (cut off current 10 mA) <sup>(1)</sup> ; rise time 1000 V/s	160 V; 1 min	
Withstanding (DC) voltage between leads and case	2840 V; 1 min	

**Note**

<sup>(1)</sup> See "Voltage Proof Test for Metalized Film Capacitors": [www.vishay.com/doc?28169](http://www.vishay.com/doc?28169)

ELECTRICAL DATA AND ORDERING CODE						
U <sub>RDC</sub> (V)	CAP. (μF)	DIMENSIONS w x h x l (mm)	MASS <sup>(2)</sup> (g)	CATALOG NUMBER BFC2 380 ..... AND PACKAGING		
				AMMOPACK <sup>(1)</sup>		LOOSE IN BOX
				H = 18.5 mm, P <sub>0</sub> = 12.7 mm		I <sub>t</sub> = 4.0 mm + 1.0 mm / - 0.5 mm
				C-TOL. = ± 10 %	SPQ	SPQ
LAST 5 DIGITS OF CATALOG NUMBER						
PITCH = 5.0 mm ± 0.3 mm; d <sub>t</sub> = 0.50 mm ± 0.05 mm; U <sub>RAC</sub> = 63 V; U <sub>p-p</sub> = 180 V						
100	0.018	3.5 x 8.0 x 7.2	0.30	25183	1500	2000
	0.020			25203		
	0.022			25223		
	0.024			25243		
	0.027			25273		
	0.030			25303		
	0.033			25333		
	0.036			25363		
	0.039	25393	1000			
	0.043	25433				
	0.047	25473				
	0.051	25513				
	0.056	4.5 x 9.0 x 7.2	0.42	25563	750	
	0.062			25623		
	0.068			25683		
	0.075			25753		
0.082	6.0 x 11.0 x 7.2	0.64	25823			
0.091			25913			
0.100			25104			

**Notes**

- <sup>(1)</sup> H = in-tape height; P<sub>0</sub> = sprocket hole distance; for detailed specifications refer to packaging information  
<sup>(2)</sup> Weight for short lead product only  
 • SPQ = Standard Packing Quantity



SPECIFIC REFERENCE DATA - 160 V <sub>DC</sub>		
DESCRIPTION	VALUE	
Tangent of loss angle:	at 10 kHz	at 100 kHz
0.013 μF ≤ C ≤ 0.027 μF	≤ 10 × 10 <sup>-4</sup>	≤ 15 × 10 <sup>-4</sup>
0.027 μF < C ≤ 0.068 μF	≤ 10 × 10 <sup>-4</sup>	≤ 20 × 10 <sup>-4</sup>
Rated voltage pulse slope (dU/dt) <sub>R</sub> at 160 V (DC)	80 V/μs	
R between leads for C ≤ 1.0 μF at 100 V; 1 min	> 100 000 MΩ	
R between interconnected leads and case; 100 V; 1 min	> 100 000 MΩ	
Withstanding (DC) voltage (cut off current 10 mA) <sup>(1)</sup> ; rise time 1000 V/s	256 V; 1 min	
Withstanding (DC) voltage between leads and case	2840 V; 1 min	

**Note**

<sup>(1)</sup> See "Voltage Proof Test for Metalized Film Capacitors": [www.vishay.com/doc?28169](http://www.vishay.com/doc?28169)

ELECTRICAL DATA AND ORDERING CODE						
U <sub>RDC</sub> (V)	CAP. (μF)	DIMENSIONS w x h x l (mm)	MASS <sup>(2)</sup> (g)	CATALOG NUMBER BFC2 380 ..... AND PACKAGING		
				AMMOPACK <sup>(1)</sup>		LOOSE IN BOX
				H = 18.5 mm, P <sub>0</sub> = 12.7 mm		l <sub>t</sub> = 4.0 mm + 1.0 mm / - 0.5 mm
				C-TOL. = ± 10 %	SPQ	SPQ
				LAST 5 DIGITS OF CATALOG NUMBER		
PITCH = 5.0 mm ± 0.3 mm; d <sub>t</sub> = 0.50 mm ± 0.05 mm; U <sub>RAC</sub> = 100 V; U <sub>p-p</sub> = 280 V						
160	0.013	3.5 x 8.0 x 7.2	0.30	35133	1500	2000
	0.015			35153		
	0.016			35163		
	0.018			35183		
	0.020			35203		
	0.022			35223		
	0.024			35243	1000	
	0.027			35273		
	0.030			35303		
	0.033			35333		
	0.036	35363				
	0.039	35393	750			
	0.043	35433				
	0.047	35473				
	0.051	4.5 x 9.0 x 7.2	0.42	35513	750	
	0.056			35563		
0.062	35623					
0.068	35683					

**Notes**

<sup>(1)</sup> H = in-tape height; P<sub>0</sub> = sprocket hole distance; for detailed specifications refer to packaging information

<sup>(2)</sup> Weight for short lead product only

- SPQ = Standard Packing Quantity



SPECIFIC REFERENCE DATA - 250 V <sub>DC</sub>		
DESCRIPTION	VALUE	
Tangent of loss angle: 0.0091 μF ≤ C ≤ 0.027 μF 0.027 μF < C ≤ 0.043 μF	at 10 kHz	at 100 kHz
	≤ 10 × 10 <sup>-4</sup>	≤ 15 × 10 <sup>-4</sup>
	≤ 10 × 10 <sup>-4</sup>	≤ 20 × 10 <sup>-4</sup>
Rated voltage pulse slope (dU/dt) <sub>R</sub> at 250 V (DC)	90 V/μs	
R between leads for C ≤ 1.0 μF at 100 V; 1 min	> 100 000 MΩ	
R between interconnected leads and case; 100 V; 1 min	> 100 000 MΩ	
Withstanding (DC) voltage (cut off current 10 mA) <sup>(1)</sup> ; rise time 100 V/s	400 V; 1 min	
Withstanding (DC) voltage between leads and case	2840 V; 1 min	

**Note**

<sup>(1)</sup> See "Voltage Proof Test for Metalized Film Capacitors": [www.vishay.com/doc?28169](http://www.vishay.com/doc?28169)

ELECTRICAL DATA AND ORDERING CODE						
U <sub>RDC</sub> (V)	CAP. (μF)	DIMENSIONS w x h x l (mm)	MASS <sup>(2)</sup> (g)	CATALOG NUMBER BFC2 380 ..... AND PACKAGING		
				AMMOPACK <sup>(1)</sup>		LOOSE IN BOX
				H = 18.5 mm, P <sub>0</sub> = 12.7 mm		l <sub>t</sub> = 4.0 mm + 1.0 mm / - 0.5 mm
				C-TOL. = ± 10 %	SPQ	SPQ
				LAST 5 DIGITS OF CATALOG NUMBER		
PITCH = 5.0 mm ± 0.3 mm; d <sub>t</sub> = 0.50 mm ± 0.05 mm; U <sub>RAC</sub> = 160 V; U <sub>p-p</sub> = 450 V						
250	0.0091	3.5 x 8.0 x 7.2	0.30	45912	1500	2000
	0.010			45103		
	0.011			45113		
	0.012			45123		
	0.013			45133		
	0.015			45153		
	0.016			45163	1000	2000
	0.018			45183		
	0.020			45203		
	0.022			45223		
	0.024			45243		
	0.027			45273		
	0.030	45303	750	2000		
	0.033	45333				
	0.036	45363				
	0.039	45393				
	0.043	45433				
					4.5 x 9.0 x 7.2	0.42

**Notes**

<sup>(1)</sup> H = in-tape height; P<sub>0</sub> = sprocket hole distance; for detailed specifications refer to packaging information

<sup>(2)</sup> Weight for short lead product only

- SPQ = Standard Packing Quantity



SPECIFIC REFERENCE DATA - 400 V <sub>DC</sub>		
DESCRIPTION	VALUE	
Tangent of loss angle:	at 10 kHz	at 100 kHz
0.0043 $\mu\text{F} \leq C \leq 0.0091 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 15 \times 10^{-4}$
0.0091 $\mu\text{F} < C \leq 0.02 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 20 \times 10^{-4}$
Rated voltage pulse slope (dU/dt) <sub>R</sub> at 400 V (DC)	100 V/ $\mu\text{s}$	
R between leads for C $\leq 1.0 \mu\text{F}$ at 100 V; 1 min	> 100 000 M $\Omega$	
R between interconnected leads and case; 100 V; 1 min	> 100 000 M $\Omega$	
Withstanding (DC) voltage (cut off current 10 mA) <sup>(1)</sup> ; rise time 100 V/s	640 V; 1 min	
Withstanding (DC) voltage between leads and case	2840 V; 1 min	

**Note**

<sup>(1)</sup> See "Voltage Proof Test for Metalized Film Capacitors": [www.vishay.com/doc?28169](http://www.vishay.com/doc?28169)

ELECTRICAL DATA AND ORDERING CODE						
U <sub>RDC</sub> (V)	CAP. ( $\mu\text{F}$ )	DIMENSIONS w x h x l (mm)	MASS <sup>(2)</sup> (g)	CATALOG NUMBER BFC2 380 ..... AND PACKAGING		
				AMMOPACK <sup>(1)</sup>		LOOSE IN BOX
				H = 18.5 mm, P <sub>0</sub> = 12.7 mm		l <sub>t</sub> = 4.0 mm + 1.0 mm / - 0.5 mm
				C-TOL. = $\pm 10 \%$	SPQ	SPQ
				LAST 5 DIGITS OF CATALOG NUMBER		
PITCH = 5.0 mm $\pm$ 0.3 mm; d <sub>t</sub> = 0.50 mm $\pm$ 0.05 mm; U <sub>RAC</sub> = 200 V; U <sub>p-p</sub> = 560 V						
400	0.0043	3.5 x 8.0 x 7.2	0.30	55432	1500	2000
	0.0047			55472		
	0.0051			55512		
	0.0056			55562		
	0.0062			55622		
	0.0068			55682		
	0.0075			55752		
	0.0082			55822		
	0.0091	55912	1000			
	0.010	55103				
	0.011	55113				
	0.012	55123				
	0.013	4.5 x 9.0 x 7.2	0.42	55133	750	
	0.015			55153		
	0.016			55163		
	0.018			55183		
0.020	6.0 x 11.0 x 7.2	0.64	55203			

**Notes**

<sup>(1)</sup> H = in-tape height; P<sub>0</sub> = sprocket hole distance; for detailed specifications refer to packaging information

<sup>(2)</sup> Weight for short lead product only

- SPQ = Standard Packing Quantity



SPECIFIC REFERENCE DATA - 630 V <sub>DC</sub>		
DESCRIPTION	VALUE	
Tangent of loss angle:	at 10 kHz	at 100 kHz
0.0015 $\mu\text{F} \leq C \leq 0.0091 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 15 \times 10^{-4}$
0.0091 $\mu\text{F} < C \leq 0.01 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 15 \times 10^{-4}$
Rated voltage pulse slope (dU/dt) <sub>R</sub> at 630 V (DC)	120 V/ $\mu\text{s}$	
R between leads for C $\leq 1.0 \mu\text{F}$ at 500 V; 1 min	> 100 000 M $\Omega$	
R between interconnected leads and case; 500 V; 1 min	> 100 000 M $\Omega$	
Withstanding (DC) voltage (cut off current 10 mA) <sup>(1)</sup> ; rise time 1000 V/s	880 V; 1 min	
Withstanding (DC) voltage between leads and case	2840 V; 1 min	

**Note**

<sup>(1)</sup> See "Voltage Proof Test for Metalized Film Capacitors": [www.vishay.com/doc?228169](http://www.vishay.com/doc?228169)

ELECTRICAL DATA AND ORDERING CODE						
U <sub>RDC</sub> (V)	CAP. ( $\mu\text{F}$ )	DIMENSIONS w x h x l (mm)	MASS <sup>(2)</sup> (g)	CATALOG NUMBER BFC2 380 ..... AND PACKAGING		
				AMMOPACK <sup>(1)</sup>		LOOSE IN BOX
				H = 18.5 mm, P <sub>0</sub> = 12.7 mm		I <sub>t</sub> = 4.0 mm + 1.0 mm / - 0.5 mm
				C-TOL. = $\pm 10 \%$	SPQ	SPQ
LAST 5 DIGITS OF CATALOG NUMBER						
PITCH = 5.0 $\pm$ 0.3 mm; d <sub>t</sub> = 0.50 $\pm$ 0.05 mm; U <sub>RAC</sub> = 200 V; U <sub>p-p</sub> = 560 V						
630	0.0022	3.5 x 8.0 x 7.2	0.30	65222	1500	2000
	0.0024			65242		
	0.0027			65272		
	0.0030			65302		
	0.0033			65332		
	0.0036			65362		
	0.0039			65392		
	0.0043			65432		
	0.0047	65472				
	0.0051	65512				
	0.0056	65562				
	0.0062	65622	750			
	0.0068	65682				
	0.0075	65752				
	0.0082	65822				
	0.0091	65912				
0.010	65103					
		4.5 x 9.0 x 7.2	0.42			

**Notes**

<sup>(1)</sup> H = in-tape height; P<sub>0</sub> = sprocket hole distance; for detailed specifications refer to packaging information

<sup>(2)</sup> Weight for short lead product only

- SPQ = Standard Packing Quantity



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