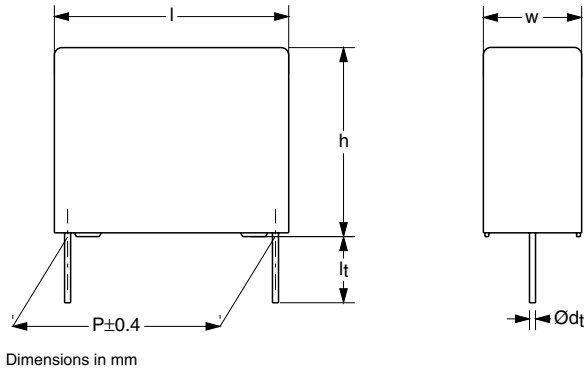


AC and Pulse Metallized Polypropylene Film Capacitors MKP Radial Potted Type



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. Their small dimensions make them ideal for circuits with high packaging density.

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

ENCAPSULATION

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

CONSTRUCTION

Wound mono construction

LEADS

Tinned wire

CAPACITANCE RANGE (E24 SERIES)

0.01 to 6.2 μ F

FEATURES

10 to 27.5 mm pitch. Supplied loose in box and taped on reel

Lead (Pb)-free product

RoHS-compliant product

CAPACITANCE TOLERANCE

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

RATED (DC) VOLTAGE

160 V; 250 V; 400 V; 630 V

RATED (AC) VOLTAGE

100 V; 160 V; 200 V; 220 V

RATED PEAK-TO-PEAK VOLTAGE

280 V; 450 V; 560 V; 620 V

CLIMATIC CATEGORY

55/085/56

RATED TEMPERATURE

85 °C

MAXIMUM APPLICATION TEMPERATURE

85 °C

REFERENCE SPECIFICATIONS

IEC 60384-17

PERFORMANCE GRADE

Grade 1 (long life)

STABILITY GRADE

100 V, 160 V versions: grade 2

250 V to 630 V versions; pitch 5 to 15 mm: grade 2

250 V to 630 V versions; pitch 22.5 and 27.5 mm: grade 1

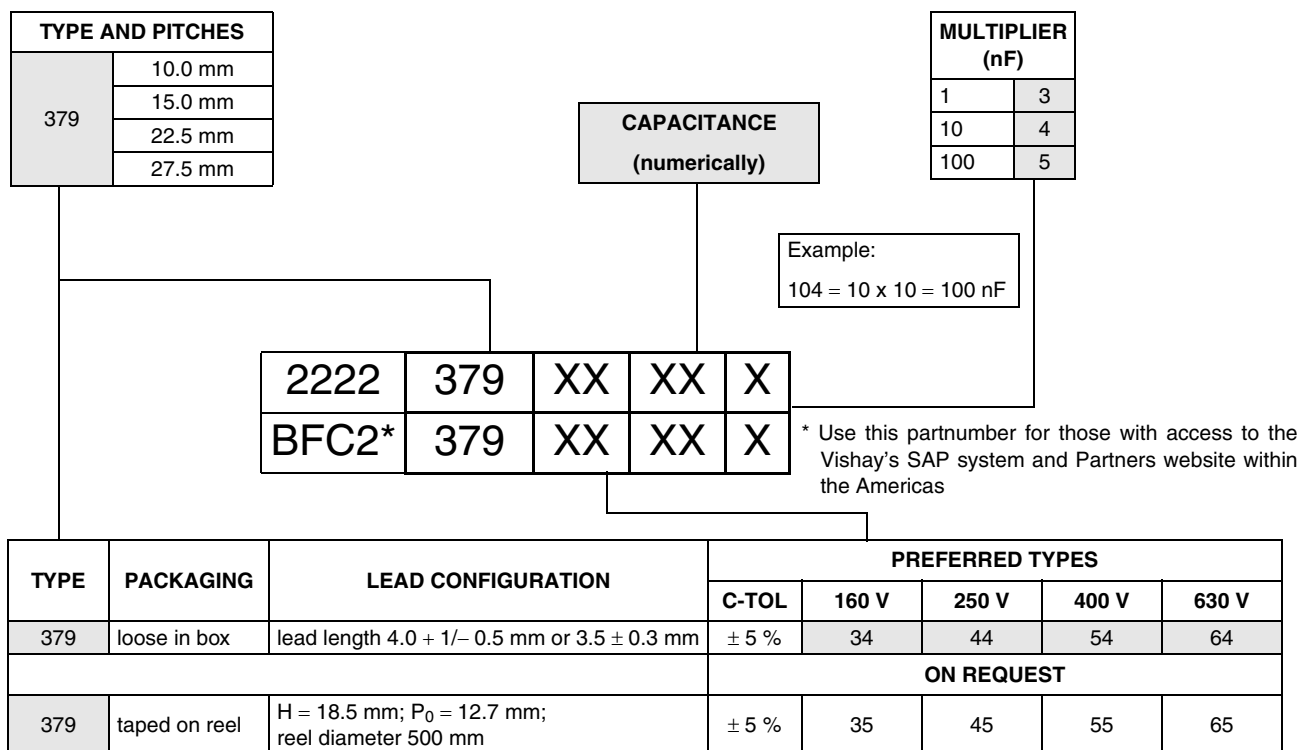
DETAIL SPECIFICATION

For more detailed data and test requirements see "Type detail specification HQN-384-17/103"



RoHS
COMPLIANT

COMPOSITION OF CATALOG NUMBER





SPECIFIC REFERENCE DATA (160 VDC)

DESCRIPTION	VALUE	
	at 10 kHz	at 100 kHz
Tangent of loss angle:		
$C \leq 0.075 \mu\text{F}$	$\leq 5 \times 10^{-4}$	$\leq 20 \times 10^{-4}$
$0.075 \mu\text{F} < C \leq 0.11 \mu\text{F}$	$\leq 5 \times 10^{-4}$	$\leq 25 \times 10^{-4}$
$0.11 \mu\text{F} < C \leq 0.16 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 30 \times 10^{-4}$
$0.18 \mu\text{F} < C \leq 0.3 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 35 \times 10^{-4}$
$0.3 \mu\text{F} < C \leq 0.39 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 40 \times 10^{-4}$
$0.39 \mu\text{F} < C \leq 0.56 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 45 \times 10^{-4}$
$0.56 \mu\text{F} < C \leq 0.68 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 50 \times 10^{-4}$
$0.68 \mu\text{F} < C \leq 0.82 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 55 \times 10^{-4}$
$0.82 \mu\text{F} < C \leq 0.91 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 60 \times 10^{-4}$
$0.91 \mu\text{F} < C \leq 1.0 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 65 \times 10^{-4}$
$1.0 \mu\text{F} < C \leq 1.2 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 70 \times 10^{-4}$
$1.2 \mu\text{F} < C \leq 1.3 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 75 \times 10^{-4}$
$1.3 \mu\text{F} < C \leq 1.5 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 80 \times 10^{-4}$
$1.5 \mu\text{F} < C \leq 1.6 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 85 \times 10^{-4}$
$1.6 \mu\text{F} < C \leq 1.8 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 90 \times 10^{-4}$
$1.8 \mu\text{F} < C \leq 2.0 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 95 \times 10^{-4}$
$2.0 \mu\text{F} < C \leq 2.2 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 100 \times 10^{-4}$
$2.2 \mu\text{F} < C \leq 2.4 \mu\text{F}$	$\leq 15 \times 10^{-4}$	$\leq 105 \times 10^{-4}$
$2.4 \mu\text{F} < C \leq 2.7 \mu\text{F}$	$\leq 15 \times 10^{-4}$	$\leq 110 \times 10^{-4}$
$2.7 \mu\text{F} < C \leq 3.0 \mu\text{F}$	$\leq 15 \times 10^{-4}$	$\leq 115 \times 10^{-4}$
$3.0 \mu\text{F} < C \leq 3.3 \mu\text{F}$	$\leq 15 \times 10^{-4}$	$\leq 125 \times 10^{-4}$
$3.3 \mu\text{F} < C \leq 3.6 \mu\text{F}$	$\leq 15 \times 10^{-4}$	$\leq 130 \times 10^{-4}$
$3.6 \mu\text{F} < C \leq 3.9 \mu\text{F}$	$\leq 15 \times 10^{-4}$	$\leq 135 \times 10^{-4}$
$3.9 \mu\text{F} < C \leq 4.3 \mu\text{F}$	$\leq 15 \times 10^{-4}$	$\leq 145 \times 10^{-4}$
$4.3 \mu\text{F} < C \leq 4.7 \mu\text{F}$	$\leq 20 \times 10^{-4}$	$\leq 155 \times 10^{-4}$
$4.7 \mu\text{F} < C \leq 5.1 \mu\text{F}$	$\leq 20 \times 10^{-4}$	$\leq 160 \times 10^{-4}$
$5.1 \mu\text{F} < C \leq 5.6 \mu\text{F}$	$\leq 20 \times 10^{-4}$	$\leq 175 \times 10^{-4}$
$5.6 \mu\text{F} < C \leq 6.2 \mu\text{F}$	$\leq 20 \times 10^{-4}$	$\leq 185 \times 10^{-4}$
Rated voltage pulse slope (dU/dt) _R :		
l = 12.5 mm	60 V/μs	
l = 17.5 mm	50 V/μs	
l = 26.0 mm	25 V/μs	
l = 31.0 mm	15 V/μs (b < 15 mm)	
l = 31.0 mm	7.5 V/μs (b ≥ 15 mm)	
R between leads for C ≤ 1.0 μF at 100 V; 1 minute	> 100000 MΩ	
RC between leads, for C > 1 μF at 100 V; 1 minute	> 100000 s	
R between interconnected leads and case; 100 V; 1 minute	> 100000 MΩ	
Withstanding (DC) voltage (cut off current 10 mA); rise time 100 V/s	256 V; 1 minute	
Withstanding (DC)voltage between leads and case	2840 V; 1 minute	

$U_{Rdc} = 160 \text{ V}; U_{Rac} = 100 \text{ V}; U_{p-p} = 280 \text{ V}$

C (μF)	DIMENSIONS W × H × L (mm)	MASS (g)	CATALOG NUMBER 2222 379 AND PACKAGING		
			LOOSE IN BOX		REEL
			l _t = 4.0 + 1.0/- 0.5 mm ⁽¹⁾		SPQ
			C-tol = ± 5 %	SPQ	
			last 5 digits of catalog number		
Pitch = 10.0 ± 0.4 mm; d _t = 0.60 ± 0.06 mm					
0.075 0.082 0.091 0.1	4.0 × 10.0 × 12.5	0.6	34753 34823 34913 34104	1000	1400
0.11 0.12 0.13 0.15	5.0 × 11.0 × 12.5	0.85	34114 34124 34134 34154	1000	1100
0.16	6.0 × 12.0 × 12.5	1.0	34164	1000	900
Pitch = 15.0 ± 0.4 mm; d _t = 0.60 ± 0.06 mm					
0.18 0.2 0.22 0.24 0.27	5.0 × 11.0 × 17.5	1.2	34184 34204 34224 34244 34274	1000	1100
0.3 0.33 0.36 0.39	6.0 × 12.0 × 17.5	1.4	34304 34334 34364 34394	1000	900
Pitch = 15.0 ± 0.4 mm; d _t = 0.80 ± 0.08 mm					
0.43 0.47 0.51	7.0 × 13.5 × 17.5	1.9	34434 34474 34514	1000	800
0.56 0.62 0.68 0.75	8.5 × 15.0 × 17.5	2.6	34564 34624 34684 34754	1000	650
Pitch = 22.5 ± 0.4 mm; d _t = 0.80 ± 0.08 mm					
0.82 0.91	7.0 × 16.5 × 26.0	3.2	34824 34914	200	550
1 1.1 1.2 1.3	8.5 × 18.0 × 26.0	4.4	34105 34115 34125 34135	200	450
1.5 1.6 1.8	10.0 × 19.5 × 26.0	5.5	34155 34165 34185	200	350
Pitch = 27.5 ± 0.4 mm; d _t = 0.80 ± 0.08 mm					
2 2.2 2.4	11.0 × 21.0 × 31.0	7.8	34205 34225 34245	100	
2.7 3 3.3	13.0 × 23.0 × 31.0	10.4	34275 34305 34335	100	



C (μF)	DIMENSIONS W × H × L (mm)	MASS (g)	CATALOG NUMBER 2222 379 AND PACKAGING		
			LOOSE IN BOX		REEL
			l _t = 4.0 + 1.0/– 0.5 mm ⁽¹⁾		SPQ
			C-tol = ± 5 %	SPQ	
			last 5 digits of catalog number		
3.6 3.9 4.3	15.0 × 25.0 × 31.0	12.8	34365 34395 34435	100	
4.7 5.1 5.6 6.2	18.0 × 28.0 × 31.0	17.2	34475 34515 34565 34625	100	

Note

1. $l_t = 4.0 + 1/-0.5 \text{ mm}$ for pitch = 10 mm and $3.5 \pm 0.3 \text{ mm}$ for pitch = 15 mm; 22.5 mm and 27.5 mm.

SPECIFIC REFERENCE DATA (250 VDC)

DESCRIPTION	VALUE	
Tangent of loss angle:	at 10 kHz	at 100 kHz
0.047 $\mu\text{F} < C \leq 0.075 \mu\text{F}$	$\leq 5 \times 10^{-4}$	$\leq 20 \times 10^{-4}$
0.075 $\mu\text{F} < C \leq 0.111 \mu\text{F}$	$\leq 5 \times 10^{-4}$	$\leq 25 \times 10^{-4}$
0.11 $\mu\text{F} < C \leq 0.18 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 30 \times 10^{-4}$
0.18 $\mu\text{F} < C \leq 0.3 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 35 \times 10^{-4}$
0.3 $\mu\text{F} < C \leq 0.39 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 40 \times 10^{-4}$
0.39 $\mu\text{F} < C \leq 0.56 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 40 \times 10^{-4}$
0.56 $\mu\text{F} < C \leq 0.68 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 50 \times 10^{-4}$
0.68 $\mu\text{F} < C \leq 0.82 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 55 \times 10^{-4}$
0.82 $\mu\text{F} < C \leq 0.91 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 60 \times 10^{-4}$
0.91 $\mu\text{F} < C \leq 1.0 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 65 \times 10^{-4}$
1.0 $\mu\text{F} < C \leq 1.2 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 70 \times 10^{-4}$
1.2 $\mu\text{F} < C \leq 1.3 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 75 \times 10^{-4}$
1.3 $\mu\text{F} < C \leq 1.5 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 80 \times 10^{-4}$
1.5 $\mu\text{F} < C \leq 1.6 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 85 \times 10^{-4}$
1.6 $\mu\text{F} < C \leq 1.8 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 90 \times 10^{-4}$
1.8 $\mu\text{F} < C \leq 2.0 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 95 \times 10^{-4}$
2.0 $\mu\text{F} < C \leq 2.2 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 100 \times 10^{-4}$
2.2 $\mu\text{F} < C \leq 2.4 \mu\text{F}$	$\leq 15 \times 10^{-4}$	$\leq 105 \times 10^{-4}$
2.4 $\mu\text{F} < C \leq 2.7 \mu\text{F}$	$\leq 15 \times 10^{-4}$	$\leq 110 \times 10^{-4}$
2.7 $\mu\text{F} < C \leq 3.0 \mu\text{F}$	$\leq 15 \times 10^{-4}$	$\leq 115 \times 10^{-4}$
3.0 $\mu\text{F} < C \leq 3.3 \mu\text{F}$	$\leq 15 \times 10^{-4}$	$\leq 125 \times 10^{-4}$
3.3 $\mu\text{F} < C \leq 3.6 \mu\text{F}$	$\leq 15 \times 10^{-4}$	$\leq 130 \times 10^{-4}$
3.6 $\mu\text{F} < C \leq 3.9 \mu\text{F}$	$\leq 15 \times 10^{-4}$	$\leq 135 \times 10^{-4}$
Rated voltage pulse slope (dU/dt) _R :		
l = 12.5 mm	70 V/ μs	
l = 17.5 mm	60 V/ μs	
l = 26.0 mm	30 V/ μs	
l = 31.0 mm	20 V/ μs (b < 15 mm)	
l = 31.0 mm	10 V/ μs (b $\geq$ 15 mm)	
R between leads for C $\leq$ 1.0 μF at 100 V; 1 minute	> 100000 M Ω	
RC between leads, for C > 1 μF at 100 V; 1 minute	> 100000 s	
R between interconnected leads and case; 100 V; 1 minute	> 100000 M Ω	
Withstanding (DC) voltage (cut off current 10 mA); rise time 100 V/s	400 V; 1 minute	
Withstanding (DC)voltage between leads and case	2840 V; 1 minute	

$U_{Rdc} = 250 \text{ V}$; $U_{Rac} = 160 \text{ V}$; $U_{p-p} = 450 \text{ V}$

C (μF)	DIMENSIONS W × H × L (mm)	MASS (g)	CATALOG NUMBER 2222 379 AND PACKAGING		
			LOOSE IN BOX		REEL
			l _t = 4.0 + 1.0/– 0.5 mm ⁽¹⁾		SPQ
			C-tol = ± 5 %	SPQ	
			LAST 5 DIGITS OF CATALOG NUMBER		
Pitch = 10.0 ± 0.4 mm; d _t = 0.60 ± 0.06 mm					
0.047 0.051 0.056 0.062 0.068	4.0 × 10.0 × 12.5	0.6	44473 44513 44563 44623 44683	1000	1400
0.075 0.082 0.091	5.0 × 11.0 × 12.5	0.85	44753 44823 44913	1000	1100
Pitch = 15.0 ± 0.4 mm; d _t = 0.60 ± 0.06 mm					
0.1 0.11 0.12 0.13 0.15 0.16	5.0 × 11.0 × 17.5	1.2	44104 44114 44124 44134 44154 44164	1000	1100
0.18 0.2 0.22 0.24	6.0 × 12.0 × 17.5	1.4	44184 44204 44224 44244	1000	900
Pitch = 15.0 ± 0.4 mm; d _t = 0.80 ± 0.08 mm					
0.27 0.3 0.33	7.0 × 13.5 × 17.5	1.9	44274 44304 44334	1000	800
0.36 0.39 0.43 0.47	8.5 × 15.0 × 17.5	2.6	44364 44394 44434 44474	1000	650
Pitch = 22.5 ± 0.4 mm; d _t = 0.80 ± 0.08 mm					
0.51 0.56 0.62	7.0 × 16.5 × 26.0	3.2	44514 44564 44624	200	550
0.68 0.75 0.82 0.91	8.5 × 18.0 × 26.0	4.4	44684 44754 44824 44914	200	450
1 1.1 1.2	10.0 × 19.5 × 26.0	5.5	44105 44115 44125	200	350
Pitch = 27.5 ± 0.4 mm; d _t = 0.80 ± 0.08 mm					
1.3 1.5 1.6	11.0 × 21.0 × 31.0	7.8	44135 44155 44165	100	
1.8 2 2.2	13.0 × 23.0 × 31.0	10.4	44185 44205 44225	100	



C (μF)	DIMENSIONS W × H × L (mm)	MASS (g)	CATALOG NUMBER 2222 379 AND PACKAGING		
			LOOSE IN BOX		REEL
			l _t = 4.0 + 1.0/– 0.5 mm ⁽¹⁾		SPQ
			C-tol = ± 5 %	SPQ	
			LAST 5 DIGITS OF CATALOG NUMBER		
2.4	15.0 × 25.0 × 31.0	12.8	44245	100	
2.7			44275		
3	18.0 × 28.0 × 31.0	17.2	44305	100	
3.3			44335		
3.6			44365		
3.9			44395		

Note

1. $l_t = 4.0 + 1/-0.5 \text{ mm}$ for pitch = 10 mm and $3.5 \pm 0.3 \text{ mm}$ for pitch = 15 mm; 22.5 mm and 27.5 mm.

SPECIFIC REFERENCE DATA (400 VDC)

DESCRIPTION	VALUE	
Tangent of loss angle:	at 10 kHz	at 100 kHz
$0.022 \mu\text{F} < C \leq 0.027 \mu\text{F}$	$\leq 5 \times 10^{-4}$	$\leq 15 \times 10^{-4}$
$0.027 \mu\text{F} < C \leq 0.075 \mu\text{F}$	$\leq 5 \times 10^{-4}$	$\leq 20 \times 10^{-4}$
$0.075 \mu\text{F} < C \leq 0.11 \mu\text{F}$	$\leq 5 \times 10^{-4}$	$\leq 25 \times 10^{-4}$
$0.11 \mu\text{F} < C \leq 0.18 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 30 \times 10^{-4}$
$0.18 \mu\text{F} < C \leq 0.3 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 35 \times 10^{-4}$
$0.3 \mu\text{F} < C \leq 0.39 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 40 \times 10^{-4}$
$0.39 \mu\text{F} < C \leq 0.56 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 45 \times 10^{-4}$
$0.56 \mu\text{F} < C \leq 0.68 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 50 \times 10^{-4}$
$0.68 \mu\text{F} < C \leq 0.82 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 55 \times 10^{-4}$
$0.82 \mu\text{F} < C \leq 0.91 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 60 \times 10^{-4}$
$0.91 \mu\text{F} < C \leq 1.0 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 65 \times 10^{-4}$
$1.0 \mu\text{F} < C \leq 1.2 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 70 \times 10^{-4}$
$1.2 \mu\text{F} < C \leq 1.3 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 75 \times 10^{-4}$
$1.3 \mu\text{F} < C \leq 1.5 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 80 \times 10^{-4}$
$1.5 \mu\text{F} < C \leq 1.6 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 85 \times 10^{-4}$
$1.6 \mu\text{F} < C \leq 1.8 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 90 \times 10^{-4}$
$1.8 \mu\text{F} < C \leq 2.0 \mu\text{F}$	$\leq 10 \times 10^{-4}$	$\leq 95 \times 10^{-4}$
Rated voltage pulse slope $(dU/dt)_R$:	80 V/ μs 70 V/ μs 35 V/ μs 25 V/ μs (b < 15 mm) 13 V/ μs (b $\geq$ 15 mm)	
R between leads for $C \leq 1.0 \mu\text{F}$ at 100 V; 1 minute	> 100000 M Ω	
RC between leads, for $C > 1 \mu\text{F}$ at 100 V; 1 minute	> 100000 s	
R between interconnected leads and case; 100 V; 1 minute	> 100000 M Ω	
Withstanding (DC) voltage (cut off current 10 mA); rise time 100 V/s	640 V; 1 minute	
Withstanding (DC)voltage between leads and case	2840 V; 1 minute	

$U_{Rdc} = 400 \text{ V}; U_{Rac} = 200 \text{ V}; U_{p-p} = 560 \text{ V}$

C (μF)	DIMENSIONS W × H × L (mm)	MASS (g)	CATALOG NUMBER 2222 379 AND PACKAGING		
			LOOSE IN BOX		REEL
			l _t = 4.0 + 1.0/– 0.5 mm ⁽¹⁾		SPQ
			C-tol = ± 5 %	SPQ	
			LAST 5 DIGITS OF CATALOG NUMBER		
Pitch = 10.0 ± 0.4 mm; d _t = 0.60 ± 0.06 mm					
0.022	4.0 × 10.0 × 12.5	0.6	54223	1000	1400
0.024			54243		
0.027			54273		
0.03			54303		
0.033			54333		
0.036	5.0 × 11.0 × 12.5	0.85	54363	1000	1100
0.039			54393		
0.043			54433		
Pitch = 15.0 ± 0.4 mm; d _t = 0.60 ± 0.06 mm					
0.047	5.0 × 11.0 × 17.5	1.2	54473	1000	1100
0.051			54513		
0.056			54563		
0.062			54623		
0.068			54683		
0.075			54753		
0.082			54823		
0.091	6.0 × 12.0 × 17.5	1.4	54913	1000	900
0.1			54104		
0.11			54114		
0.12			54124		
Pitch = 15.0 ± 0.4 mm; d _t = 0.80 ± 0.08 mm					
0.13	7.0 × 13.5 × 17.5	1.9	54134	1000	800
0.15			54154		
0.16			54164		
0.18	8.5 × 15.0 × 17.5	2.6	54184	1000	650
0.2			54204		
0.22			54224		
Pitch = 22.5 ± 0.4 mm; d _t = 0.80 ± 0.08 mm					
0.24	7.0 × 16.5 × 26.0	3.2	54244	200	550
0.27			54274		
0.3			54304		
0.33	8.5 × 18.0 × 26.0	4.4	54334	200	450
0.36			54364		
0.39			54394		
0.43			54434		
0.47			54474		
0.51	10.0 × 19.5 × 26.0	5.5	54514	200	350
0.56			54564		
0.62			54624		
Pitch = 27.5 ± 0.4 mm; d _t = 0.80 ± 0.08 mm					
0.68	11.0 × 21.0 × 31.0	7.8	54684	100	
0.75			54754		
0.82			54824		



C (μF)	DIMENSIONS W × H × L (mm)	MASS (g)	CATALOG NUMBER 2222 379 AND PACKAGING		
			LOOSE IN BOX		REEL
			l _t = 4.0 + 1.0/- 0.5 mm ⁽¹⁾		SPQ
			C-tol = ± 5 %	SPQ	
			LAST 5 DIGITS OF CATALOG NUMBER		
0.91 1 1.1	13.0 × 23.0 × 31.0	10.4	54914 54105 54115	100	
1.2 1.3 1.5	15.0 × 25.0 × 31.0	12.8	54125 54135 54155	100	
1.6 1.8 2	18.0 × 28.0 × 31.0	17.2	54165 54185 54205	100	

Note

1. $l_t = 4.0 + 1/-0.5 \text{ mm}$ for pitch = 10 mm and $3.5 \pm 0.3 \text{ mm}$ for pitch = 15 mm; 22.5 mm and 27.5 mm.

SPECIFIC REFERENCE DATA (630 VDC)

DESCRIPTION	VALUE	
Tangent of loss angle:	at 10 kHz	at 100 kHz
0.01 μ F $\leq C \leq 0.027 \mu$ F	$\leq 5 \times 10^{-4}$	$\leq 15 \times 10^{-4}$
0.027 μ F $< C \leq 0.075 \mu$ F	$\leq 5 \times 10^{-4}$	$\leq 20 \times 10^{-4}$
0.075 μ F $< C \leq 0.11 \mu$ F	$\leq 5 \times 10^{-4}$	$\leq 25 \times 10^{-4}$
0.11 μ F $< C \leq 0.18 \mu$ F	$\leq 10 \times 10^{-4}$	$\leq 30 \times 10^{-4}$
0.18 μ F $< C \leq 0.3 \mu$ F	$\leq 10 \times 10^{-4}$	$\leq 35 \times 10^{-4}$
0.3 μ F $< C \leq 0.39 \mu$ F	$\leq 10 \times 10^{-4}$	$\leq 40 \times 10^{-4}$
0.39 μ F $< C \leq 0.56 \mu$ F	$\leq 10 \times 10^{-4}$	$\leq 45 \times 10^{-4}$
0.56 μ F $< C \leq 0.68 \mu$ F	$\leq 10 \times 10^{-4}$	$\leq 50 \times 10^{-4}$
0.68 μ F $< C \leq 0.82 \mu$ F	$\leq 10 \times 10^{-4}$	$\leq 55 \times 10^{-4}$
0.82 μ F $< C \leq 1.0 \mu$ F	$\leq 10 \times 10^{-4}$	$\leq 60 \times 10^{-4}$
Rated voltage pulse slope (dU/dt) _R	100 V/ μ s 90 V/ μ s 45 V/ μ s 30 V/ μ s (b < 15 mm) 15 V/ μ s (b $\geq$ 15 mm)	
R between leads for C $\leq 1.0 \mu$ F at 500 V; 1 minute	> 100000 M Ω	
RC between leads, for C > 1 μ F at 100 V; 1 minute	> 100000 s	
R between interconnected leads and case; 500 V; 1 minute	> 100000 M Ω	
Withstanding (DC) voltage (cut off current 10 mA); rise time 100 V/s	960 V; 1 minute	
Withstanding (DC)voltage between leads and case	2840 V; 1 minute	

$U_{Rdc} = 630 \text{ V}; U_{Rac} = 220 \text{ V}; U_{p-p} = 620 \text{ V}$

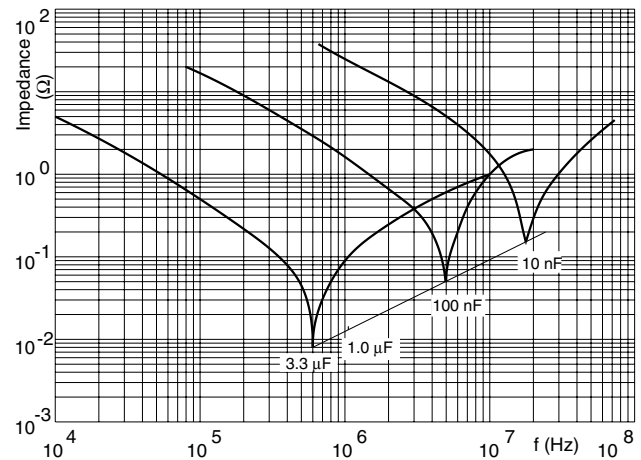
C (μF)	DIMENSIONS W × H × L (mm)	MASS (g)	CATALOG NUMBER 2222 379 AND PACKAGING		
			LOOSE IN BOX		REEL
			I _t = 4.0 + 1.0/– 0.5 mm ⁽²⁾		SPQ
			C-tol = ± 5 %	SPQ	
			last 5 digits of catalog number		
Pitch = 10.0 ± 0.4 mm; d _t = 0.60 ± 0.06 mm					
0.01 0.011 0.012 0.013 0.015 0.016	4.0 × 10.0 × 12.5	0.6	64103 64113 64123 64133 64153 64163	1000	1400
0.018 0.02 0.022 0.024	5.0 × 11.0 × 12.5	0.85	64183 64203 64223 64243	1000	1100
Pitch = 15.0 ± 0.4 mm; d _t = 0.60 ± 0.06 mm					
0.027 0.03 0.033 0.036 0.039	5.0 × 11.0 × 17.5	1.2	64273 64303 64333 64363 64393	1000	1100
0.043 0.047 0.051 0.056 0.062	6.0 × 12.0 × 17.5	1.4	64433 64473 64513 64563 64623	1000	900
Pitch = 15.0 ± 0.4 mm; d _t = 0.80 ± 0.08 mm					
0.068 0.075 0.082	7.0 × 13.5 × 17.5	1.9	64683 64753 64823	1000	800
0.091 0.1 0.11	8.5 × 15.0 × 17.5	2.6	64913 64104 64114	1000	650
Pitch = 22.5 ± 0.4 mm; d _t = 0.80 ± 0.08 mm					
0.12 0.13 0.15 0.16	7.0 × 16.5 × 26.0	3.2	64124 64134 64154 64164	200	550
0.18 0.2 0.22	8.5 × 18.0 × 26.0	4.4	64184 64204 64224	200	450



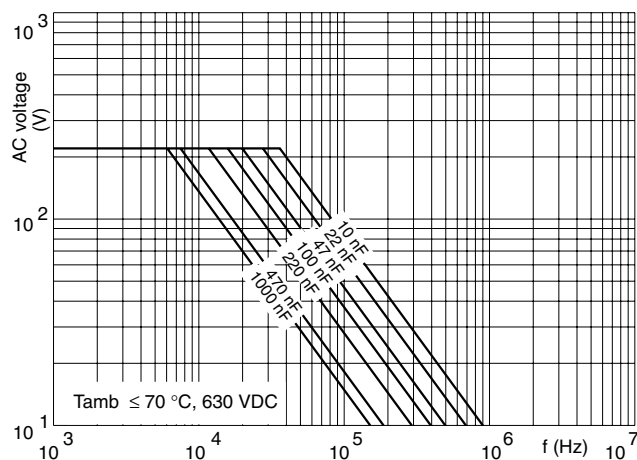
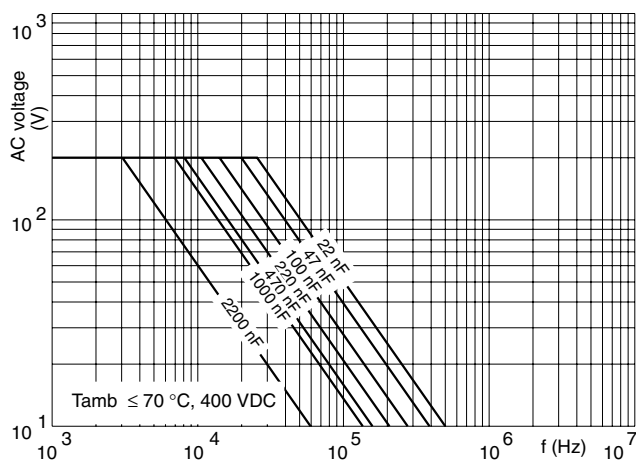
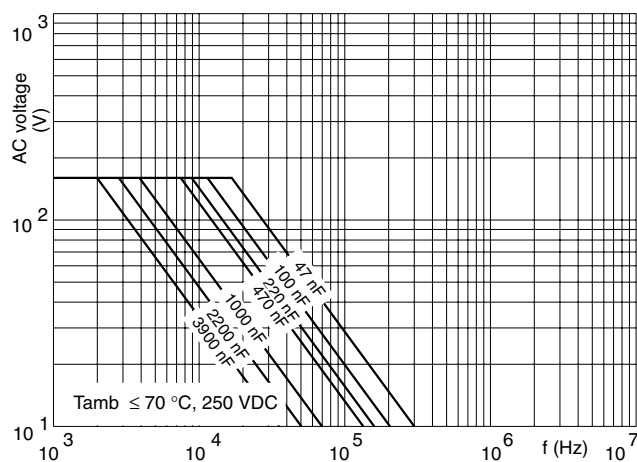
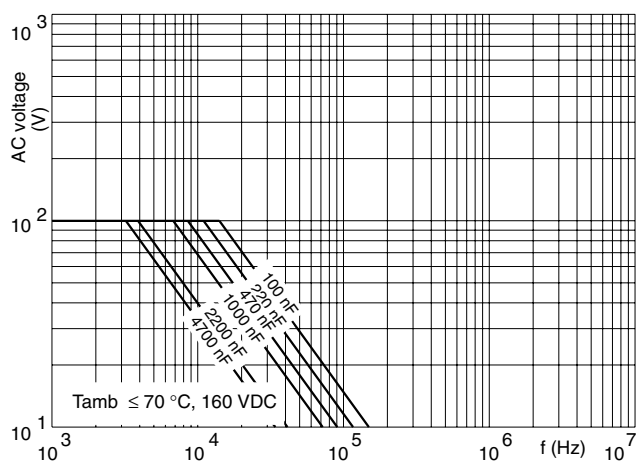
C (μF)	DIMENSIONS W × H × L (mm)	MASS (g)	CATALOG NUMBER 2222 379 AND PACKAGING		
			LOOSE IN BOX		REEL
			l _t = 4.0 + 1.0/– 0.5 mm ⁽²⁾		SPQ
			C-tol = ± 5 %	SPQ	
			last 5 digits of catalog number		
0.24 0.27 0.3	10.0 × 19.5 × 26.0	5.5	64244 64274 64304	200	350
Pitch = 27.5 ± 0.4 mm; d _t = 0.80 ± 0.08 mm					
0.33 0.36 0.39 0.43	11.0 × 21.0 × 31.0	7.8	64334 64364 64394 64434	100	
0.47 0.51 0.56	13.0 × 23.0 × 31.0	10.4	64474 64514 64564	100	
0.62 0.68 0.75	15.0 × 25.0 × 31.0	12.8	64624 64684 64754	100	
0.82 0.91 1	18.0 × 28.0 × 31.0	17.2	64824 64914 64105	100	

Note

- $U_{\text{Rac}} = 250 \text{ V}/U_{\text{p-p}} = 700 \text{ V}$ for $C > 0.11 \mu\text{F}$.
- $l_t = 4.0 + 1/-0.5 \text{ mm}$ for pitch = 10 mm and $3.5 \pm 0.3 \text{ mm}$ for pitch = 15 mm; 22.5 mm and 27.5 mm.

CAPACITANCE**IMPEDANCE**

MAXIMUM RMS VOLTAGE (SINEWAVE) AS A FUNCTION OF FREQUENCY





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