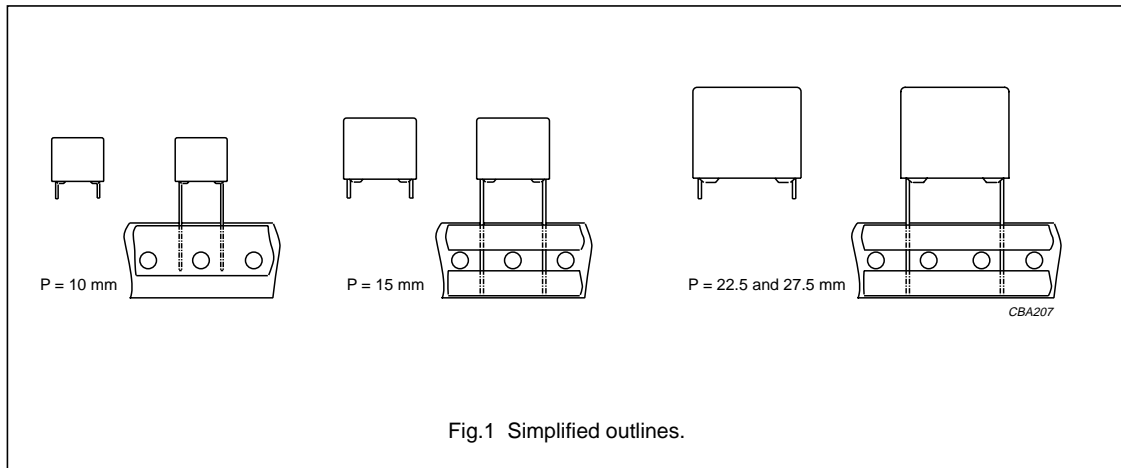


## Metallized polycarbonate film capacitors

MKC 344

## MKC RADIAL POTTED CAPACITORS

PITCH 10/15/22.5/27.5 mm



## FEATURES

- 10 to 27.5 mm lead pitch
- Small dimensions for high density packaging
- Supplied loose in box and on tape.

## APPLICATIONS

- In electronic circuits for blocking and coupling, bypass and energy reservoir applications.

## DETAIL SPECIFICATION

For more detailed data and test requirements see "Type detail specification HQN-384-06/101".

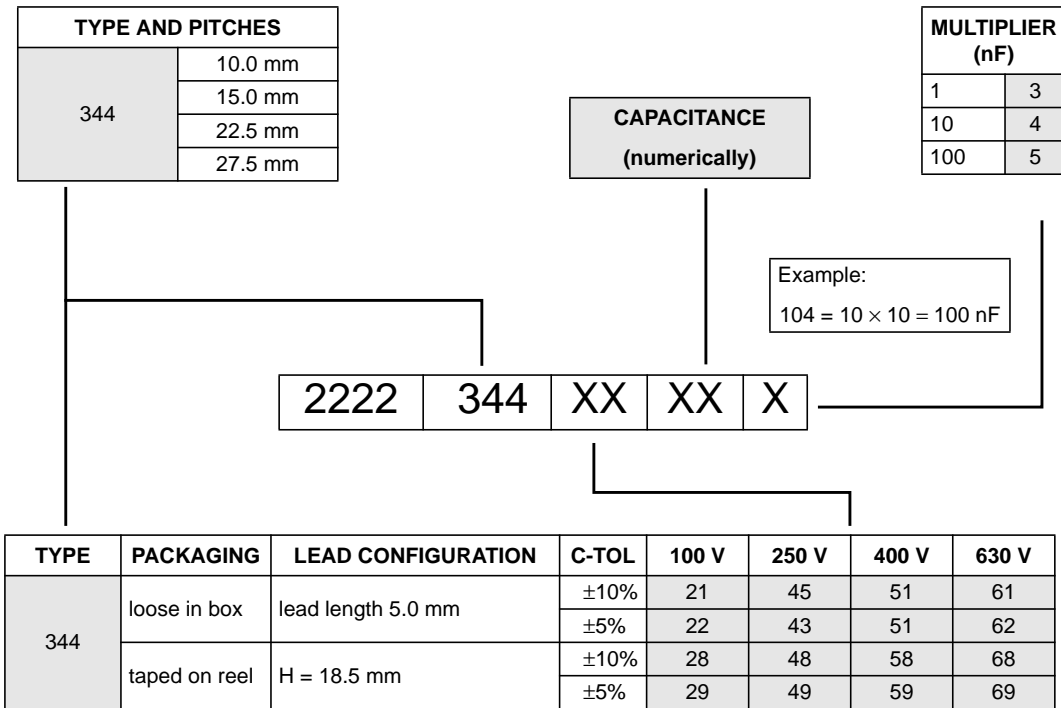
## QUICK REFERENCE DATA

DESCRIPTION	VALUE
Capacitance range (E12 series)	0.01 to 6.8 $\mu$ F
Capacitance tolerance	$\pm 10\%$ ; $\pm 5\%$
Rated (DC) voltage	100 V; 250 V; 400 V; 630 V
Climatic category	55/100/56
Rated temperature	85 °C
Maximum application temperature	100 °C
Tangent of loss angle at 10 kHz	$20 \times 10^{-4}$
Reference specification	IEC 60384-6
Performance grade	grade 1 (long life)

Metallized polycarbonate film capacitors

MKC 344

COMPOSITION OF CATALOGUE NUMBER

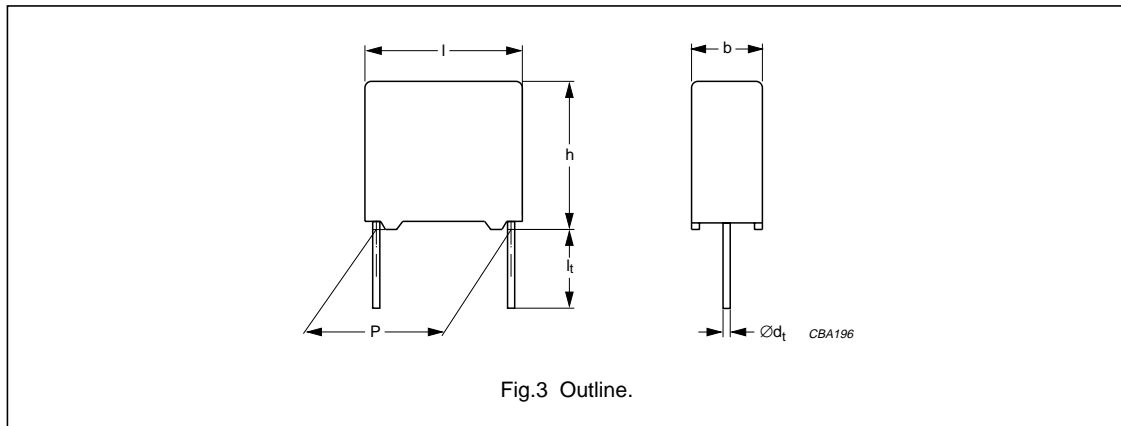


## Metallized polycarbonate film capacitors

MKC 344

## MKC 344 GENERAL DATA

PITCH 10/15/22.5/27.5 mm



## Specific reference data for the 100 V DC capacitors

DESCRIPTION	VALUE		
	at 1 kHz	at 10 kHz	at 100 kHz
Tangent of loss angle: C ≤ 0.1 μF 0.1 μF < C ≤ 1.0 μF C > 1.0 μF	≤30 × 10 <sup>-4</sup> ≤30 × 10 <sup>-4</sup> ≤30 × 10 <sup>-4</sup>	≤60 × 10 <sup>-4</sup> ≤60 × 10 <sup>-4</sup> ≤75 × 10 <sup>-4</sup>	≤130 × 10 <sup>-4</sup> – –
Rated voltage pulse slope (dU/dt) <sub>R</sub> at 100 V (DC): P = 10.0 mm P = 15.0 mm P = 22.5 mm P = 27.5 mm	60 V/μs 26 V/μs 12 V/μs 9 V/μs		
R between leads, for C ≤ 0.33 μF at 100 V; 1 minute	>15000 MΩ		
RC between leads, for C > 0.33 μF at 100 V; 1 minute	>5000 s		
R between interconnecting leads and case; 100 V; 1 minute	>30000 MΩ		
Withstanding (DC) voltage (cut off current 10 mA); rise time 100 V/s	160 V; 1 minute		
Withstanding (DC) voltage between leads and case	200 V; 1 minute		

## Available 100 V DC versions

PACKAGING <sup>(1)</sup>	DIMENSIONS	C-tol	FIRST 9 DIGITS OF CATALOGUE NUMBER	ORDERING
Loose in box	l <sub>t</sub> = 5.0 ±1.0 mm	±10%	2222 344 21...	preferred
		±5%	2222 344 22...	on request
Taped on reel	H = 18.5 mm; note 2	±10%	2222 344 28...	on request
		±5%	2222 344 29...	on request

## Notes

- For SPQ refer to this handbook, chapter "Packaging information"; taped on reel pitch = 27.5 mm is not available.
- H = in-tape height; for detailed specifications refer to this handbook, chapter "Packaging information".

## Metallized polycarbonate film capacitors

MKC 344

 $U_{Rdc} = 100 \text{ V}$ ;  $U_{Rac} = 63 \text{ V}$ 

C ( $\mu\text{F}$ )	DIMENSIONS $b \times h \times l$ (mm)	MASS (g)	CATALOGUE NUMBER <sup>(1)</sup>
			LOOSE IN BOX; $l_t = 5.0 \pm 1.0 \text{ mm}$
			C-tol = $\pm 10\%$
<b>Pitch = <math>10.0 \pm 0.4 \text{ mm}</math>; <math>d_t = 0.60 \pm 0.06 \text{ mm}</math></b>			
0.082	4.0 × 10.0 × 12.5	0.7	2222 344 21823
0.1			2222 344 21104
0.12			2222 344 21124
0.15			2222 344 21154
0.18			2222 344 21184
0.22	5.0 × 11.0 × 12.5	0.9	2222 344 21224
<b>Pitch = <math>15.0 \pm 0.4 \text{ mm}</math>; <math>d_t = 0.80 \pm 0.08 \text{ mm}</math></b>			
0.27	5.0 × 11.0 × 17.5	1.1	2222 344 21274
0.33			2222 344 21334
0.39			2222 344 21394
0.47			2222 344 21474
0.56	6.0 × 12.0 × 17.5	1.4	2222 344 21564
0.68			2222 344 21684
0.82	7.0 × 13.5 × 17.5	1.8	2222 344 21824
1			2222 344 21105
<b>Pitch = <math>22.5 \pm 0.4 \text{ mm}</math>; <math>d_t = 0.80 \pm 0.08 \text{ mm}</math></b>			
1.2	6.0 × 15.5 × 26.0	2.8	2222 344 21125
1.5			2222 344 21155
1.8	7.0 × 16.5 × 26.0	4.3	2222 344 21185
2.2	8.5 × 18.0 × 26.0	4.3	2222 344 21225
2.7		5.1	2222 344 21275
3.3	10.0 × 19.5 × 26.0	5.1	2222 344 21335
<b>Pitch = <math>27.5 \pm 0.4 \text{ mm}</math>; <math>d_t = 0.80 \pm 0.08 \text{ mm}</math></b>			
3.9	11.0 × 21.0 × 31.0	7.4	2222 344 21395
4.7			2222 344 21475
5.6	13.0 × 23.0 × 31.0	10.2	2222 344 21565
6.8			2222 344 21685

**Note**

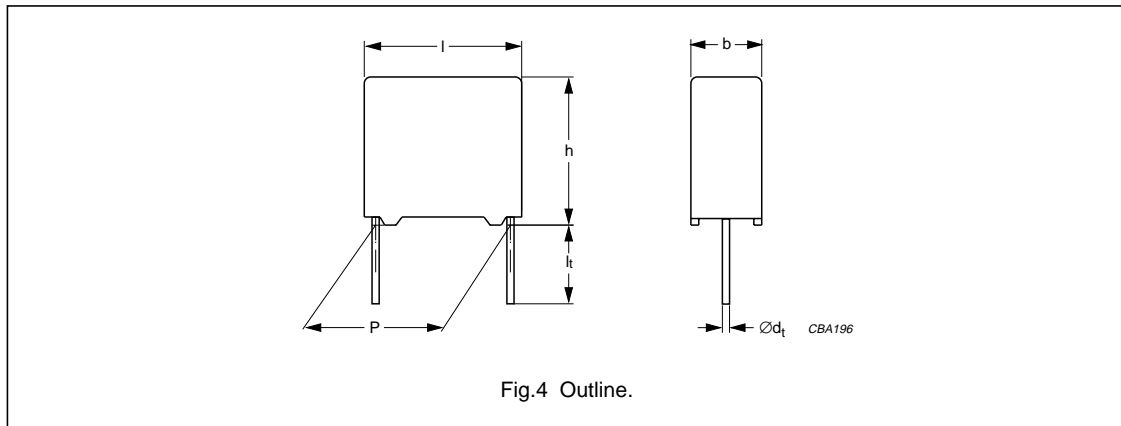
1. The shading indicates preferred types.

## Metallized polycarbonate film capacitors

MKC 344

## MKC 344 GENERAL DATA

PITCH 10/15/22.5/27.5 mm



## Specific reference data for the 250 V DC capacitors

DESCRIPTION	VALUE		
	at 1 kHz	at 10 kHz	at 100 kHz
Tangent of loss angle: C ≤ 0.1 μF 0.1 μF < C ≤ 1.0 μF C > 1.0 μF	≤30 × 10 <sup>-4</sup> ≤30 × 10 <sup>-4</sup> ≤30 × 10 <sup>-4</sup>	≤60 × 10 <sup>-4</sup> ≤60 × 10 <sup>-4</sup> ≤75 × 10 <sup>-4</sup>	≤130 × 10 <sup>-4</sup> – –
Rated voltage pulse slope (dU/dt) <sub>R</sub> at 250 V (DC): P = 10.0 mm P = 15.0 mm P = 22.5 mm P = 27.5 mm	90 V/μs 36 V/μs 16 V/μs 14 V/μs		
R between leads, for C ≤ 0.33 μF at 100 V; 1 minute	>30000 MΩ		
RC between leads, for C > 0.33 μF at 100 V; 1 minute	>10000 s		
R between interconnecting leads and case; 100 V; 1 minute	>30000 MΩ		
Withstanding (DC) voltage (cut off current 10 mA); rise time 100 V/s	400 V; 1 minute		
Withstanding (DC) voltage between leads and case	500 V; 1 minute		

## Available 250 V DC versions

PACKAGING <sup>(1)</sup>	DIMENSIONS	C-tol	FIRST 9 DIGITS OF CATALOGUE NUMBER	ORDERING
Loose in box	l <sub>t</sub> = 5.0 ±1.0 mm	±10%	2222 344 45...	preferred
		±5%	2222 344 43...	on request
Taped on reel	H = 18.5 mm; note 2	±10%	2222 344 48...	on request
		±5%	2222 344 49...	on request

## Notes

- For SPQ refer to this handbook, chapter "Packaging information"; taped on reel pitch = 27.5 mm is not available.
- H = in-tape height; for detailed specifications refer to this handbook, chapter "Packaging information".

## Metallized polycarbonate film capacitors

MKC 344

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

C ( $\mu\text{F}$ )	DIMENSIONS $b \times h \times l$ (mm)	MASS (g)	CATALOGUE NUMBER <sup>(1)</sup>
			LOOSE IN BOX; $l_t = 5.0 \pm 1.0 \text{ mm}$
			C-tol = $\pm 10\%$
<b>Pitch = <math>10.0 \pm 0.4 \text{ mm}</math>; <math>d_t = 0.60 \pm 0.06 \text{ mm}</math></b>			
0.039	4.0 × 10.0 × 12.5	0.7	2222 344 45393
0.047			2222 344 45473
0.056			2222 344 45563
0.068			2222 344 45683
<b>Pitch = <math>15.0 \pm 0.4 \text{ mm}</math>; <math>d_t = 0.80 \pm 0.08 \text{ mm}</math></b>			
0.082	5.0 × 11.0 × 17.5	1.1	2222 344 45823
0.1			2222 344 45104
0.12			2222 344 45124
0.15			2222 344 45154
0.18	6.0 × 12.0 × 17.5	1.4	2222 344 45184
0.22			2222 344 45224
0.27	7.0 × 13.5 × 17.5	1.8	2222 344 45274
0.33			2222 344 45334
<b>Pitch = <math>22.5 \pm 0.4 \text{ mm}</math>; <math>d_t = 0.80 \pm 0.08 \text{ mm}</math></b>			
0.39	6.0 × 15.5 × 26.0	2.8	2222 344 45394
0.47			2222 344 45474
0.56	7.0 × 16.5 × 26.0	3.5	2222 344 45564
0.68			2222 344 45684
0.82	8.5 × 18.0 × 26.0	5.1	2222 344 45824
1			2222 344 45105
<b>Pitch = <math>27.5 \pm 0.4 \text{ mm}</math>; <math>d_t = 0.80 \pm 0.08 \text{ mm}</math></b>			
1.2	9.0 × 19.0 × 31.0	7.4	2222 344 45125
1.5	11.0 × 21.0 × 31.0	7.4	2222 344 45155
1.8		10.2	2222 344 45185
2.2		10.2	2222 344 45225

**Note**

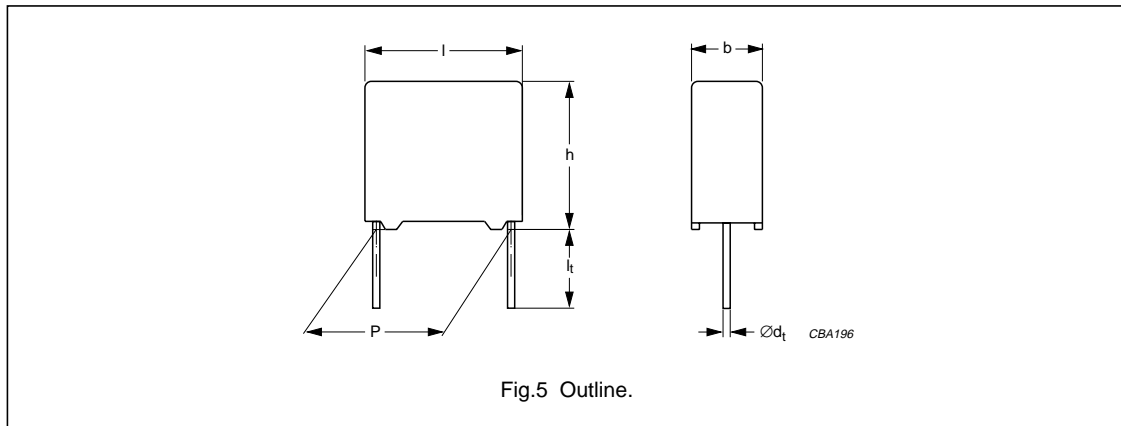
1. The shading indicates preferred types.

## Metallized polycarbonate film capacitors

MKC 344

## MKC 344 GENERAL DATA

PITCH 10/15/22.5/27.5 mm



## Specific reference data for the 400 V DC capacitors

DESCRIPTION	VALUE		
	at 1 kHz	at 10 kHz	at 100 kHz
Tangent of loss angle: C ≤ 0.1 μF 0.1 μF < C ≤ 1.0 μF	≤30 × 10 <sup>-4</sup> ≤30 × 10 <sup>-4</sup>	≤60 × 10 <sup>-4</sup> ≤60 × 10 <sup>-4</sup>	≤130 × 10 <sup>-4</sup> -
Rated voltage pulse slope (dU/dt) <sub>R</sub> at 400 V (DC): P = 10.0 mm P = 15.0 mm P = 22.5 mm P = 27.5 mm	140 V/μs 60 V/μs 26 V/μs 22 V/μs		
R between leads, for C ≤ 0.33 μF at 100 V; 1 minute	>30000 MΩ		
RC between leads, for C > 0.33 μF at 100 V; 1 minute	>10000 s		
R between interconnecting leads and case; 100 V; 1 minute	>30000 MΩ		
Withstanding (DC) voltage (cut off current 10 mA); rise time 100 V/s	640 V; 1 minute		
Withstanding (DC) voltage between leads and case	800 V; 1 minute		

## Available 400 V DC versions

PACKAGING <sup>(1)</sup>	DIMENSIONS	C-tol	FIRST 9 DIGITS OF CATALOGUE NUMBER	ORDERING
Loose in box	l <sub>t</sub> = 5.0 ±1.0 mm	±10%	2222 344 51...	preferred
		±5%	2222 344 52...	on request
Taped on reel	H = 18.5 mm; note 2	±10%	2222 344 58...	on request
		±5%	2222 344 59...	on request

## Notes

- For SPQ refer to this handbook, chapter "Packaging information"; taped on reel pitch = 27.5 mm is not available.
- H = in-tape height; for detailed specifications refer to this handbook, chapter "Packaging information".

## Metallized polycarbonate film capacitors

MKC 344

 $U_{Rdc} = 400 \text{ V}$ ;  $U_{Rac} = 220 \text{ V}$ 

C ( $\mu\text{F}$ )	DIMENSIONS $b \times h \times l$ (mm)	MASS (g)	CATALOGUE NUMBER <sup>(1)</sup>
			LOOSE IN BOX; $l_t = 5.0 \pm 1.0 \text{ mm}$
			C-tol = $\pm 10\%$
<b>Pitch = <math>10.0 \pm 0.4 \text{ mm}</math>; <math>d_t = 0.60 \pm 0.06 \text{ mm}</math></b>			
0.01	4.0 × 10.0 × 12.5	0.7	2222 344 51103
0.012			2222 344 51123
0.015			2222 344 51153
0.018			2222 344 51183
0.022			2222 344 51223
0.027			2222 344 51273
0.033			2222 344 51333
<b>Pitch = <math>15.0 \pm 0.4 \text{ mm}</math>; <math>d_t = 0.80 \pm 0.08 \text{ mm}</math></b>			
0.039	5.0 × 11.0 × 17.5	1.1	2222 344 51393
0.047			2222 344 51473
0.056			2222 344 51563
0.068			2222 344 51683
0.082	6.0 × 12.0 × 17.5	1.4	2222 344 51823
0.1			2222 344 51104
0.12	7.0 × 13.5 × 17.5	1.8	2222 344 51124
0.15			2222 344 51154
<b>Pitch = <math>22.5 \pm 0.4 \text{ mm}</math>; <math>d_t = 0.80 \pm 0.08 \text{ mm}</math></b>			
0.18	6.0 × 15.5 × 26.0	2.8	2222 344 51184
0.22			2222 344 51224
0.27	7.0 × 16.5 × 26.0	3.5	2222 344 51274
0.33	8.5 × 18.0 × 26.0	3.5	2222 344 51334
0.39		5.1	2222 344 51394
0.47	10.0 × 19.5 × 26.0	5.1	2222 344 51474
<b>Pitch = <math>27.5 \pm 0.4 \text{ mm}</math>; <math>d_t = 0.80 \pm 0.08 \text{ mm}</math></b>			
0.56	11.0 × 21.0 × 31.0	7.4	2222 344 51564
0.68			2222 344 51684
0.82	13.0 × 23.0 × 31.0	10.2	2222 344 51824
1			2222 344 51105

**Note**

1. The shading indicates preferred types.

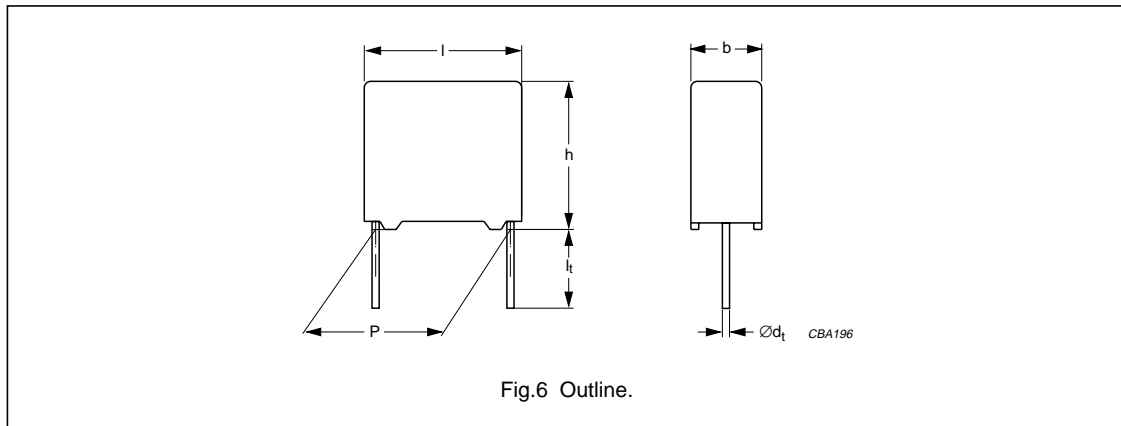


## Metallized polycarbonate film capacitors

MKC 344

## MKC 344 GENERAL DATA

PITCH 10/15/22.5/27.5 mm



## Specific reference data for the 630 V DC capacitors

DESCRIPTION	VALUE		
	at 1 kHz	at 10 kHz	at 100 kHz
Tangent of loss angle: C ≤ 0.1 μF 0.1 μF < C ≤ 1.0 μF	≤30 × 10 <sup>-4</sup> ≤30 × 10 <sup>-4</sup>	≤60 × 10 <sup>-4</sup> ≤60 × 10 <sup>-4</sup>	≤130 × 10 <sup>-4</sup> -
Rated voltage pulse slope (dU/dt) <sub>R</sub> at 630 V (DC): P = 10.0 mm P = 15.0 mm P = 22.5 mm P = 27.5 mm	200 V/μs 90 V/μs 36 V/μs 30 V/μs		
R between leads, for C ≤ 0.33 μF at 500 V; 1 minute	>30000 MΩ		
RC between leads, for C > 0.33 μF at 500 V; 1 minute	>10000 s		
R between interconnecting leads and case; 500 V; 1 minute	>30000 MΩ		
Withstanding (DC) voltage (cut off current 10 mA); rise time 100 V/s	1018 V; 1 minute		
Withstanding (DC) voltage between leads and case	1260 V; 1 minute		

## Available 630 V DC versions

PACKAGING <sup>(1)</sup>	DIMENSIONS	C-tol	FIRST 9 DIGITS OF CATALOGUE NUMBER	ORDERING
Loose in box	l <sub>t</sub> = 5.0 ±1.0 mm	±10%	2222 344 61...	preferred
		±5%	2222 344 62...	on request
Taped on reel	H = 18.5 mm; note 2	±10%	2222 344 68...	on request
		±5%	2222 344 69...	on request

## Notes

- For SPQ refer to this handbook, chapter "Packaging information"; taped on reel pitch = 27.5 mm is not available.
- H = in-tape height; for detailed specifications refer to this handbook, chapter "Packaging information".

## Metallized polycarbonate film capacitors

MKC 344

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

C ( $\mu\text{F}$ )	DIMENSIONS $b \times h \times l$ (mm)	MASS (g)	CATALOGUE NUMBER <sup>(1)</sup>
			LOOSE IN BOX; $l_t = 5.0 \pm 1.0 \text{ mm}$
			C-tol = $\pm 10\%$
<b>Pitch = <math>10.0 \pm 0.4 \text{ mm}</math>; <math>d_t = 0.60 \pm 0.06 \text{ mm}</math></b>			
0.01	$4.0 \times 10.0 \times 12.5$	0.7	2222 344 61103
0.012	$5.0 \times 11.0 \times 12.5$	0.9	2222 344 61123
0.015			2222 344 61153
0.018			2222 344 61183
0.022	$6.0 \times 12.0 \times 12.5$	1.0	2222 344 61223
<b>Pitch = <math>15.0 \pm 0.4 \text{ mm}</math>; <math>d_t = 0.80 \pm 0.08 \text{ mm}</math></b>			
0.027	$5.0 \times 11.0 \times 17.5$	1.4	2222 344 61273
0.033	$6.0 \times 12.0 \times 17.5$	1.4	2222 344 61333
0.039		1.8	2222 344 61393
0.047		1.8	2222 344 61473
0.056	$7.0 \times 13.5 \times 17.5$	2.6	2222 344 61563
0.068	$8.5 \times 15.0 \times 17.5$	2.6	2222 344 61683
<b>Pitch = <math>22.5 \pm 0.4 \text{ mm}</math>; <math>d_t = 0.80 \pm 0.08 \text{ mm}</math></b>			
0.082	$7.0 \times 16.5 \times 26.0$	2.8	2222 344 61823
0.1			2222 344 61104
0.12			2222 344 61124
0.15	$8.5 \times 18.0 \times 26.0$	3.5	2222 344 61154
0.18	$10.0 \times 19.5 \times 26.0$	5.1	2222 344 61184
0.22			2222 344 61224
<b>Pitch = <math>27.5 \pm 0.4 \text{ mm}</math>; <math>d_t = 0.80 \pm 0.08 \text{ mm}</math></b>			
0.27	$11.0 \times 21.0 \times 31.0$	7.4	2222 344 61274
0.33			2222 344 61334
0.39	$13.0 \times 23.0 \times 31.0$	10.2	2222 344 61394
0.47			2222 344 61474

**Note**

1. The shading indicates preferred types.