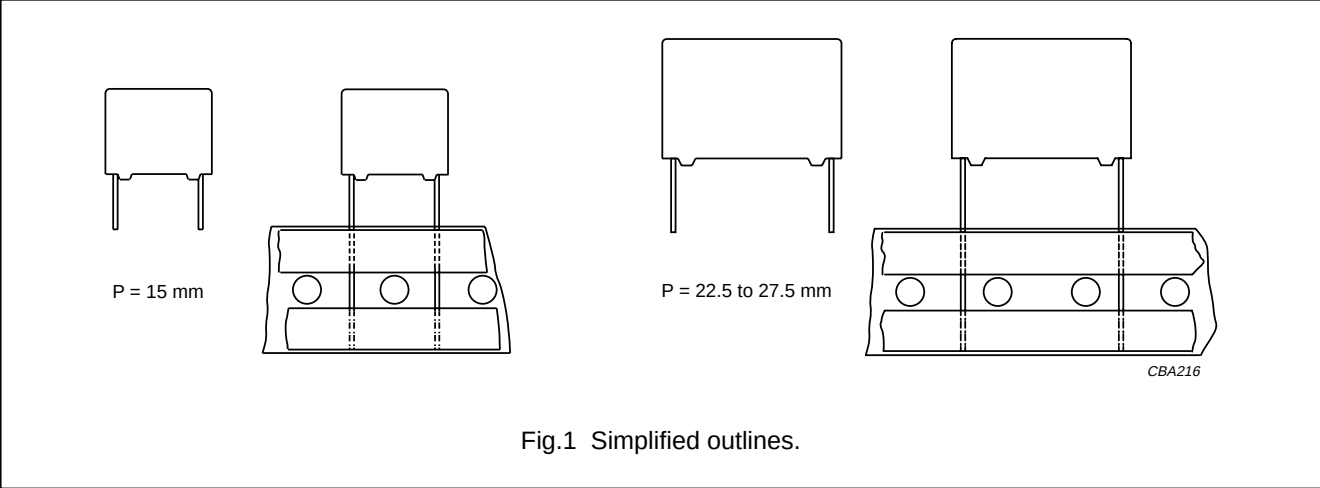


AC and pulse
metallized polypropylene film capacitors

KP/MMKP 376

KP/MMKP RADIAL POTTED TYPE

PITCH 15/22.5/27.5 mm



FEATURES

- 15 to 27.5 mm lead pitch
- Supplied loose in box and taped on reel.

APPLICATIONS

- Where high currents and steep pulses occur
- For deflection circuits in television receivers.

DETAIL SPECIFICATION

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

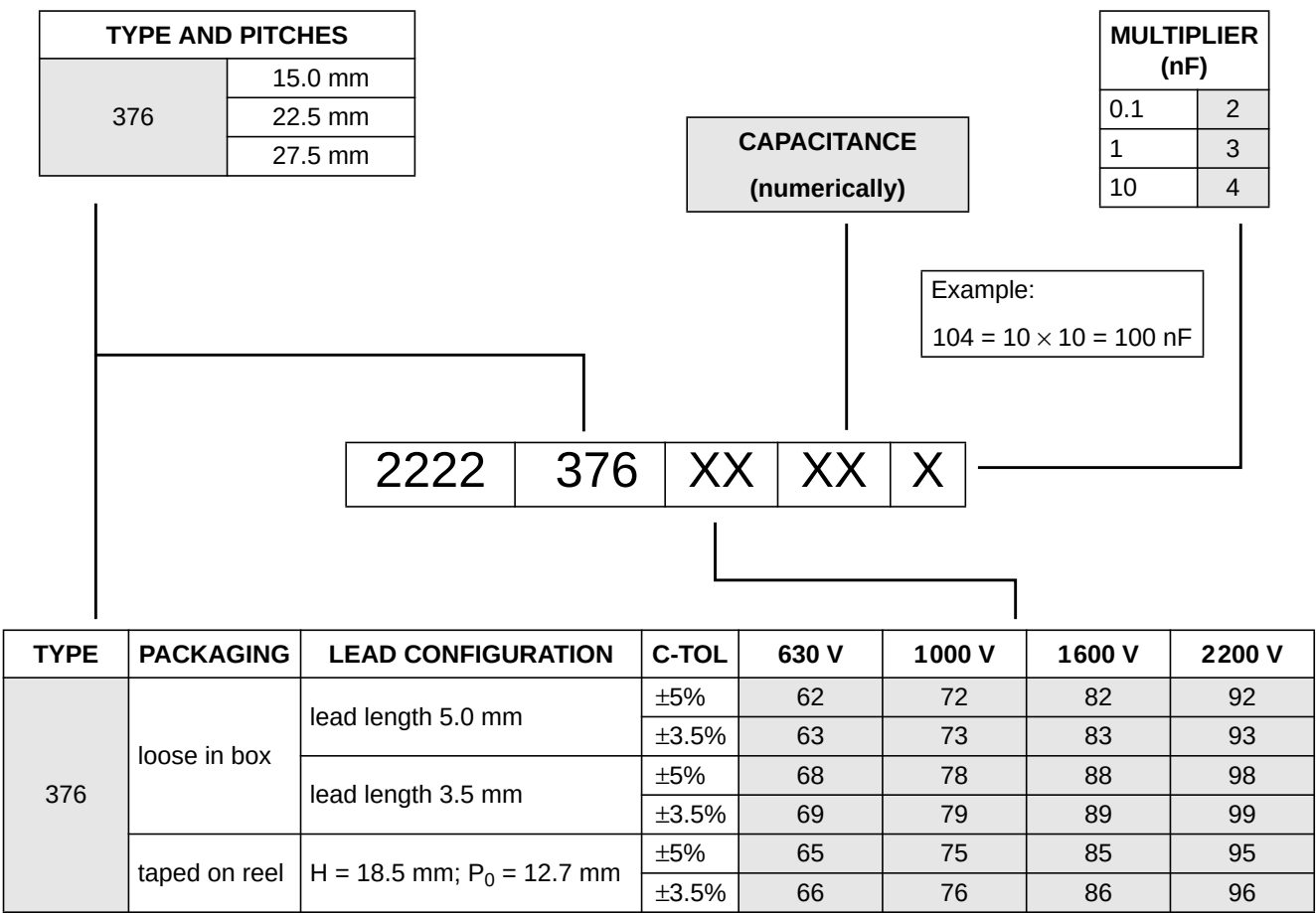
QUICK REFERENCE DATA

DESCRIPTION	VALUE
Capacitance range (E24 series)	0.001 to 0.27 μ F
Capacitance tolerance	$\pm$ 5%; $\pm$ 3.5%
Rated (DC) voltage	630 V; 1000 V; 1600 V; 2000 V
Rated (AC) voltage	300 V; 400 V; 500 V; 600 V
Rated peak-to-peak voltage	850 V; 1100 V; 1400 V; 1700 V
Climatic category	55/100/56
Maximum application temperature	100 $^{\circ}$ C
Rated temperature	85 $^{\circ}$ C
Reference specification	IEC 60384-17
Performance grade: for C > 4.7 nF for C $\leq$ 4.7 nF	grade 1 (long life) grade 2 (general purpose)
Stability grade	grade 2

AC and pulse
metallized polypropylene film capacitors

KP/MMKP 376

COMPOSITION OF CATALOGUE NUMBER

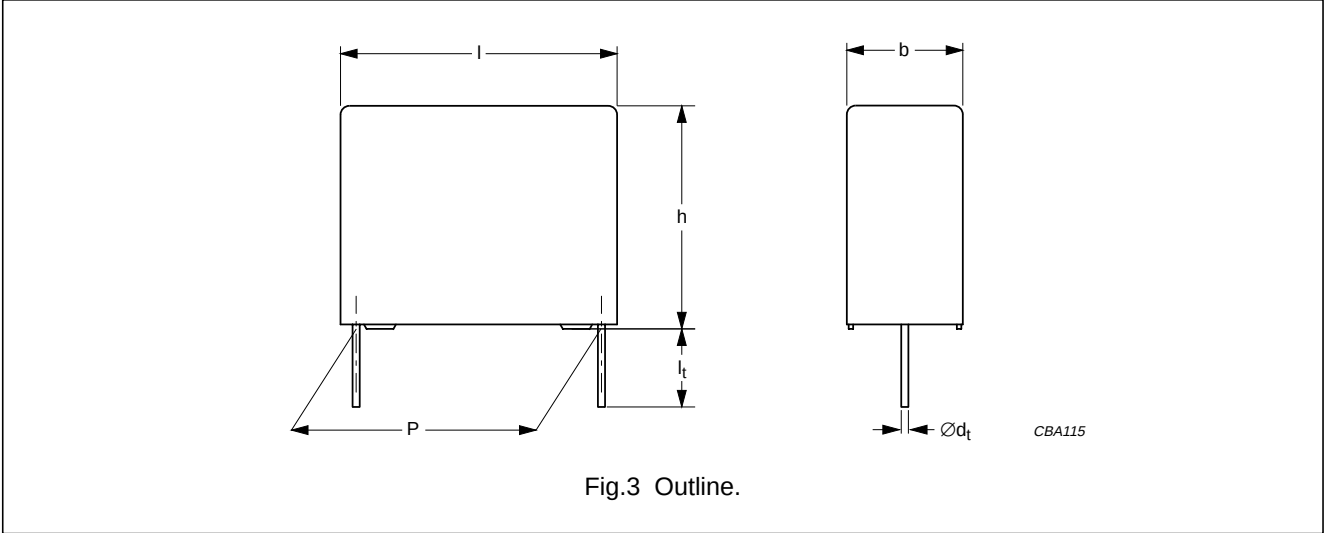


AC and pulse
metallized polypropylene film capacitors

KP/MMKP 376

KP/MMKP 376 GENERAL DATA

PITCH 15/22.5/27.5 mm



Specific reference data for the 630 V DC capacitors

DESCRIPTION	VALUE	
	at 10 kHz	at 100 kHz
Tangent of loss angle: P = 15.0 mm P = 22.5 mm P = 27.5 mm	$\leq 3 \times 10^{-4}$ $\leq 3 \times 10^{-4}$ $\leq 4 \times 10^{-4}$	$\leq 10 \times 10^{-4}$ $\leq 15 \times 10^{-4}$ $\leq 20 \times 10^{-4}$
Rated voltage pulse slope (dU/dt) _R at 630 V (DC): P = 15.0 mm P = 22.5 mm P = 27.5 mm	4000 V/μs 1400 V/μs 900 V/μs	
R between leads at 500 V; 1 minute	>100 000 MΩ	
R between interconnected leads and case; 500 V; 1 minute	>100 000 MΩ	
Ionization (AC) voltage (typical value) at 50 pC peak discharge	>400 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	

Available 630 V DC versions

PACKAGING ⁽¹⁾	DIMENSIONS	C-tol	FIRST 9 DIGITS OF CATALOGUE NUMBER	ORDERING
Loose in box	$l_t = 5.0 \pm 1.0$ mm	±5%	2222 376 62...	on request
		±3.5%	2222 376 63...	on request
	$l_t = 3.5 \pm 0.3$ mm	±5%	2222 376 68...	on request
		±3.5%	2222 376 69...	on request
Taped on reel	H = 18.5 mm; note 2	±5%	2222 376 65...	on request
		±3.5%	2222 376 66...	on request

Notes

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

AC and pulse metallized polypropylene film capacitors

KP/MMKP 376

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

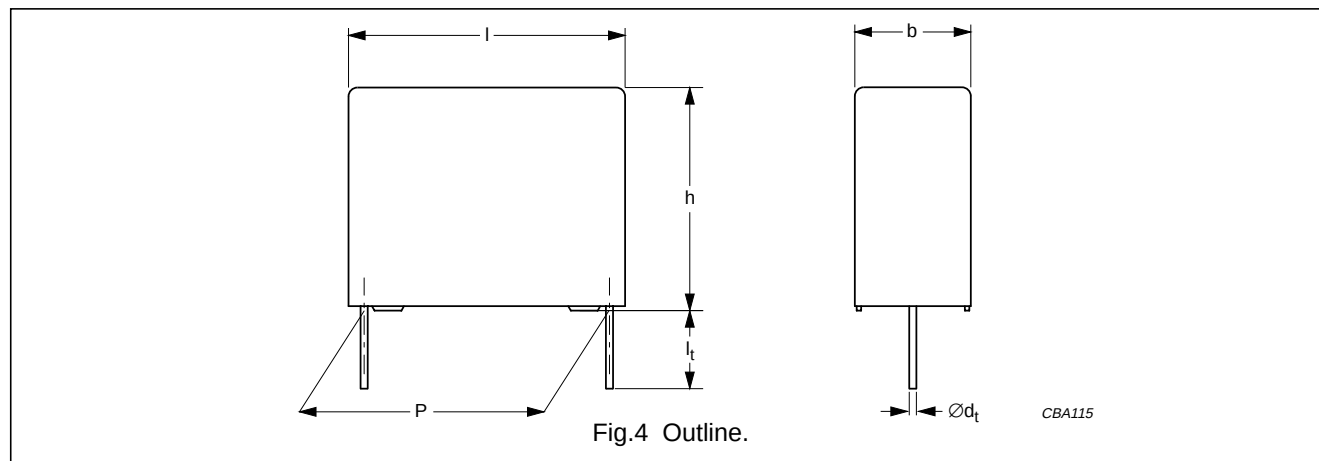
C (μF)	DIMENSIONS b × h × l (mm)	MASS (g)	CATALOGUE NUMBER
			LOOSE IN BOX
			l _t = 5.0 ±1.0 mm
			C-tol = ±5%
Pitch = 15.0 ±0.4 mm; d _t = 0.80 ±0.08 mm			
0.0068 0.0075 0.0082 0.0091	5.0 × 11.0 × 17.5	1.1	2222 376 62682 2222 376 62752 2222 376 62822 2222 376 62912
0.01 0.011 0.012 0.013	6.0 × 12.0 × 17.5	1.5	2222 376 62103 2222 376 62113 2222 376 62123 2222 376 62133
0.015 0.016 0.018	7.0 × 13.5 × 17.5	2.0	2222 376 62153 2222 376 62163 2222 376 62183
0.02 0.022	8.5 × 15.0 × 17.5	2.6	2222 376 62203 2222 376 62223
Pitch = 22.5 ±0.4 mm; d _t = 0.80 ±0.08 mm			
0.024 0.027 0.03	6.0 × 15.5 × 26.0	2.8	2222 376 62243 2222 376 62273 2222 376 62303
0.033 0.036 0.039	7.0 × 16.5 × 26.0	3.5	2222 376 62333 2222 376 62363 2222 376 62393
0.043 0.047 0.051 0.056	8.5 × 18.0 × 26.0	4.5 4.5 4.5 5.1	2222 376 62433 2222 376 62473 2222 376 62513 2222 376 62563
Pitch = 27.5 ±0.4 mm; d _t = 0.80 ±0.08 mm			
0.062 0.068 0.075	9.0 × 19.0 × 31.0	6.2	2222 376 62623 2222 376 62683 2222 376 62753
0.082 0.091 0.1 0.11	11.0 × 21.0 × 31.0	8.3	2222 376 62823 2222 376 62913 2222 376 62104 2222 376 62114
0.12 0.13 0.15 0.16	13.0 × 23.0 × 31.0	10.8	2222 376 62124 2222 376 62134 2222 376 62154 2222 376 62164
0.18 0.2	15.0 × 25.0 × 31.0	13.0	2222 376 62184 2222 376 62204
0.22 0.24 0.27	18.0 × 28.0 × 31.0	19.0	2222 376 62224 2222 376 62244 2222 376 62274

AC and pulse metallized polypropylene film capacitors

KP/MMKP 376

KP/MMKP 376 GENERAL DATA

PITCH 15/22.5/27.5 mm



Specific reference data for the 1000 V DC capacitors

DESCRIPTION	VALUE	
	at 10 kHz	at 100 kHz
Tangent of loss angle: P = 15.0 mm P = 22.5 mm P = 27.5 mm	$\leq 3 \times 10^{-4}$ $\leq 3 \times 10^{-4}$ $\leq 3 \times 10^{-4}$	$\leq 10 \times 10^{-4}$ $\leq 10 \times 10^{-4}$ $\leq 15 \times 10^{-4}$
Rated voltage pulse slope (dU/dt) _R at 1000 V (DC): P = 15.0 mm P = 22.5 mm P = 27.5 mm	7000 V/μs 2500 V/μs 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 ≤ 47 nF for C > 47 nF	1600 V; 1 minute [1.6 – (0.0364 × √(C – 47))] × 1000 V; 1 minute	
Withstanding (DC) voltage between leads and case	2840 V; 1 minute	

Available 1000 V DC versions

PACKAGING ⁽¹⁾	DIMENSIONS	C-tol	FIRST 9 DIGITS OF CATALOGUE NUMBER	ORDERING
Loose in box	l _t = 5.0 ±1.0 mm	±5%	2222 376 72...	on request
		±3.5%	2222 376 73...	on request
	l _t = 3.5 ±0.3 mm	±5%	2222 376 78...	on request
		±3.5%	2222 376 79...	on request
Taped on reel	H = 18.5 mm; note 2	±5%	2222 376 75...	on request
		±3.5%	2222 376 76...	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".

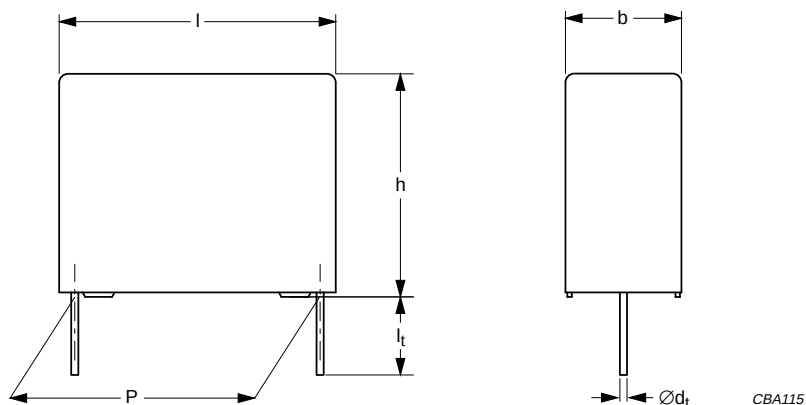
AC and pulse metallized polypropylene film capacitors

KP/MMKP 376

$U_{Rdc} = 1000 \text{ V}$; $U_{Rac} = 400 \text{ V}$ / $U_{p-p} = 1100 \text{ V}$

C (μF)	DIMENSIONS b × h × l (mm)	MASS (g)	CATALOGUE NUMBER
			LOOSE IN BOX
			l _t = 5.0 ±1.0 mm
			C-tol = ±5%
Pitch = 15.0 ±0.4 mm; d _t = 0.80 ±0.08 mm			
0.0047 0.0051 0.0056	5.0 × 11.0 × 17.5	1.1	2222 376 72472 2222 376 72512 2222 376 72562
0.0062 0.0068 0.0075 0.0082	6.0 × 12.0 × 17.5	1.5	2222 376 72622 2222 376 72682 2222 376 72752 2222 376 72822
0.0091 0.01 0.011 0.012	7.0 × 13.5 × 17.5	2.0	2222 376 72912 2222 376 72103 2222 376 72113 2222 376 72123
Pitch = 22.5 ±0.4 mm; d _t = 0.80 ±0.08 mm			
0.013	6.0 × 15.5 × 26.0	2.8	2222 376 72133
0.015 0.016 0.018	7.0 × 16.5 × 26.0	3.5	2222 376 72153 2222 376 72163 2222 376 72183
0.02 0.022 0.024 0.027 0.03 0.033 0.036	8.5 × 18.0 × 26.0	4.5	2222 376 72203 2222 376 72223 2222 376 72243 2222 376 72273 2222 376 72303 2222 376 72333 2222 376 72363
0.039	10.0 × 19.5 × 26.0	5.4	2222 376 72393
Pitch = 27.5 ±0.4 mm; d _t = 0.80 ±0.08 mm			
0.043 0.047 0.051	9.0 × 19.0 × 31.0	6.2	2222 376 72433 2222 376 72473 2222 376 72513
0.056 0.062 0.068 0.075	11.0 × 21.0 × 31.0	8.3	2222 376 72563 2222 376 72623 2222 376 72683 2222 376 72753
0.082 0.091 0.1	13.0 × 23.0 × 31.0	10.8	2222 376 72823 2222 376 72913 2222 376 72104
0.11 0.12 0.13 0.15	15.0 × 25.0 × 31.0	13.0	2222 376 72114 2222 376 72124 2222 376 72134 2222 376 72154
0.16 0.18	18.0 × 28.0 × 31.0	19.0	2222 376 72164 2222 376 72184

AC and pulse metallized polypropylene film capacitors

KP/MMKP 376
KP/MMKP 376 GENERAL DATA
PITCH 15/22.5/27.5 mm

Fig.5 Outline.
Specific reference data for the 1600 V DC capacitors

DESCRIPTION	VALUE	
	at 10 kHz	at 100 kHz
Tangent of loss angle: P = 15.0 mm P = 22.5 mm P = 27.5 mm	$\leq 3 \times 10^{-4}$ $\leq 3 \times 10^{-4}$ $\leq 3 \times 10^{-4}$	$\leq 10 \times 10^{-4}$ $\leq 10 \times 10^{-4}$ $\leq 15 \times 10^{-4}$
Rated voltage pulse slope $(dU/dt)_R$ at 1600 V (DC): P = 15.0 mm P = 22.5 mm P = 27.5 mm	10000 V/ μ s 3500 V/ μ s 2300 V/ μ s	
R between leads at 500 V; 1 minute	>100000 M Ω	
R between interconnected leads and case; 500 V; 1 minute	>100000 M Ω	
Ionization (AC) voltage (typical value) at 20 pC peak discharge	>550 V	
Withstanding (DC) voltage (cut off current 10 mA); rise time 100 V/s	2560 V; 1 minute	
Withstanding (DC)voltage between leads and case	2840 V; 1 minute	

Available 1600 V DC versions

PACKAGING ⁽¹⁾	DIMENSIONS	C-tol	FIRST 9 DIGITS OF CATALOGUE NUMBER	ORDERING
Loose in box	$l_t = 5.0 \pm 1.0$ mm	$\pm 5\%$	2222 376 82...	on request
		$\pm 3.5\%$	2222 376 83...	on request
	$l_t = 3.5 \pm 0.3$ mm	$\pm 5\%$	2222 376 88...	on request
		$\pm 3.5\%$	2222 376 89...	on request
Taped on reel	H = 18.5 mm; note 2	$\pm 5\%$	2222 376 85...	on request
		$\pm 3.5\%$	2222 376 86...	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".

AC and pulse metallized polypropylene film capacitors

KP/MMKP 376

$U_{Rdc} = 1600 \text{ V}$; $U_{Rac} = 500 \text{ V}$ / $U_{p-p} = 1400 \text{ V}$

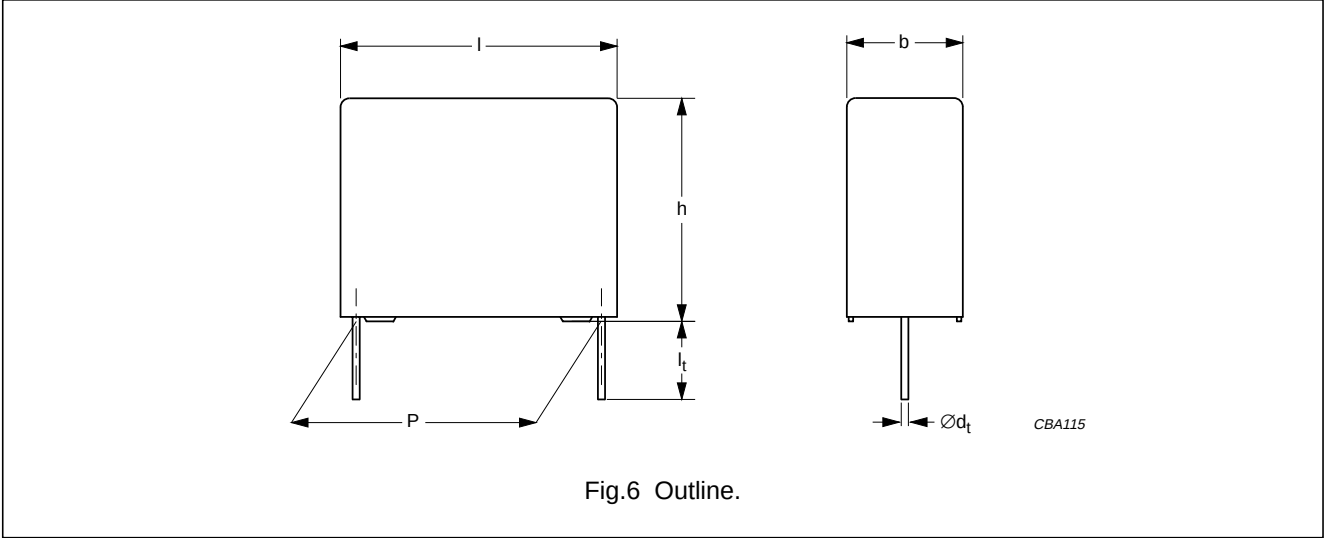
C (μF)	DIMENSIONS b × h × l (mm)	MASS (g)	CATALOGUE NUMBER
			LOOSE IN BOX
			l _t = 5.0 ±1.0 mm
			C-tol = ±5%
Pitch = 15.0 ±0.4 mm; d _t = 0.80 ±0.08 mm			
0.0018	5.0 × 11.0 × 17.5	1.1	2222 376 82182
0.002	6.0 × 12.0 × 17.5	1.5	2222 376 82202
0.0022			2222 376 82222
0.0024			2222 376 82242
0.0027	7.0 × 13.5 × 17.5	2.0	2222 376 82272
0.003			2222 376 82302
0.0033			2222 376 82332
0.0036	8.5 × 15.0 × 17.5	2.6	2222 376 82362
0.0039			2222 376 82392
0.0043			2222 376 82432
0.0047			2222 376 82472
Pitch = 22.5 ±0.4 mm; d _t = 0.80 ±0.08 mm			
0.0051	6.0 × 15.5 × 26.0	2.8	2222 376 82512
0.0056			2222 376 82562
0.0062			2222 376 82622
0.0068			2222 376 82682
0.0075	7.0 × 16.5 × 26.0	3.5	2222 376 82752
0.0082			2222 376 82822
0.0091			2222 376 82912
0.01	8.5 × 18.0 × 26.0	4.5	2222 376 82103
0.011			2222 376 82113
0.012			2222 376 82123
0.013			2222 376 82133
0.015	10.0 × 19.5 × 26.0	5.4	2222 376 82153
Pitch = 27.5 ±0.4 mm; d _t = 0.80 ±0.08 mm			
0.016	9.0 × 19.0 × 31.0	6.2	2222 376 82163
0.018	11.0 × 21.0 × 31.0	7.4	2222 376 82183
0.02			2222 376 82203
0.022			2222 376 82223
0.024			2222 376 82243
0.027	13.0 × 23.0 × 31.0	10.2	2222 376 82273
0.03			2222 376 82303
0.033			2222 376 82333
0.036			2222 376 82363
0.039	15.0 × 25.0 × 31.0	13.0	2222 376 82393
0.043			2222 376 82433
0.047			2222 376 82473
0.051	18.0 × 28.0 × 31.0	19.0	2222 376 82513
0.056			2222 376 82563

AC and pulse
metallized polypropylene film capacitors

KP/MMKP 376

KP/MMKP 376 GENERAL DATA

PITCH 15/22.5/27.5 mm



Specific reference data for the 2000 V DC capacitors

DESCRIPTION	VALUE	
	at 10 kHz	at 100 kHz
Tangent of loss angle: P = 15.0 mm P = 22.5 mm P = 27.5 mm	$\leq 3 \times 10^{-4}$ $\leq 3 \times 10^{-4}$ $\leq 3 \times 10^{-4}$	$\leq 10 \times 10^{-4}$ $\leq 10 \times 10^{-4}$ $\leq 15 \times 10^{-4}$
Rated voltage pulse slope (dU/dt) _R at 2000 V (DC): P = 15.0 mm P = 22.5 mm P = 27.5 mm	15000 V/μs 5000 V/μs 3300 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 20 pC peak discharge	>600 V	
Withstanding (DC) voltage (cut off current 10 mA); rise time 100 V/s	3200 V; 1 minute	
Withstanding (DC)voltage between leads and case	2840 V; 1 minute	

Available 2000 V DC versions

PACKAGING ⁽¹⁾	DIMENSIONS	C-tol	FIRST 9 DIGITS OF CATALOGUE NUMBER	ORDERING
Loose in box	$l_t = 5.0 \pm 1.0$ mm	±5%	2222 376 92...	on request
		±3.5%	2222 376 93...	on request
	$l_t = 3.5 \pm 0.3$ mm	±5%	2222 376 98...	on request
		±3.5%	2222 376 99...	on request
Taped on reel	H = 18.5 mm; note 2	±5%	2222 376 95...	on request
		±3.5%	2222 376 96...	on request

Notes

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

AC and pulse metallized polypropylene film capacitors

KP/MMKP 376

$U_{Rdc} = 2000 \text{ V}$; $U_{Rac} = 600 \text{ V}$ / $U_{p-p} = 1700 \text{ V}$

C (μF)	DIMENSIONS b × h × l (mm)	MASS (g)	CATALOGUE NUMBER
			LOOSE IN BOX
			l _t = 5.0 ±1.0 mm
			C-tol = ±5%
Pitch = 15.0 ±0.4 mm; d _t = 0.80 ±0.08 mm			
0.001 0.0011	5.0 × 11.0 × 17.5	1.1	2222 376 92102 2222 376 92112
0.0012 0.0013 0.0015 0.0016	6.0 × 12.0 × 17.5	1.5	2222 376 92122 2222 376 92132 2222 376 92152 2222 376 92162
0.0018 0.002	7.0 × 13.5 × 17.5	2.0	2222 376 92182 2222 376 92202
0.0022 0.0024 0.0027 0.003	8.5 × 15.0 × 17.5	2.6	2222 376 92222 2222 376 92242 2222 376 92272 2222 376 92302
Pitch = 22.5 ±0.4 mm; d _t = 0.80 ±0.08 mm			
0.0033 0.0036 0.0039	6.0 × 15.5 × 26.0	2.8	2222 376 92332 2222 376 92362 2222 376 92392
0.0043 0.0047 0.0051	7.0 × 16.5 × 26.0	3.5	2222 376 92432 2222 376 92472 2222 376 92512
0.0056 0.0062 0.0068 0.0075 0.0082	8.5 × 18.0 × 26.0	4.5	2222 376 92562 2222 376 92622 2222 376 92682 2222 376 92752 2222 376 92822
0.0091 0.01	10.0 × 19.5 × 26.0	5.4	2222 376 92912 2222 376 92103
Pitch = 27.5 ±0.4 mm; d _t = 0.80 ±0.08 mm			
0.011 0.012 0.013 0.015	11.0 × 21.0 × 31.0	7.4	2222 376 92113 2222 376 92123 2222 376 92133 2222 376 92153
0.016 0.018 0.02 0.022	13.0 × 23.0 × 31.0	10.2	2222 376 92163 2222 376 92183 2222 376 92203 2222 376 92223
0.024 0.027	15.0 × 25.0 × 31.0	13.0	2222 376 92243 2222 376 92273
0.03 0.033	18.0 × 28.0 × 31.0	19.0	2222 376 92303 2222 376 92333