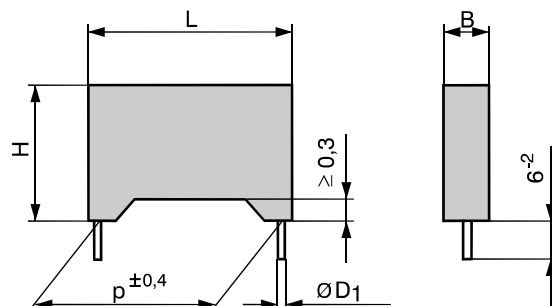


**Metallized Polypropylene Film Capacitor
for high voltage application
4 kVdc (1 200 Vac) to 10 kVdc (3 000 Vac)**

**in a plastic case
lead spacing 27,5 mm and 37,5 mm**

Characteristic

- Available up to 10 kVdc e.g. 3000 Vac / 60 Hz
- Self-healing
- Low dielectric losses up to high frequencies
- High stability of the parameters
- RoHS Compliant 2011/95/EC



Overall view

Rated voltage V_R	Lead Spacing (L/S) p	Range of Capacitance
4 000 Vdc (1 200 Vac)	27,5 mm	1 000 pF - 0,082 μ F
	37,5 mm	0,033 μ F - 0,33 μ F
6 300 Vdc (1 900 Vac)	27,5 mm	1 000 pF - 0,022 μ F
	37,5 mm	0,015 μ F - 0,1 μ F
8 000 Vdc (2 400 Vac)	27,5 mm	1 000 pF - 0,012 μ F
	37,5 mm	0,01 μ F - 0,056 μ F
10 000 Vdc (3 000 Vac)	27,5 mm	100 pF - 3 300 pF

Dielectric: Polypropylene film

Electrodes: Vacuum deposited aluminium with internal series connection

Coating: Flame retardant plastic case (UL-class 94V-0), epoxy resin sealed

Leads: Tinned copper wire

Temperature range: -40°C to +85°C

IEC test classification: 40/085/21 acc. EN 60068-1

Insulation resistance R_i : $\geq 100\,000\,M\Omega$

Measuring procedure: 100Vdc, 1 min., 20°C

Capacitance tolerance: $\pm 20\%$ (M), $\pm 10\%$ (K), $\pm 5\%$ (J)

Dissipation factor $\tan\delta$ (at 20°C)

Frequency	$C_R \leq 0,1\,\mu\text{F}$	$C_R > 0,1\,\mu\text{F}$
1 kHz	$\leq 4 \cdot 10^{-4}$	$\leq 6 \cdot 10^{-4}$
10 kHz	$\leq 7 \cdot 10^{-4}$	$\leq 15 \cdot 10^{-4}$

Pulse rise time dv/dt (max. working) and pulse characteristic K_0 :
see tables next pages

Lead Spacing (p)	Typ-Code	$\varnothing D_1$
27,5 mm	MKP 61.4	0,8 mm
37,5 mm	MKP 61.5	1,0 mm

Test voltage (between terminations): $1,2 \cdot V_R$, 2 s
(Approval test: 1 Min.)

Test voltage (between terminations and case): 4 kVdc, 1 min.

Derating of voltage: A voltage derating factor of 1,5% per 1K must be applied from 75°C for AC application > 60 Hz

Voltage strength at superposition of DC- and AC-Voltage
up to 60 Hz:

$$V_{DC} + V_{peak} \leq V_R$$

Resistance to soldering heat: Temperature of soldering bath max. 260°C, duration max. 10 s, method Tb acc. IEC 60068-2-20

4 000 Vdc / 1 200 Vac

Capacitance	B	H	L	L/S	Ordering Code	Ko 10 ³ V ² /μs max.	dv/dt V/μs max.	Packing Unit		Tape Style
	mm	mm	mm	p mm				loose pcs.	taped pcs.	
1 000 pF	9,0	17,0	32,0	27,5	MKP614+310%C+ #	9 600	1 200	480	225	Reel
1 200 pF	9,0	17,0	32,0	27,5	MKP614+312%C+ #	9 600	1 200	480	225	Reel
1 500 pF	9,0	17,0	32,0	27,5	MKP614+315%C+ #	9 600	1 200	480	225	Reel
1 800 pF	9,0	17,0	32,0	27,5	MKP614+318%C+ #	9 600	1 200	480	225	Reel
2 200 pF	9,0	17,0	32,0	27,5	MKP614+322%C+ #	9 600	1 200	480	225	Reel
2 700 pF	9,0	17,0	32,0	27,5	MKP614+327%C+ #	9 600	1 200	480	225	Reel
3 300 pF	9,0	17,0	32,0	27,5	MKP614+333%C+ #	9 600	1 200	480	225	Reel
3 900 pF	9,0	17,0	32,0	27,5	MKP614+339%C+ #	9 600	1 200	480	225	Reel
4 700 pF	9,0	17,0	32,0	27,5	MKP614+347%C+ #	9 600	1 200	480	225	Reel
5 600 pF	9,0	17,0	32,0	27,5	MKP614+356%C+ #	9 600	1 200	480	225	Reel
6 800 pF	9,0	17,0	32,0	27,5	MKP614+368%C+ #	9 600	1 200	480	225	Reel
8 200 pF	9,0	17,0	32,0	27,5	MKP614+382%C+ #	9 600	1 200	480	225	Reel
0,01 μF	9,0	17,0	32,0	27,5	MKP614+410%C+ #	9 600	1 200	480	225	Reel
0,012 μF	9,0	17,0	32,0	27,5	MKP614+412%C+ #	9 600	1 200	480	225	Reel
0,015 μF	9,0	17,0	32,0	27,5	MKP614+415%C+ #	9 600	1 200	480	225	Reel
0,018 μF	9,0	17,0	32,0	27,5	MKP614+418%C+ #	9 600	1 200	480	225	Reel
0,022 μF	10,0	20,0	32,0	27,5	MKP614+422%C+ #	9 600	1 200	432	200	Reel
0,027 μF	11,0	20,0	32,0	27,5	MKP614+427%C+ #	9 600	1 200	408	165	Reel
0,033 μF	13,0	22,0	32,0	27,5	MKP614+433%C+ #	9 600	1 200	336	140	Reel
0,033 μF	11,0	22,0	41,5	37,5	MKP615+433%C+ #	4 400	550	by request	-	-
0,039 μF	15,0	24,5	32,0	27,5	MKP614+439%C+ #	9 600	1 200	288	100	Reel
0,039 μF	11,0	22,0	41,5	37,5	MKP615+439%C+ #	4 400	550	by request	-	-
0,047 μF	14,0	28,0	32,0	27,5	MKP614+447%C+ #	9 600	1 200	208	100	Reel
0,047 μF	11,0	22,0	41,5	37,5	MKP615+447%C+ #	4 400	550	by request	-	-
0,056 μF	18,0	33,0	32,0	27,5	MKP614+456%C+ #	9 600	1 200	160	-	-
0,056 μF	13,0	24,0	41,5	37,5	MKP615+456%C+ #	4 400	550	by request	-	-
0,068 μF	18,0	33,0	32,0	27,5	MKP614+468%C+ #	9 600	1 200	160	-	-
0,068 μF	16,0	28,5	41,5	37,5	MKP615+468%C+ #	4 400	550	by request	-	-
0,082 μF	18,0	33,0	32,0	27,5	MKP614+482%C+ #	9 600	1 200	160	-	-
0,082 μF	16,0	28,5	41,5	37,5	MKP615+482%C+ #	4 400	550	by request	-	-
0,1 μF	16,0	28,5	41,5	37,5	MKP615+510%C+ #	4 400	550	by request	-	-
0,12 μF	19,0	32,0	41,5	37,5	MKP615+512%C+ #	4 400	550	116	-	-
0,15 μF	20,0	40,0	41,5	37,5	MKP615+515%C+ #	4 400	550	108	-	-
0,18 μF	20,0	40,0	41,5	37,5	MKP615+518%C+ #	4 400	550	108	-	-
0,22 μF	24,0	44,0	41,5	37,5	MKP615+522%C+ #	4 400	550	80	-	-
0,27 μF	30,0	45,0	42,5	37,5	MKP615+527%C+ #	4 400	550	by request	-	-
0,33 μF	30,0	45,0	42,5	37,5	MKP615+533%C+ #	4 400	550	by request	-	-

Specify in ordering code the characters % and # as follow:

%: Code of Tolerance of Capacitance:

J for ±5%
K for ±10%
M for ±20%

#: Code for leads and packing
(empty)

M
R

loose, leads length 6-2 mm (default)
loose, leads length 3,5±0,5 mm
taped on reel

6 300 Vdc / 1 900 Vac

Capacitance	B	H	L	L/S p mm	Ordering Code	Ko 10 ³ V ² /μs max.	dv/dt V/μs max.	Packing Unit		Tape Style
	mm	mm	mm					loose pcs.	taped pcs.	
1 000 pF	9,0	17,0	32,0	27,5	MKP614+310%D+#	130 000	10 000	480	225	Reel
1 200 pF	9,0	17,0	32,0	27,5	MKP614+312%D+#	130 000	10 000	480	225	Reel
1 500 pF	9,0	17,0	32,0	27,5	MKP614+315%D+#	130 000	10 000	480	225	Reel
1 800 pF	9,0	17,0	32,0	27,5	MKP614+318%D+#	130 000	10 000	480	225	Reel
2 200 pF	9,0	17,0	32,0	27,5	MKP614+322%D+#	130 000	10 000	480	225	Reel
2 700 pF	10,0	20,0	32,0	27,5	MKP614+327%D+#	130 000	10 000	432	200	Reel
3 300 pF	10,0	20,0	32,0	27,5	MKP614+333%D+#	130 000	10 000	432	200	Reel
3 900 pF	13,0	22,0	32,0	27,5	MKP614+339%D+#	130 000	10 000	336	140	Reel
4 700 pF	13,0	22,0	32,0	27,5	MKP614+347%D+#	130 000	10 000	336	140	Reel
5 600 pF	14,0	28,0	32,0	27,5	MKP614+356%D+#	130 000	10 000	208	100	Reel
6 800 pF	14,0	28,0	32,0	27,5	MKP614+368%D+#	130 000	10 000	208	100	Reel
8 200 pF	18,0	33,0	32,0	27,5	MKP614+382%D+#	130 000	10 000	160	-	-
0,01 μF	18,0	33,0	32,0	27,5	MKP614+410%D+#	130 000	10 000	160	-	-
0,012 μF	15,0	24,5	32,0	27,5	MKP614+412%D+#	130 000	10 000	288	100	Reel
0,015 μF	18,0	33,0	32,0	27,5	MKP614+415%D+#	130 000	10 000	160	-	-
0,015 μF	13,0	24,0	41,5	37,5	MKP615+415%D+#	44 000	3 500	by request	-	-
0,018 μF	18,0	33,0	32,0	27,5	MKP614+418%D+#	130 000	10 000	160	-	-
0,018 μF	13,0	24,0	41,5	37,5	MKP615+418%D+#	44 000	3 500	by request	-	-
0,022 μF	18,0	33,0	32,0	27,5	MKP614+422%D+#	130 000	10 000	160	-	-
0,022 μF	16,0	28,5	41,5	37,5	MKP615+422%D+#	44 000	3 500	by request	-	-
0,027 μF	16,0	28,5	41,5	37,5	MKP615+427%D+#	44 000	3 500	by request	-	-
0,033 μF	19,0	32,0	41,5	37,5	MKP615+433%D+#	44 000	3 500	116	-	-
0,039 μF	19,0	32,0	41,5	37,5	MKP615+439%D+#	44 000	3 500	116	-	-
0,047 μF	20,0	40,0	41,5	37,5	MKP615+447%D+#	44 000	3 500	108	-	-
0,056 μF	24,0	44,0	41,5	37,5	MKP615+456%D+#	44 000	3 500	80	-	-
0,068 μF	24,0	44,0	41,5	37,5	MKP615+468%D+#	44 000	3 500	80	-	-
0,082 μF	30,0	45,0	42,5	37,5	MKP615+482%D+#	44 000	3 500	by request	-	-
0,1 μF	30,0	45,0	42,5	37,5	MKP615+510%D+#	44 000	3 500	by request	-	-

8 000 Vdc / 2 400 Vac

Capacitance	B	H	L	L/S p mm	Ordering Code	Ko 10 ³ V ² /μs max.	dv/dt V/μs max.	Packing unit		Tape Style
	mm	mm	mm					loose pcs.	taped pcs.	
1 000 pF	9,0	17,0	32,0	27,5	MKP614+310%U+#	480 000	30 000	480	225	Reel
1 200 pF	9,0	17,0	32,0	27,5	MKP614+312%U+#	480 000	30 000	480	225	Reel
1 500 pF	9,0	17,0	32,0	27,5	MKP614+315%U+#	480 000	30 000	480	225	Reel
1 800 pF	9,0	17,0	32,0	27,5	MKP614+318%U+#	480 000	30 000	480	225	Reel
2 200 pF	9,0	17,0	32,0	27,5	MKP614+322%U+#	480 000	30 000	480	225	Reel
2 700 pF	11,0	20,0	32,0	27,5	MKP614+327%U+#	480 000	30 000	408	165	Reel
3 300 pF	11,0	20,0	32,0	27,5	MKP614+333%U+#	480 000	30 000	408	165	Reel
3 900 pF	13,0	22,0	32,0	27,5	MKP614+339%U+#	480 000	30 000	336	140	Reel
4 700 pF	13,0	22,0	32,0	27,5	MKP614+347%U+#	480 000	30 000	336	140	Reel
5 600 pF	14,0	28,0	32,0	27,5	MKP614+356%U+#	480 000	30 000	208	100	Reel
6 800 pF	14,0	28,0	32,0	27,5	MKP614+368%U+#	480 000	30 000	208	100	Reel
8 200 pF	18,0	33,0	32,0	27,5	MKP614+382%U+#	480 000	30 000	160	-	-
0,01 μF	18,0	33,0	32,0	27,5	MKP614+410%U+#	480 000	30 000	160	-	-
0,01 μF	13,0	24,0	41,5	37,5	MKP615+410%U+#	130 000	8 000	by request	-	-
0,012 μF	18,0	33,0	32,0	27,5	MKP614+412%U+#	480 000	30 000	160	-	-
0,012 μF	16,0	28,5	41,5	37,5	MKP615+412%U+#	130 000	8 000	by request	-	-
0,015 μF	16,0	28,5	41,5	37,5	MKP615+415%U+#	130 000	8 000	by request	-	-
0,018 μF	16,0	28,5	41,5	37,5	MKP615+418%U+#	130 000	8 000	by request	-	-
0,022 μF	19,0	32,0	41,5	37,5	MKP615+422%U+#	130 000	8 000	116	-	-
0,027 μF	20,0	40,0	41,5	37,5	MKP615+427%U+#	130 000	8 000	108	-	-
0,033 μF	24,0	44,0	41,5	37,5	MKP615+433%U+#	130 000	8 000	80	-	-
0,039 μF	24,0	44,0	41,5	37,5	MKP615+439%U+#	130 000	8 000	80	-	-
0,047 μF	30,0	45,0	42,5	37,5	MKP615+447%U+#	130 000	8 000	by request	-	-
0,056 μF	30,0	45,0	42,5	37,5	MKP615+456%U+#	130 000	8 000	by request	-	-

Specify in ordering code the characters % and # as follow:

#: Code of Tolerance of Capacitance:

J for ±5%

K for ±10%

M for ±20%

#: Code for leads and packing

(empty)

M

R

loose, leads length 6-2 mm (default)

loose, leads length 3,5±0,5 mm

taped on reel

10 000 Vdc / 3 000 Vac

Capacitance	B mm	H mm	L mm	L/S p mm	Ordering Code	Ko 10 ³ V ² /μs max.	dv/dt V/μs max.	Packing Unit		Tape Style
								loose pcs.	taped pcs.	
100 pF	9,0	17,0	32,0	27,5	MKP614+210%E+#	3 000 000	150 000	480	225	Reel
120 pF	9,0	17,0	32,0	27,5	MKP614+212%E+#	3 000 000	150 000	480	225	Reel
150 pF	9,0	17,0	32,0	27,5	MKP614+215%E+#	3 000 000	150 000	480	225	Reel
180 pF	9,0	17,0	32,0	27,5	MKP614+218%E+#	3 000 000	150 000	480	225	Reel
220 pF	9,0	17,0	32,0	27,5	MKP614+220%E+#	3 000 000	150 000	480	225	Reel
270 pF	9,0	17,0	32,0	27,5	MKP614+227%E+#	3 000 000	150 000	480	225	Reel
330 pF	9,0	17,0	32,0	27,5	MKP614+233%E+#	3 000 000	150 000	480	225	Reel
390 pF	9,0	17,0	32,0	27,5	MKP614+239%E+#	3 000 000	150 000	480	225	Reel
470 pF	9,0	17,0	32,0	27,5	MKP614+247%E+#	3 000 000	150 000	480	225	Reel
560 pF	9,0	17,0	32,0	27,5	MKP614+256%E+#	3 000 000	150 000	480	225	Reel
680 pF	9,0	17,0	32,0	27,5	MKP614+614%E+#	3 000 000	150 000	480	225	Reel
820 pF	10,0	20,0	32,0	27,5	MKP614+282%E+#	3 000 000	150 000	432	200	Reel
1 000 pF	10,0	20,0	32,0	27,5	MKP614+310%E+#	3 000 000	150 000	432	200	Reel
1 200 pF	13,0	22,0	32,0	27,5	MKP614+312%E+#	3 000 000	150 000	336	140	Reel
1 500 pF	13,0	22,0	32,0	27,5	MKP614+315%E+#	3 000 000	150 000	336	140	Reel
1 800 pF	15,0	24,5	32,0	27,5	MKP614+318%E+#	3 000 000	150 000	288	100	Reel
2 200 pF	15,0	24,5	32,0	27,5	MKP614+322%E+#	3 000 000	150 000	288	100	Reel
2 700 pF	18,0	33,0	32,0	27,5	MKP614+327%E+#	3 000 000	150 000	160	-	-
3 300 pF	18,0	33,0	32,0	27,5	MKP614+333%E+#	3 000 000	150 000	160	-	-

Specify in ordering code the characters % and # as follow:

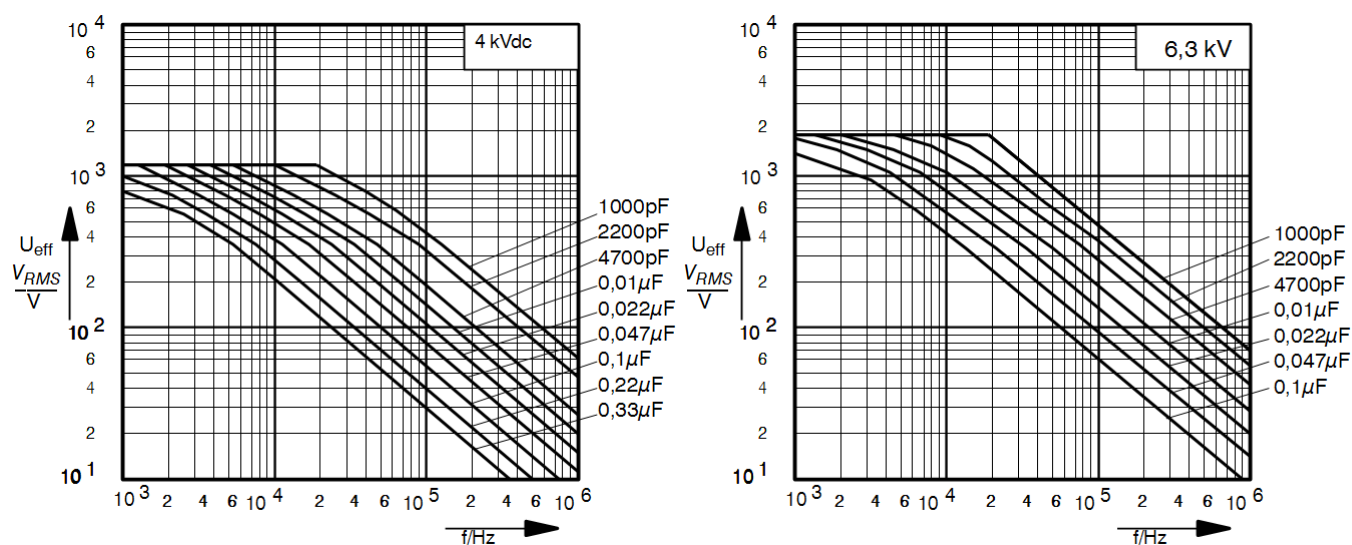
%: Code of Tolerance of Capacitance:

J for ±5%
 K for ±10%
 M for ±20%

#: Code for leads and packing

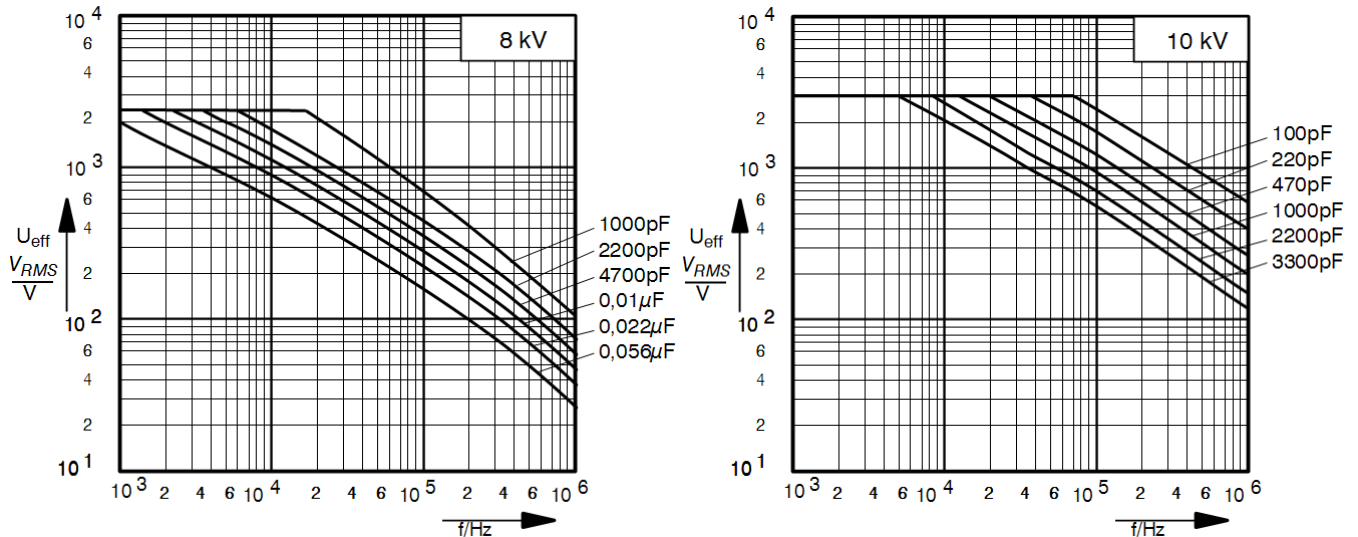
(empty)
 M
 R

loose, leads length 6-2 mm (default)
 loose, leads length 3,5±0,5 mm
 taped on reel

AC-Voltage vs. frequency at sinusoidal wave-form, general guide up to 40°C:


AC-Voltage vs. frequency at sinusoidal wave-form, general guide up to 40°C:

- continuation -



Ordering Code

All inquiries and orders we accept in usually text or by code. Ordering codes for further values we give by request.

Example of code for capacitor MKP 61.5 - 0,1μF±10%/4kVdc, loose, leads length 6-2 mm:

MKP615+510KC

If the purchaser has taken no other agreement, the product description is made as usual text. Capacitance values less than 10 nF are given in picofarad (pF), from 10 nF in microfarad (μF).

Packing: Loose capacitors in boxes or taped on reel, L/S 37,5 mm loose only

Additional information:

General and Principles: www.electel.de/files/general.pdf

Taping: www.electel.de/files/tape_rad.pdf

This specification must be read in conjunction with the data given in the "General technical information" chapter.
Deviations in the construction as opposed to the description in the drawings are possible. The dimension of lengths is mm.
We reserve the rights of delivery and technical alterations without prior notice.
The data indicated herein describe the type of component and shall not be considered as guaranteed characteristics.
In all cases the German version of this document shall be taken as authoritative.

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