

**METALLIZED PPS CAPACITORS**

**Type MKS ... d**

Applications

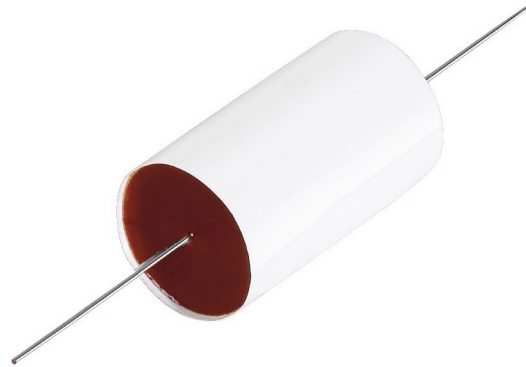
- AC or DC voltages
- Professional Applications
- Tuned circuits, filters, timers
- Integrators, S/ H
- Coupling / decoupling, Audio
- Instrumentation

Main Characteristics

- Dry plastic film technology
- Nominal Voltage: 63 VDC à 630 VDC
- Climatic Category: 55/100/56
- Tolerances  $\pm 10\%$   
on request:  $\pm 5\%$ ,  $\pm 2\%$ ,  $\pm 1\%$

Design

- Metallized PPS film
- Polyester wrap
- Tinned copper wire axial leads
- Epoxy resin end-seal (UL-V0)



**MKS....d**

**1.0 Rated Values and Operational Data**

DC	Nominal Voltage $U_{R1}$ [VDC]	$\leq 85^\circ\text{C}$	1	63	160	160	250	400	630
			2			250	330	500	800
	Category Voltage $U_C$ [VDC]	$\leq 100^\circ\text{C}$	1	50	80	130	200	320	500
			2			200	260	400	640
	Test Voltage $U_T$ [VDC]	2 s / $23^\circ\text{C}$	1	100	160	260	400	640	1000
			2			350	460	700	1120
AC	Nominal Voltage $U_{N-50/60}$ Hz [VAC]	$\leq 85^\circ\text{C}$	1,2	40	63	100	160	200	220
	Category tension	$\leq 100^\circ\text{C}$	1,2	30	40	70	110	140	150

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**2.0 Capacitance Range**

Cn =>	10 nF	→	2.2 μF	6.8 μF	15 μF	22 μF	33 μF
63 VDC							
100 VDC							
160 VDC							
250 VDC							
400 VDC							
630 VDC							

**3.0 Characteristics**

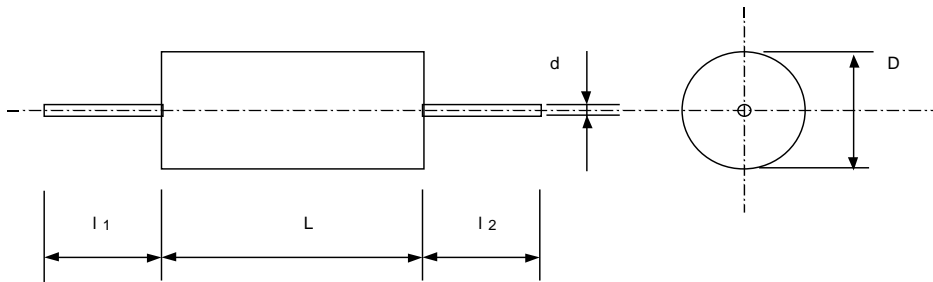
			Min	Typ	Max
Dissipation factor	tg δ	≤ 1 μF		9 ... 12	30 x 10 <sup>-4</sup>
		> 1 μF		15 ... 25	50 x 10 <sup>-4</sup>
Insulation resistance 1min à 23°C	R <sub>i</sub> [MOhms]	≤ 0.33 μF	≤ 100 V: 10V	15000	30000
			> 100 V: 100 V	30000	60000
Time Constant 1min at 23°C	R <sub>i</sub> C [s]	> 0.33 μF	≤ 100 V: 10V	5000	10000
			> 100 V: 100 V	10000	20000
Temperature coefficient	α <sub>c</sub> [ppm]		- 30 ... +80°C	+ 40	+ 70
Long term Stability	ΔC / C [%]		2 years, ≤ 50% HR, ≤ 40°C		-0.5 ... +1

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#### 4.0 Dimensions, shapes:

The capacitors are axial.



D max [mm]	< 7.5	8 ... 12	$\geq 12.5$	$l_1, l_2$
d [mm]	0.6	0.8	1.0	min 30 mm

The capacitors are delivered in bulk.

On special request we can deliver tape-mounted

**METALLIZED PPS CAPACITORS**

**Type MKS ... d**

**MKS ... d 63 VDC**

B4F6	Type	Cn [μF]	Dimensions			dU / dt max [V / μs]	î [A]
			∅ [mm]	L [mm]	∅ leads [mm]		
Pos.							
1	MKS 6-110 d	0.010	4.5	11.0	0.6	25	0.3
2	MKS 6-115 d	0.015	4.5	11.0	0.6	25	0.4
3	MKS 6-122 d	0.022	4.5	11.0	0.6	25	0.6
4	MKS 6-133 d	0.033	4.5	11.0	0.6	25	0.8
5	MKS 6-147 d	0.047	4.5	11.0	0.6	25	1.2
6	MKS 6-168 d	0.068	5.5	11.0	0.6	25	1.7
7	MKS 6-010 d	0.10	5.5	11.0	0.6	25	2.5
8	MKS 6-015 d	0.15	6.5	11.0	0.6	25	3.8
9	MKS 6-022 d	0.22	6.5	11.0	0.6	25	5.5
1	MKS 6-033 d	0.33	6.5	15.0	0.6	14	4.6
2	MKS 6-047 d	0.47	7.5	15.0	0.6	14	6.6
3	MKS 6-068 d	0.68	7.5	19.5	0.6	8	5.4
4	MKS 6-1.0 d	1.0	7.5	19.5	0.6	8	8.0
5	MKS 6-1.5 d	1.5	8.8	19.5	0.8	8	12.0
6	MKS 6-2.2 d	2.2	10.3	19.5	0.8	8	17.6
7	MKS 6-3.3 d	3.3	11	24	0.8	5	16.5
8	MKS 6-4.7 d	4.7	11.5	27	0.8	4	18.8
9	MKS 6-6.8 d	6.8	12	32	0.8	4	27.2
10	MKS 6-10 d	10	15	32	1.0	4	40.0
11	MKS 6-15 d	15	18	32	1.0	4	60.0
12	MKS 6-22 d	22	30	32	1.0	4	88.0
13	MKS 6-33 d	33	30	44	1.0	2	66.0

**METALLIZED PPS CAPACITORS**

**Type MKS ... d**

**MKS ... d 100 VDC**

B4F6 Pos.	Type	Cn [μF]	Dimensions			dU / dt max [V / μs]	î s [A]
			∅ [mm]	L [mm]	∅ leads [mm]		
1	MKS 10-110 d	0.010	4.5	11.0	0.6	38	0.4
2	MKS 10-115 d	0.015	4.5	11.0	0.6	38	0.6
3	MKS 10-122 d	0.022	4.5	11.0	0.6	38	0.8
4	MKS 10-133 d	0.033	5.5	11.0	0.6	38	1.3
5	MKS 10-147 d	0.047	5.5	11.0	0.6	38	1.8
6	MKS 10-168 d	0.068	6.5	11.0	0.6	38	2.6
7	MKS 10-010 d	0.10	6.5	11.0	0.6	38	3.8
8	MKS 10-015 d	0.15	6.5	15.0	0.6	23	3.5
9	MKS 10-022 d	0.22	8.0	15.0	0.8	23	5.1
10	MKS 10-033 d	0.33	7.0	19.5	0.6	13	4.3
11	MKS 10-047 d	0.47	7.5	19.5	0.6	13	6.1
12	MKS 10-068 d	0.68	8.5	19.5	0.8	13	8.8
13	MKS 10-1.0 d	1.0	10.0	19.5	0.8	13	13.0
14	MKS 10-1.5 d	1.5	9.0	27.0	0.8	6	9.0
15	MKS 10-2.2 d	2.2	10.6	27.0	0.8	6	13.2
16	MKS 10-3.3 d	3.3	12.5	27	1.0	6	19.8
17	MKS 10-4.7 d	4.7	13	32	1.0	6	28.2
18	MKS 10-6.8 d	6.8	16	32	1.0	6	40.8
19	MKS 10-10 d	10	17.5	32	1.0	6	60.0
20	MKS 10-15 d	15	23	44	1.0	4	60.0
21	MKS 10-22 d	22	28	44	1.0	4	88.0
22	MKS 10-33 d	33	32	44	1.0	4	132.0

**METALLIZED PPS CAPACITORS**

**Type MKS ... d**

**MKS ... d 160 VDC**

B4F6 Pos.	Type	Cn [ $\mu$ F]	Dimensions			dU / dt max [V / $\mu$ s]	$\hat{I}$ s [A]
			$\varnothing$ [mm]	L [mm]	$\varnothing$ leads [mm]		
1	MKS 16-110 d	0.010	4.5	11.0	0.6	51	0.5
2	MKS 16-115 d	0.015	4.5	11.0	0.6	51	0.8
3	MKS 16-122 d	0.022	4.5	11.0	0.6	51	1.1
4	MKS 16-133 d	0.033	5.5	11.0	0.6	51	1.7
5	MKS 16-147 d	0.047	6.5	11.0	0.6	51	2.4
6	MKS 16-168 d	0.068	6.5	15.0	0.6	38	2.6
7	MKS 16-010 d	0.10	7.5	15.0	0.6	38	3.8
8	MKS 16-015 d	0.15	7.0	19.5	0.6	21	3.2
9	MKS 16-022 d	0.22	7.5	19.5	0.6	21	4.6
10	MKS 16-033 d	0.33	9.0	19.5	0.8	21	6.9
11	MKS 16-047 d	0.47	10.5	19.5	0.8	21	9.9
12	MKS 16-068 d	0.68	9.5	27.0	0.8	10	6.8
13	MKS 16-1.0 d	1.0	11.5	27.0	0.8	10	10.0
14	MKS 16-1.5 d	1.5	12.5	32.0	1.0	10	15.0
15	MKS 16-2.2 d	2.2	14.5	32.0	1.0	10	22.0
16	MKS 16-3.3 d	3.3	17	32	1.0	10	33.0
17	MKS 16-4.7 d	4.7	20	32	1.0	10	47.0
18	MKS 16-6.8 d	6.8	24	32	1.0	10	68.0
19	MKS 16-10 d	10	24	44	1.0	6	60.0
20	MKS 16-15 d	15	30	44	1.0	6	90.0
21	MKS 16-22 d	22	35	44	1.0	6	132.0

**METALLIZED PPS CAPACITORS**

**Type MKS ... d**

**MKS ... d 250 VDC**

B4F6 Pos.	Type	Cn [ $\mu$ F]	Dimensions			dU / dt max [V / $\mu$ s]	$\hat{I}$ s [A]
			$\varnothing$ [mm]	L [mm]	$\varnothing$ leads [mm]		
1	MKS 25-110 d	0.010	5.5	11.0	0.6	51	0.5
2	MKS 25-115 d	0.015	5.5	11.0	0.6	51	0.8
3	MKS 25-122 d	0.022	5.5	11.0	0.6	51	1.1
4	MKS 25-133 d	0.033	6.5	11.0	0.6	51	1.7
5	MKS 25-147 d	0.047	6.5	15.0	0.6	51	2.4
6	MKS 25-168 d	0.068	7.0	15.0	0.6	38	2.6
7	MKS 25-010 d	0.10	8.0	15.0	0.6	38	3.8
8	MKS 25-015 d	0.15	7.5	19.5	0.6	21	3.2
9	MKS 25-022 d	0.22	8.5	19.5	0.6	21	4.6
10	MKS 25-033 d	0.33	10.0	19.5	0.8	21	6.9
11	MKS 25-047 d	0.47	11.0	19.5	0.8	21	9.9
12	MKS 25-068 d	0.68	11.0	27.0	0.8	10	6.8
13	MKS 25-1.0 d	1.0	11.5	32.0	0.8	10	10.0
14	MKS 25-1.5 d	1.5	14.0	32.0	1.0	10	15.0
15	MKS 25-2.2 d	2.2	16.5	32.0	1.0	10	22.0
16	MKS 25-3.3 d	3.3	20.0	32.0	1.0	10	33.0
17	MKS 25-4.7 d	4.7	23.5	32.0	1.0	10	47.0
18	MKS 25-6.8 d	6.8	23.0	44.0	1.0	10	68.0
19	MKS 25-10 d	10.0	29.0	44.0	1.0	6	60.0
20	MKS 25-15 d	15.0	35.0	44.0	1.0	6	90.0

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**METALLIZED PPS CAPACITORS**

**Type MKS ... d**

MKS...d 400 VDC

B4F6 Pos.	Type	Cn	Dimension			dU / dt max	Î s
		[µF]	ø [mm]	L [mm]	ø fil [mm]	[V / µs]	[A]
1	MKS 40-110 d	0.010	6.5	11.0	0.6	102	1.0
2	MKS 40-115 d	0.015	6.5	15.0	0.6	61	0.9
3	MKS 40-122 d	0.022	7.0	15.0	0.6	61	1.3
4	MKS 40-133 d	0.033	7.5	15.0	0.6	61	2.0
5	MKS 40-147 d	0.047	7.0	19.5	0.6	33	1.6
6	MKS 40-168 d	0.068	7.5	19.5	0.6	33	2.2
7	MKS 40-010 d	0.10	9.5	19.5	0.8	33	3.3
8	MKS 40-015 d	0.15	11.0	19.5	0.8	33	5.0
9	MKS 40-022 d	0.22	10.5	27.0	0.8	16	3.5
10	MKS 40-033 d	0.33	12.5	27.0	1.0	16	5.3
11	MKS 40-047 d	0.47	12.5	32.0	1.0	16	7.5
12	MKS 40-068 d	0.68	15.0	32.0	1.0	16	10.9
13	MKS 40-1.0 d	1.0	17.8	32.0	1.0	16	16.0
14	MKS 40-1.5 d	1.5	21.5	32.0	1.0	16	24.0
15	MKS 40-2.2 d	2.2	23.0	44.0	1.0	11	24.2
16	MKS 40-3.3 d	3.3	27.5	44.0	1.0	11	36.3
17	MKS 40-4.7 d	4.7	33.0	44.0	1.0	11	51.7
18	MKS 40-6.8 d	6.8	39.0	44.0	1.0	11	74.8

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**METALLIZED PPS CAPACITORS**

**Type MKS ... d**

**MKS ... d 630 VDC**

B4F6 Pos.	Type	Cn [μF]	Dimensions			dU / dt max [V / μs]	î s [A]
			ø [mm]	L [mm]	ø leads[mm]		
1	MKS 63-110 d	0.010	6.5	15.0	0.6	100	1.0
2	MKS 63-115 d	0.015	7.5	15.0	0.6	100	1.5
3	MKS 63-122 d	0.022	7.5	19.5	0.6	45	1.0
4	MKS 63-133 d	0.033	8.6	19.5	0.8	45	1.5
5	MKS 63-147 d	0.047	10.0	19.5	0.8	45	2.1
6	MKS 63-168 d	0.068	11.5	19.5	0.8	45	3.1
7	MKS 63-010 d	0.10	10.5	27.0	0.8	21	2.1
8	MKS 63-015 d	0.15	12.5	27.0	1.0	21	3.2
9	MKS 63-022 d	0.22	15.0	27.0	1.0	21	4.6
10	MKS 63-033 d	0.33	16.0	32.0	1.0	21	6.9
11	MKS 63-047 d	0.47	19.0	32.0	1.0	21	9.9
12	MKS 63-068 d	0.68	22.5	32.0	1.0	21	14.3
13	MKS 63-1.0 d	1.0	27.0	32.0	1.0	21	21.0
14	MKS 63-1.5 d	1.5	28.0	44.0	1.0	14	21.0
15	MKS 63-2.2 d	2.2	34.0	44.0	1.0	14	30.8