

**Applications**

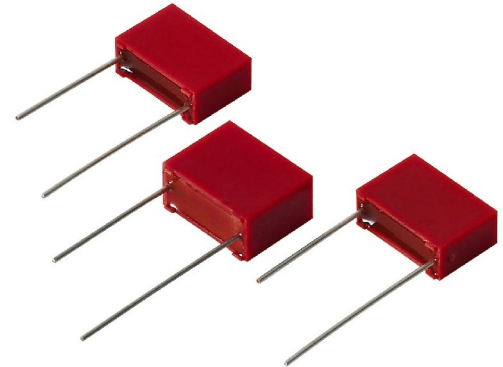
- DC and AC voltages
- Professional Applications
- Tuned circuits, filters, timers
- Integrators, S/H
- Coupling / decoupling, audio
- Instrumentation

**Main Characteristics**

- Dry film-foil based technology
- Rated Voltages: 63 VDC to 630 VDC
- Climatic category: 40/100/56
- Tolerances  $\pm 10\%$   
and on request:  $\pm 5\%$ ,  $\pm 2\%$ ,  $\pm 1\%$
- Class 1 compliant

**Design**

- Metallized polyphenylene sulphide (PPS) film
- Polyester exterior wrap
- Axial tinned-copper leads
- Resin-epoxy end-seal (UL-V0)



**MKS....g**

**1.0 Rated Values and Operational Data**

DC	Nominal Voltage $U_R$ [VDC]	$\leq 85^\circ\text{C}$	1	63	100		250	400	630
	Category Voltage $U_C$ [VDC] = $0.8 \times U_R$	$\leq 85^\circ\text{C}$	1	50	80		200	320	500
	Test Voltage $U_T$ [VDC] = $0.8 \times U_R$	1 min / $23^\circ\text{C}$	1	100	160		400	640	1000
AC	Nominal Voltage $U_{N-50/60}$ Hz [VAC]	$\leq 85^\circ\text{C}$	1	40	63		120	200	(275)
	Category Voltage $U_C$	$\leq 100^\circ\text{C}$	1	35	50		75	160	200

## 2.0 Capacitance Range

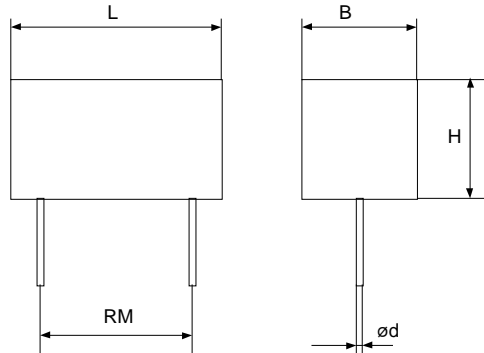
Cn =>	1.0 nF	33 nF	68 nF	1.5 µF	3.3 µF	10 µF			22 µF
63 VDC									
100 VDC									
250 VDC									
400 VDC									
630 VDC									

## 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 at 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% RH, ≤ 40°C		-0.5 ... +1	

## 5.0 Dimensions:

This series is delivered with radial leads. For axial leads, please consult the MKS...d series.



D max [mm]	13	18	26.5	31.5	42
d [mm]	10	15	22.5	27.5	37.5

ø d [mm]	
0.6	$B \leq 4 \text{ mm}$
0.8	$B > 4 \text{ mm}$
1.0	RM 37.5 mm

Capacitors are delivered in bulk. Taped product available on demand.

**MKS ... g 63 VDC**

B4F6	Type	C <sub>N</sub>	Dimensions						
			Pos.	Housing	B [mm]	H [mm]	L [mm]	∅ wire lead [mm]	Pitch [mm]
	MKS 6-168 g K	0.068	1	D	3.5	8.5	13.0	0.6	10.00
	MKS 6-182 g K	0.082	2	D	3.5	8.5	13.0	0.6	10.00
	MKS 6-010 g K	0.10	3	D	3.5	8.5	13.0	0.6	10.00
	MKS 6-012 g K	0.12	4	E	4.0	9.0	13.0	0.6	10.00
	MKS 6-015 g K	0.15	5	E	4.0	9.0	13.0	0.6	10.00
	MKS 6-018 g K	0.18	6	F	5.0	10.5	13.0	0.8	10.00
	MKS 6-022 g K	0.22	7	F	5.0	10.5	13.0	0.8	10.00
	MKS 6-027 g K	0.27	8	F	5.0	10.5	13.0	0.8	10.00
	MKS 6-033 g K	0.33	9	F	5.0	10.5	13.0	0.8	10.00
	MKS 6-039 g K	0.39	10	F	5.0	10.5	13.0	0.8	10.00
	MKS 6-047 g K	0.47	11	G	6.0	11.5	13.0	0.8	10.00
	MKS 6-056 g K	0.56	12	G	6.0	11.5	13.0	0.8	10.00
	MKS 6-068 g K	0.68	13	H	5.5	11.0	18.0	0.8	15.00
	MKS 6-082 g K	0.82	14	I	6.5	12.5	18.0	0.8	15.00
	MKS 6-1.0 g K	1.00	15	I	6.5	12.5	18.0	0.8	15.00
	MKS 6-1.2 g K	1.20	16	I	6.5	12.5	18.0	0.8	15.00
	MKS 6-1.5 g K	1.50	17	J	8.5	14.5	18.0	0.8	15.00
	MKS 6-1.8 g K	1.80	18	J	8.5	14.5	18.0	0.8	15.00
	MKS 6-2.2 g K	2.20	19	J	8.5	14.5	18.0	0.8	15.00
	MKS 6-2.7 g K	2.70	20	K	7.0	15.5	26.5	0.8	22.50
	MKS 6-3.3 g K	3.30	21	K	7.0	15.5	26.5	0.8	22.50
	MKS 6-3.9 g K	3.90	22	L	8.5	18.0	26.5	0.8	22.50
	MKS 6-4.7 g K	4.70	23	L	8.5	18.0	26.5	0.8	22.50
	MKS 6-5.6 g K	5.60	24	M	10.5	19.0	26.5	0.8	22.50
	MKS 6-6.8 g K	6.80	25	M	10.5	19.0	26.5	0.8	22.50
	MKS 6-8.2 g K	8.20	26	M	10.5	19.0	26.5	0.8	22.50
	MKS 6-10 g K	10.00	27	N	11.5	20.5	31.5	0.8	27.50
	MKS 6-12 g K	12.00	28	N	11.5	20.5	31.5	0.8	27.50
	MKS 6-15 g K	15.00	29	O	14.0	24.0	31.5	0.8	27.50
	MKS 6-18 g K	18.00	30	O	14.0	24.0	31.5	0.8	27.50
	MKS 6-22 g K	22.00	31	R	20.0	33.5	42.0	1.0	37.50

MKS ... g 100 VDC

B4F6	Type	C <sub>N</sub>	Dimensions					
			Pos.	[μF]	Housing	B [mm]	H [mm]	L [mm]
1	MKS 10-133 g K	0.033	D	3.5	8.5	13.0	0.6	10.00
2	MKS 10-139 g K	0.039	D	3.5	8.5	13.0	0.6	10.00
3	MKS 10-147 g K	0.047	D	3.5	8.5	13.0	0.6	10.00
4	MKS 10-156 g K	0.056	E	4.0	9.0	13.0	0.6	10.00
5	MKS 10-168 g K	0.068	E	4.0	9.0	13.0	0.6	10.00
6	MKS 10-182 g K	0.082	E	4.0	9.0	13.0	0.6	10.00
7	MKS 10-010 g K	0.10	E	4.0	9.0	13.0	0.6	10.00
8	MKS 10-012 g K	0.12	F	5.0	10.5	13.0	0.8	10.00
9	MKS 10-015 g K	0.15	F	5.0	10.5	13.0	0.8	10.00
10	MKS 10-018 g K	0.18	G	6.0	11.5	13.0	0.8	10.00
11	MKS 10-022 g K	0.22	G	6.0	11.5	13.0	0.8	10.00
12	MKS 10-027 g K	0.27	H	5.5	11.0	18.0	0.8	15.00
13	MKS 10-033 g K	0.33	H	5.5	11.0	18.0	0.8	15.00
14	MKS 10-039 g K	0.39	I	6.5	12.5	18.0	0.8	15.00
15	MKS 10-047 g K	0.47	I	6.5	12.5	18.0	0.8	15.00
16	MKS 10-056 g K	0.56	I	6.5	12.5	18.0	0.8	15.00
17	MKS 10-068 g K	0.68	I	6.5	12.5	18.0	0.8	15.00
18	MKS 10-082 g K	0.82	J	8.5	14.5	18.0	0.8	15.00
19	MKS 10-1.0 g K	1.00	J	8.5	14.5	18.0	0.8	15.00
20	MKS 10-1.2 g K	1.20	K	7.0	15.5	26.5	0.8	22.50
21	MKS 10-1.5 g K	1.50	K	7.0	15.5	26.5	0.8	22.50
22	MKS 10-1.8 g K	1.80	K	7.0	15.5	26.5	0.8	22.50
23	MKS 10-2.2 g K	2.20	L	8.5	18.0	26.5	0.8	22.50
24	MKS 10-2.7 g K	2.70	M	10.5	19.0	26.5	0.8	22.50
25	MKS 10-3.3 g K	3.30	M	10.5	19.0	26.5	0.8	22.50
26	MKS 10-3.9 g K	3.90	N	11.5	20.5	31.5	0.8	27.50
27	MKS 10-4.7 g K	4.70	N	11.5	20.5	31.5	0.8	27.50
28	MKS 10-5.6 g K	5.60	O	14.0	24.0	31.5	0.8	27.50
29	MKS 10-6.8 g K	6.80	O	14.0	24.0	31.5	0.8	27.50
30	MKS 10-8.2 g K	8.20	O	14.0	24.0	31.5	0.8	27.50
31	MKS 10-10 g K	10.00	O	14.0	24.0	31.5	0.8	27.50
32	MKS 10-12 g K	12.00	R	20.0	33.5	42.0	1.0	37.50
33	MKS 10-15 g K	15.00	R	20.0	33.5	42.0	1.0	37.50
34	MKS 10-18 g K	18.00	R	20.0	33.5	42.0	1.0	37.50
35	MKS 10-22 g K	22.00	R	20.0	33.5	42.0	1.0	37.50

MKS ... g 250 VDC

B4F6	Type	C <sub>N</sub>	Dimensions					
Pos.		[μF]	Housing	B [mm]	H [mm]	L [mm]	Ø wire leads [mm]	Pitch [mm]
1	MKS 25-210 g K	0.0010	D	3.5	8.5	13.0	0.6	10.00
2	MKS 25-215 g K	0.0015	D	3.5	8.5	13.0	0.6	10.00
3	MKS 25-222 g K	0.0022	D	3.5	8.5	13.0	0.6	10.00
4	MKS 25-233 g K	0.0033	D	3.5	8.5	13.0	0.6	10.00
5	MKS 25-247 g K	0.0047	D	3.5	8.5	13.0	0.6	10.00
6	MKS 25-268 g K	0.0068	D	3.5	8.5	13.0	0.6	10.00
7	MKS 25-110 g K	0.010	D	3.5	8.5	13.0	0.6	10.00
8	MKS 25-112 g K	0.012	D	3.5	8.5	13.0	0.6	10.00
9	MKS 25-115 g K	0.015	D	3.5	8.5	13.0	0.6	10.00
10	MKS 25-118 g K	0.018	D	3.5	8.5	13.0	0.6	10.00
11	MKS 25-122 g K	0.022	D	3.5	8.5	13.0	0.6	10.00
12	MKS 25-127 g K	0.027	E	4.0	9.0	13.0	0.6	10.00
13	MKS 25-133 g K	0.033	E	4.0	9.0	13.0	0.6	10.00
14	MKS 25-139 g K	0.039	E	4.0	9.0	13.0	0.6	10.00
15	MKS 25-147 g K	0.047	F	5.0	10.5	13.0	0.8	10.00
16	MKS 25-156 g K	0.056	F	5.0	10.5	13.0	0.8	10.00
17	MKS 25-168 g K	0.068	F	5.0	10.5	13.0	0.8	10.00
18	MKS 25-182 g K	0.082	H	5.5	11.0	18.0	0.8	15.00
19	MKS 25-010 g K	0.10	H	5.5	11.0	18.0	0.8	15.00
20	MKS 25-012 g K	0.12	H	5.5	11.0	18.0	0.8	15.00
21	MKS 25-015 g K	0.15	H	5.5	11.0	18.0	0.8	15.00
22	MKS 25-018 g K	0.18	I	6.5	12.5	18.0	0.8	15.00
23	MKS 25-022 g K	0.22	I	6.5	12.5	18.0	0.8	15.00
24	MKS 25-027 g K	0.27	J	8.5	14.5	18.0	0.8	15.00
25	MKS 25-033 g K	0.33	J	8.5	14.5	18.0	0.8	15.00
26	MKS 25-039 g K	0.39	K	7.0	15.5	26.5	0.8	22.50
27	MKS 25-047 g K	0.47	K	7.0	15.5	26.5	0.8	22.50
28	MKS 25-056 g K	0.56	L	8.5	18.0	26.5	0.8	22.50
29	MKS 25-068 g K	0.68	L	8.5	18.0	26.5	0.8	22.50
30	MKS 25-082 g K	0.82	M	10.5	19.0	26.5	0.8	22.50
31	MKS 25-1.0 g K	1.00	M	10.5	19.0	26.5	0.8	22.50
32	MKS 25-1.2 g K	1.20	N	11.5	20.5	31.5	0.8	27.50
33	MKS 25-1.5 g K	1.50	N	11.5	20.5	31.5	0.8	27.50
34	MKS 25-1.8 g K	1.80	O	14.0	24.0	31.5	0.8	27.50
35	MKS 25-2.2 g K	2.20	O	14.0	24.0	31.5	0.8	27.50
36	MKS 25-2.7 g K	2.70	P	18.0	27.5	31.5	0.8	27.50
37	MKS 25-3.3 g K	3.30	P	18.0	27.5	31.5	0.8	27.50
38	MKS 25-3.9 g K	3.90	Q	18.0	29.0	42.0	1.0	37.50
39	MKS 25-4.7 g K	4.70	Q	18.0	29.0	42.0	1.0	37.50
40	MKS 25-5.6 g k	5.60	R	20.0	33.5	42.0	1.0	37.50
41	MKS 25-6.8 g K	6.80	R	20.0	33.5	42.0	1.0	37.50

MKS ... g 400 VDC

B4F6	Type	C <sub>N</sub>	Dimension					
			Pos.	[μF]	Housing	B [mm]	H [mm]	L [mm]
1	MKS 40-210 g K	0.0010	D	3.5	8.5	13.0	0.6	10.00
2	MKS 40-215 g K	0.0015	D	3.5	8.5	13.0	0.6	10.00
3	MKS 40-222 g K	0.0022	D	3.5	8.5	13.0	0.6	10.00
4	MKS 40-233 g K	0.0033	D	3.5	8.5	13.0	0.6	10.00
5	MKS 40-247 g K	0.0047	D	3.5	8.5	13.0	0.6	10.00
6	MKS 40-268 g K	0.0068	D	3.5	8.5	13.0	0.6	10.00
7	MKS 40-110 g K	0.010	E	4.0	9.0	13.0	0.6	10.00
8	MKS 40-112 g K	0.012	F	5.0	10.5	13.0	0.8	10.00
9	MKS 40-115 g K	0.015	F	5.0	10.5	13.0	0.8	10.00
10	MKS 40-118 g K	0.018	F	5.0	10.5	13.0	0.8	10.00
11	MKS 40-122 g K	0.022	F	5.0	10.5	13.0	0.8	10.00
12	MKS 40-127 g K	0.027	G	6.0	11.5	13.0	0.8	10.00
13	MKS 40-133 g K	0.033	G	6.0	11.5	13.0	0.8	10.00
14	MKS 40-139 g K	0.039	H	5.5	11.0	18.0	0.8	15.00
15	MKS 40-147 g K	0.047	H	5.5	11.0	18.0	0.8	15.00
16	MKS 40-156 g K	0.056	I	6.5	12.5	18.0	0.8	15.00
17	MKS 40-168 g K	0.068	I	6.5	12.5	18.0	0.8	15.00
18	MKS 40-182 g K	0.082	J	8.5	14.5	18.0	0.8	15.00
19	MKS 40-010 g K	0.10	J	8.5	14.5	18.0	0.8	15.00
20	MKS 40-012 g K	0.12	J	8.5	14.5	18.0	0.8	15.00
21	MKS 40-015 g K	0.15	J	8.5	14.5	18.0	0.8	15.00
22	MKS 40-018 g K	0.18	K	7.0	15.5	26.5	0.8	22.50
23	MKS 40-022 g K	0.22	K	7.0	15.5	26.5	0.8	22.50
24	MKS 40-027 g K	0.27	M	10.5	19.0	26.5	0.8	22.50
25	MKS 40-033 g K	0.33	M	10.5	19.0	26.5	0.8	22.50
26	MKS 40-039 g K	0.39	N	11.5	20.5	31.5	0.8	27.50
27	MKS 40-047 g K	0.47	N	11.5	20.5	31.5	0.8	27.50
28	MKS 40-056 g K	0.56	N	11.5	20.5	31.5	0.8	27.50
29	MKS 40-068 g K	0.68	N	11.5	20.5	31.5	0.8	27.50
30	MKS 40-082 g K	0.82	O	14.0	24.0	31.5	0.8	27.50
31	MKS 40-1.0 g K	1.00	O	14.0	24.0	31.5	0.8	27.50
32	MKS 40-1.2 g K	1.20	Q	18.0	29.0	42.0	1.0	37.50
33	MKS 40-1.5 g K	1.50	Q	18.0	29.0	42.0	1.0	37.50
34	MKS 40-1.8 g K	1.80	R	20.0	33.5	42.0	1.0	37.50
35	MKS 40-2.2 g K	2.20	R	20.0	33.5	42.0	1.0	37.50

**MKS ... g 630 VDC**

B4F6	Type	C <sub>N</sub>	Dimensions					
Pos.		[μF]	Housing	B [mm]	H [mm]	L [mm]	∅ wire lead [mm]	Pitch [mm]
1	MKS 63-210 g K	0.0010	D	3.5	8.5	13.0	0.6	10.00
2	MKS 63-215 g K	0.0015	D	3.5	8.5	13.0	0.6	10.00
3	MKS 63-222 g K	0.0022	D	3.5	8.5	13.0	0.6	10.00
4	MKS 63-233 g K	0.0033	D	3.5	8.5	13.0	0.6	10.00
5	MKS 63-247 g K	0.0047	D	3.5	8.5	13.0	0.6	10.00
6	MKS 63-268 g K	0.0068	E	4.0	9.0	13.0	0.6	10.00
7	MKS 63-110 g K	0.010	F	5.0	10.5	13.0	0.8	10.00
8	MKS 63-112 g K	0.012	G	6.0	11.5	13.0	0.8	10.00
9	MKS 63-115 g K	0.015	G	6.0	11.5	13.0	0.8	10.00
10	MKS 63-118 g K	0.018	H	5.5	11.0	18.0	0.8	15.00
11	MKS 63-122 g K	0.022	H	5.5	11.0	18.0	0.8	15.00
12	MKS 63-127 g K	0.027	I	6.5	12.5	18.0	0.8	15.00
13	MKS 63-133 g K	0.033	I	6.5	12.5	18.0	0.8	15.00
14	MKS 63-139 g K	0.039	J	8.5	14.5	18.0	0.8	15.00
15	MKS 63-147 g K	0.047	J	8.5	14.5	18.0	0.8	15.00
16	MKS 63-156 g K	0.056	K	7.0	15.5	26.5	0.8	22.50
17	MKS 63-168 g K	0.068	K	7.0	15.5	26.5	0.8	22.50
18	MKS 63-182 g K	0.082	L	8.5	18.0	26.5	0.8	22.50
19	MKS 63-010 g K	0.10	L	8.5	18.0	26.5	0.8	22.50
20	MKS 63-012 g K	0.12	M	10.5	19.0	26.5	0.8	22.50
21	MKS 63-015 g K	0.15	M	10.5	19.0	26.5	0.8	22.50
22	MKS 63-018 g K	0.18	N	11.5	20.5	31.5	0.8	27.50
23	MKS 63-022 g K	0.22	N	11.5	20.5	31.5	0.8	27.50
24	MKS 63-027 g K	0.27	O	14.0	24.0	31.5	0.8	27.50
25	MKS 63-033 g K	0.33	O	14.0	24.0	31.5	0.8	27.50
26	MKS 63-039 g K	0.39	P	18.0	27.5	31.5	0.8	27.50
27	MKS 63-047 g K	0.47	P	18.0	27.5	31.5	0.8	27.50
28	MKS 63-056 g K	0.56	Q	18.0	29.0	42.0	1.0	37.50
29	MKS 63-068 g K	0.68	Q	18.0	29.0	42.0	1.0	37.50
30	MKS 63-082 g K	0.82	R	20.0	33.5	42.0	1.0	37.50
31	MKS 63-1.0 g K	1.00	R	20.0	33.5	42.0	1.0	37.50