

High Security Capacitors with controllable frame layers

Type CKS 501-4 BDF

Applications

- Railway Signal Systems
- High Reliability Circuits

Main Characteristics

- High Reliability
- Controllable Metallized frame layers
- According to standards NF F 62 – 102, PPS dielectric
- Nominal Voltage U_n : 40 VDC to 630 VDC
- Dry film technology
- Climatic category 40/125/56
- Tolerances $\pm 20\%$, $\pm 10\%$, $\pm 5\%$, $\pm 2\%$



CKS 501-4BDF

Design Data

- Metallized PPS film
- Self-extinguishing plastic housing
- Tinned copper radial leads
- Epoxy resin end-seal (UL-V0)
- Marking to indicate outer foil on request

1.0 Rated Values and Operational Data

DC	Nominal Voltage U_R [VDC]	$\leq 85^\circ\text{C}$	B	40	63	160	250	400	630
	Category Voltage U_C [VDC] = $0.5x_r$	$\leq 125^\circ\text{C}$	B	20	31.5	80	125	200	315
	Test Voltage U_T [VDC] = $1.6xU_r$	1 min / 23°C	B	64	100	160	400	640	1000
AC	Nominal Voltage $U_{N-50/60}$ Hz [VAC]	$\leq 85^\circ\text{C}$	B	25	40	100	160	200	220

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2.0 Capacitance Range

Cn =>	1.0 nF	22 nF	33 nF	68 nF	0.22µF	0.47µF	2.2µF	4.7µF	10µF	33µF
40 VDC										
63 VDC										
160 VDC										
250 VDC										
400 VDC										
630 VDC										

3.0 Characteristics

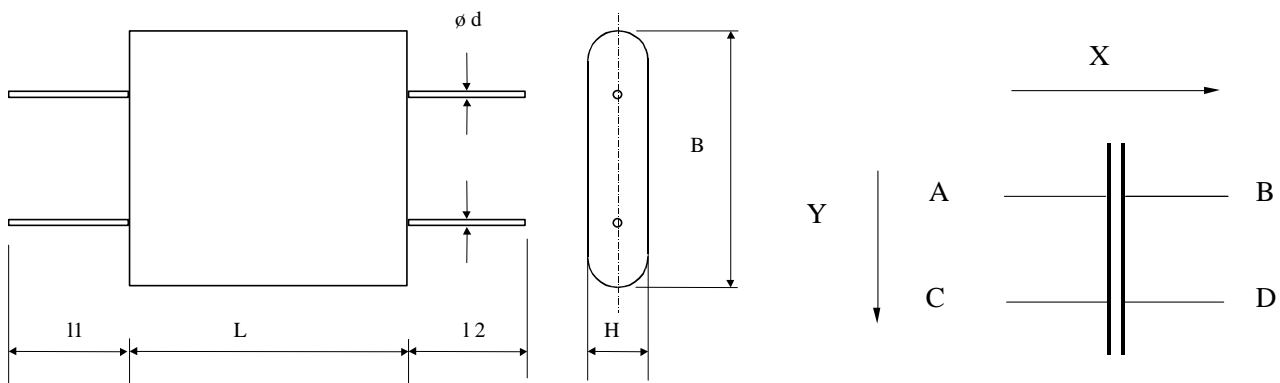
			Min	Typ	Max
Dissipation Factor	tg δ	≤ 1 µF			x 10 ⁻⁴
		> 1 µF			x 10 ⁻⁴
Insulation Resistance 1min à 23°C	R _i [MOhms]	≤ 0.22 µF	50000		
Time Constant 1min à 23°C	R _i C [s]	> 0.22 µF	10000		
Temperature Coefficient	α _c [ppm]				
Long term stability	ΔC / C [%]				

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4.0 Dimensions, Shape

The capacitors are delivered in bulk.



High Security Capacitors with controllable frame layers

Type CKS 501-4 BDF

CKS 501-4 BDF 40 VDC

B4F6	Type	Cn	Dimensions					
			Pos.	Dim.	B [mm]	H [mm]	L [mm]	X [mm]
	CKS 501-4BDF 4-047	0.47	6	12.0	9.0	14.0	5.08	0.60
	CKS 501-4BDF 4-068	0.68	9	13.5	10.5	14.0	5.08	0.60
	CKS 501-4BDF 4-1.0	1.0	15	12.0	9.0	16.0	5.08	0.60
	CKS 501-4BDF 4-1.5	1.5	20	13.5	10.5	16.0	5.08	0.60
	CKS 501-4BDF 4-2.2	2.2	26	12.5	9.5	21.0	5.08	0.80
	CKS 501-4BDF 4-3.3	3.3	30	15.0	11.0	21.0	7.62	0.80
	CKS 501-4BDF 4-4.7	4.7	34	12.5	9.0	34.0	5.08	0.80
	CKS 501-4BDF 4-6.8	6.8	37	14.0	11.0	34.0	5.08	0.80
	CKS 501-4BDF 4-10.0	10	46	16.5	13.5	34.0	7.62	0.80
	CKS 501-4BDF 4-15.0	15	45	22.0	13.0	34.0	10.16	0.80
	CKS 501-4BDF 4-22.0	22	52	24.0	15.0	34.0	10.16	0.80
	CKS 501-4BDF 4-33.0	33	55	27.0	18.0	34.0	12.70	0.80

CKS 501-4 BDF 63 VDC

B4F6	Type	Cn	Dimensions					
			Pos.	Dim.	B [mm]	H [mm]	L [mm]	X [mm]
	CKS 501-4BDF 6-022	0.22	6	12.0	9.0	14.0	5.08	0.6
	CKS 501-4BDF 6-033	0.33	9	13.5	10.5	14.0	5.08	0.6
	CKS 501-4BDF 6-047	0.47	15	12.0	9.0	16.0	5.08	0.6
	CKS 501-4BDF 6-068	0.68	20	13.5	10.5	16.0	5.08	0.6
	CKS 501-4BDF 6-1.0	1.0	26	12.5	9.5	21.0	5.08	0.8
	CKS 501-4BDF 6-1.5	1.5	30	15.0	11.0	21.0	7.62	0.8
	CKS 501-4BDF 6-2.2	2.2	34	12.5	9.0	34.0	5.08	0.8
	CKS 501-4BDF 6-3.3	3.3	37	14.0	11.0	34.0	5.08	0.8
	CKS 501-4BDF 6-4.7	4.7	46	16.5	13.5	34.0	7.62	0.8
	CKS 501-4BDF 6-6.8	6.8	45	22.0	13.0	34.0	10.16	0.8
	CKS 501-4BDF 6-10.0	10	52	24.0	15.0	34.0	10.16	0.8
	CKS 501-4BDF 6-15.0	15	58	26.0	17.0	45.0	12.70	1.0
	CKS 501-4BDF 6-22.0	22	58	26.0	17.0	45.0	12.70	1.0
	CKS 501-4BDF 6-33.0	33	59	32.0	21.0	45.0	12.70	1.0

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High Security Capacitors with controllable frame layers

Type CKS 501-4 BDF

CKS 501-4 BDF 160 VDC

B4F6	Type	Cn [μF]	Dimensions					
			Pos.	Dim.	B [mm]	H [mm]	L [mm]	X [mm]
3	CKS 501-4BDF 16-168	0.068	6	12.0	9.0	14.0	5.08	0.6
5	CKS 501-4BDF 16-010	0.100	8	13.0	10.0	14.0	5.08	0.6
7	CKS 501-4BDF 16-015	0.150	15	12.0	9.0	16.0	5.08	0.6
9	CKS 501-4BDF 16-022	0.22	18	12.5	9.5	16.0	5.08	0.6
11	CKS 501-4BDF 16-033	0.33	25	13.0	9.0	21.0	5.08	0.8
13	CKS 501-4BDF 16-047	0.47	27	13.0	10.0	21.0	5.08	0.8
15	CKS 501-4BDF 16-068	0.68	34	12.5	9.0	34.0	5.08	0.8
17	CKS 501-4BDF 16-1.0	1.0	35	13.0	10.0	34.0	5.08	0.8
19	CKS 501-4BDF 16-1.5	1.5	41	16.0	12.5	34.0	7.62	0.8
21	CKS 501-4BDF 16-2.2	2.2	47	17.0	14.0	34.0	7.62	0.8
23	CKS 501-4BDF 16-3.3	3.3	52	24.0	15.0	34.0	10.16	0.8
24	CKS 501-4BDF 16-4.7	4.7	53	25.5	16.5	34.0	12.70	0.8
25	CKS 501-4BDF 16-6.8	6.8	58	26.0	17.0	45.0	12.70	1.0
27	CKS 501-4BDF 16-10.0	10	59	32.0	21.0	45.0	12.70	1.0

CKS 501-4 BDF 250 VDC

B4F6	Type	Cn [μF]	Dimensions					
			Pos.	Dim.	B [mm]	H [mm]	L [mm]	X [mm]
2	CKS 501-4BDF 25-133	0.033	7	12.5	9.5	14.0	5.08	0.6
4	CKS 501-4BDF 25-147	0.047	9	13.5	10.5	14.0	5.08	0.6
6	CKS 501-4BDF 25-168	0.068	15	12.0	9.0	16.0	5.08	0.6
8	CKS 501-4BDF 25-010	0.10	20	13.5	10.5	16.0	5.08	0.6
10	CKS 501-4BDF 25-015	0.15	26	12.5	9.5	21.0	5.08	0.8
12	CKS 501-4BDF 25-022	0.22	29	14.0	10.0	21.0	5.08	0.8
14	CKS 501-4BDF 25-033	0.33	34	12.5	9.0	34.0	5.08	0.8
16	CKS 501-4BDF 25-047	0.47	37	14.0	11.0	34.0	5.08	0.8
18	CKS 501-4BDF 25-068	0.68	41	16.0	12.5	34.0	7.62	0.8
20	CKS 501-4BDF 25-1.0	1.0	47	17.0	14.0	34.0	7.62	0.8
22	CKS 501-4BDF 25-1.5	1.5	52	24.0	15.0	34.0	10.16	0.8
23	CKS 501-4BDF 25-2.2	2.2	55	27.0	18.0	34.0	12.70	0.8
24	CKS 501-4BDF 25-3.3	3.3	58	26.0	17.0	45.0	12.70	1.0
25	CKS 501-4BDF 25-4.7	4.7	59	32.0	21.0	45.0	12.70	1.0

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Type CKS 501-4 BDF

CKS 501-4 BDF 400 VDC

B4F6	Type	Cn	Dimensions					
			Pos.	Dim.	B [mm]	H [mm]	L [mm]	X [mm]
	CKS 501-4BDF 40-122	0.022	7	12.5	9.5	14.0	5.08	0.6
	CKS 501-4BDF 40-133	0.033	11	14.0	11.0	14.0	5.08	0.6
	CKS 501-4BDF 40-147	0.047	18	12.5	9.5	16.0	5.08	0.6
	CKS 501-4BDF 40-168	0.068	26	12.5	9.5	21.0	5.08	0.8
	CKS 501-4BDF 40-010	0.10	27	13.0	10.0	21.0	5.08	0.8
	CKS 501-4BDF 40-015	0.15	31	14.5	11.5	21.0	5.08	0.8
	CKS 501-4BDF 40-022	0.22	34	12.5	9.0	34.0	5.08	0.8
	CKS 501-4BDF 40-033	0.33	37	14.0	11.0	34.0	5.08	0.8
	CKS 501-4BDF 40-047	0.47	41	16.0	12.5	34.0	7.62	0.8
	CKS 501-4BDF 40-068	0.68	42	21.0	12.5	34.0	10.16	0.8
	CKS 501-4BDF 40-1.0	1.00	52	24.0	15.0	34.0	10.16	0.8
	CKS 501-4BDF 40-1.5	1.50	58	26.0	17.0	45.0	12.70	1.0
	CKS 501-4BDF 40-2.2	2.20	58	26.0	17.0	45.0	12.70	1.0
	CKS 501-4BDF 40-3.3	3.30	59	32.0	21.0	45.0	12.70	1.0
	CKS 501-4BDF 40-4.7	4.70	60	37.0	26.0	45.0	12.70	1.0