

CD81 Series

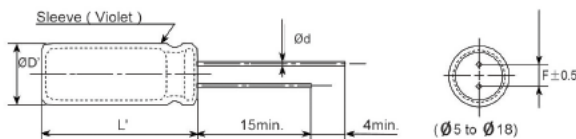
- Low impedance design
- Life time: +105°C 3000 hours
- Suit for Digital Household Appliance、Car-Audio、Tuner、SMPS、Adaptor...
- RoHs Compliant



◆ SPECIFICATIONS

Items	Characteristics											
Category Temperature Range	-40 ~ +105°C						-25 ~ +105°C					
Rated Voltage Range	6.3 ~ 100 Vdc						160 ~ 450 Vdc					
Capacitance Tolerance	±20%(M)						(at 20°C, 120Hz)					
Leakage Current	6.3 to 100Vdc : I=0.01CV(μA) or 3μA, which is greater.						160 to 450Vdc : I≤0.04CV +100μA					
	Where, I: Max. leakage current (μA), C: Nominal capacitance (μF), V: Rated voltage(V) (at 20°C after 1 minutes)											
Dissipation Factor (tan δ)	Rated Voltage (Vdc)	6.3v	10v	16v	25v	35v	50v	63v	80v	100v	160 to 250v	350 ~ 450v
	tanδ(Max.)	0.24	0.22	0.20	0.16	0.12	0.12	0.08	0.08	0.08	0.15	0.20
	When nominal capacitance exceeds 1,000μF, add 0.02 to the value above for each 1,000μF increase . (at 20°C,120Hz)											
Low Temperature Characteristics (Max. Impedance Ratio)	Rated Voltage (Vdc)	6.3 to 100v			160 to 250v			350 to 450v			(at 120Hz)	
	Z(-25°C)/Z(+20°C)	5max			3			6				
	Z(-40°C)/Z(+20°C)	10max			8			8				
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with the rated ripple current is applied for 3000 hours at 105°C.											
	Capacitance change	≤±20% of the initial value.										
	D.F. (tan δ)	≤150% of the initial specified value.										
	Leakage current	≤ The initial specified value.										
Shelf Life	The following specifications shall be satisfied when the capacitors performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C after exposing them for 1000hours at 105°C without voltage applied.											
	Capacitance change	≤±20% of the initial value.										
	D.F. (tan δ)	≤200% of the initial specified value.										
	Leakage current	≤The initial specified value.										

◆ DIMENSIONS [mm]



φD	5	6.3	8	10	12.5	16	18	22
φd	0.5	0.5	0.6	0.6	0.6	0.8	0.8	1.0
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5	10.0
	φD'				φD+0.5max.			
	L'				L+2.0max.			

◆ RATED RIPPLE CURRENT MULTIPLIERS

FREQUENCY COEFFICIENT

Freq.(Hz) μF	120	1K	10K	100K
6.8 ~ 180	0.40	0.75	0.90	1.00
220 ~ 560	0.44	0.85	0.94	1.00
680 ~ 1800	0.60	0.87	0.95	1.00
2200 ~ 3900	0.75	0.90	0.95	1.00
4700 ~	0.85	0.95	0.98	1.00

Part number system for Radial type:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	C	D	8	1	1	E	2	2	2	E	W	0	2	0	M
Type of series					Voltage code(V)		Capacitance code(μF)		Sleeve material	Diameter (mm)	The length(mm)			Capacitance tolerance	

◆ Standard Rating of CD81 Series (6.3v-100v)

WV (Vdc)	Cap (μF)	Case size φD×L(mm)	IMP.(Ωmax)100KHz		Ripple current mA/105°C, 100KHz
			20°C	-10°C	
6.3(0J)	150	5×11	0.35	1.03	219
	330	6.3×11	0.15	0.43	386
	560	8×11.5	0.075	0.23	723
	820	8×16	0.058	0.19	947
	1000	10×12.5	0.055	0.18	980
	1200	10×16	0.039	0.14	1362
	1500	10×20	0.025	0.071	1733
	2200	10×25	0.025	0.068	2047
	3300	12.5×20	0.023	0.055	2247
	3900	12.5×25	0.020	0.042	2638
	4700	12.5×30	0.018	0.043	2990
	5600	16×20	0.020	0.047	3133
6800	16×25	0.018	0.045	3295	
10(1A)	100	5×11	0.33	1.03	238
	220	6.3×11	0.15	0.43	385
	470	8×11.5	0.075	0.24	723
	680	10×12.5	0.055	0.18	980
	1000	10×16	0.040	0.14	1362
	1200	10×20	0.025	0.071	1733
	1500	10×25	0.025	0.068	2047
	2200	12.5×20	0.023	0.055	2247
	3300	12.5×25	0.020	0.047	2638
	3900	12.5×30	0.018	0.045	3133
	4700	12.5×30	0.017	0.041	3238
	5600	16×25	0.019	0.046	3295
16(1C)	56	5×11	0.33	1.02	238
	120	6.3×11	0.15	0.43	385
	330	8×11.5	0.075	0.25	723
	470	10×12.5	0.055	0.18	980
	680	10×16	0.040	0.15	1362
	1000	10×20	0.025	0.071	1733
	1200	10×25	0.025	0.068	2047
	1500	12.5×20	0.023	0.055	2247
	2200	12.5×25	0.020	0.047	2638
	2700	12.5×30	0.019	0.043	3133
	3300	12.5×30	0.017	0.041	3238
	3900	16×25	0.019	0.045	3295
4700	16×25	0.017	0.043	3390	
6800	16×25	0.017	0.052	3562	
25(1E)	47	5×11	0.32	1.03	238
	100	6.3×11	0.15	0.43	385
	220	8×11.5	0.075	0.25	723
	330	10×12.5	0.055	0.19	980
	470	10×16	0.040	0.15	1361
	680	10×20	0.025	0.071	1733
	820	10×25	0.025	0.068	2047
	1000	12.5×20	0.023	0.055	2247
	1500	12.5×25	0.020	0.047	2638
	1800	12.5×30	0.018	0.048	3133
	2200	16×25	0.017	0.043	3257
	2700	16×25	0.017	0.042	3295
	3300	16×35	0.018	0.041	3390
	3900	18×35	0.017	0.043	3457
4700	18×40	0.017	0.039	3557	

WV (Vdc)	Cap (μF)	Case size φD×L(mm)	IMP.(Ωmax)100KHz		Ripple current mA/105°C, 100KHz
			20°C	-10°C	
35(1V)	33	5×11	0.33	1.03	238
	56	6.3×11	0.15	0.43	385
	150	8×11.5	0.074	0.25	723
	220	10×12.5	0.055	0.19	980
	330	10×16	0.041	0.15	1361
	470	10×20	0.026	0.071	1733
	560	10×25	0.025	0.068	2047
	680	12.5×20	0.023	0.055	2247
	1000	12.5×25	0.021	0.047	2638
	1200	12.5×30	0.019	0.043	3133
	1500	16×25	0.019	0.041	3257
	1800	16×25	0.019	0.045	3295
	2200	16×35	0.017	0.041	3390
	2700	18×35	0.018	0.043	3495
	3300	18×40	0.018	0.041	3609
50(1H)	22	5×11	0.36	1.21	226
	56	6.3×11	0.17	0.53	366
	100	8×11.5	0.077	0.25	689
	120	8×11.5	0.063	0.20	904
	150	10×12.5	0.063	0.20	932
	180	10×12.5	0.048	0.16	1152
	220	10×16	0.045	0.15	1304
	270	10×20	0.033	0.092	1504
	330	10×25	0.030	0.087	1780
	470	12.5×20	0.029	0.071	1952
	680	12.5×30	0.023	0.055	2723
	820	16×20	0.025	0.061	2600
	1000	16×25	0.023	0.058	2866
	2200	18×30	0.022	0.056	2980
	3300	18×30	0.022	0.055	3070
3900	22×40	0.021	0.053	3131	
4700	22×40	0.021	0.053	3256	
63(1J)	15	5×11	0.91	3.7	157
	33	6.3×11	0.37	1.6	252
	56	8×11.5	0.25	0.90	476
	82	10×12.5	0.13	0.47	657
	120	10×16	0.078	0.33	906
	180	10×20	0.058	0.25	1095
	220	10×25	0.048	0.21	1285
	270	12.5×20	0.043	0.15	1428
	390	12.5×25	0.035	0.095	1809
	470	12.5×30	0.031	0.086	2190
	560	16×25	0.025	0.075	2409
	680	16×25	0.027	0.077	2476
	820	16×30	0.023	0.065	2714
	1000	16×35	0.021	0.059	2762
	1200	16×40	0.020	0.056	3142
	1500	18×35	0.021	0.056	3238
	1800	18×40	0.019	0.053	3335
	2200	18×40	0.019	0.052	3466
	2700	18×40	0.019	0.052	3533
	3300	22×35	0.018	0.051	3639
3900	22×40	0.017	0.050	3711	
4700	22×40	0.017	0.050	3864	

◆ Standard Rating of CD81 Series (6.3v-100v)

WV (Vdc)	Cap (μF)	Case size φD×L(mm)	IMP.(Ωmax)100KHz		Ripple current mA/105°C, 100KHz
			20°C	-10°C	
80(1K)	68	10×12.5	0.19	0.68	457
	100	10×16	0.13	0.49	571
	120	10×20	0.086	0.36	762
	150	10×25	0.071	0.30	857
	220	12.5×20	0.065	0.20	1047
	330	12.5×25	0.049	0.16	1190
	390	12.5×30	0.045	0.15	1428
	470	16×25	0.040	0.15	1619
	560	16×30	0.035	0.097	1733
	680	16×30	0.035	0.097	1762
	820	16×35	0.031	0.088	1904
	1000	18×35	0.029	0.085	2095
	1200	18×40	0.028	0.079	2571
	1500	18×40	0.028	0.078	2647
	1800	18×45	0.027	0.077	2695
	2200	18×45	0.027	0.077	2714
2700	22×25	0.025	0.075	2790	
3300	22×30	0.025	0.075	2809	
3900	22×40	0.024	0.075	2847	

WV (Vdc)	Cap (μF)	Case size φD×L(mm)	IMP.(Ωmax)100KHz		Ripple current mA/105°C, 100KHz
			20°C	-10°C	
100 (2A)	6.8	5×11	1.6	5.8	119
	15	6.3×11	0.59	2.5	195
	27	8×11.5	0.38	1.6	338
	39	10×12.5	0.27	1.2	428
	47	10×12.5	0.19	0.68	457
	56	10×16	0.19	0.68	552
	68	10×16	0.13	0.49	571
	82	10×20	0.086	0.36	714
	100	12.5×20	0.084	0.34	762
	120	12.5×20	0.071	0.30	885
	150	12.5×20	0.064	0.20	1047
	220	12.5×25	0.049	0.16	1190
	270	12.5×30	0.045	0.15	1428
	330	16×25	0.040	0.15	1619
	390	16×30	0.035	0.097	1714
	470	18×25	0.035	0.097	1762
560	18×30	0.032	0.092	1809	
680	18×35	0.029	0.083	2095	
820	18×40	0.028	0.079	2571	

◆ Standard Rating of CD81 Series (160v-450v)

WV (Vdc)	Cap (μF)	Case size φD×L(mm)	tan δ	Ripple current(mA/105°C)	
				120Hz	100KHz
160 (2C)	10	10×16	0.15	119	300
	22	10×20	0.15	190	476
	33	10×20	0.15	238	595
	47	10×20	0.15	285	714
	68	12.5×20	0.15	447	1119
	82	12.5×20	0.15	485	1214
	100	12.5×30	0.15	590	1328
	150	16×20	0.15	733	1652
	220	16×25	0.15	971	2185
200 (2D)	10	10×16	0.15	133	333
	22	10×20	0.15	219	547
	33	10×20	0.15	247	619
	47	12.5×20	0.15	371	928
	68	12.5×20	0.15	466	1166
	82	16×20	0.15	523	1309
	100	16×20	0.15	600	1500
	150	16×25	0.15	800	2000
	220	18×30	0.15	1000	2272
250 (2E)	10	10×20	0.15	142	357
	22	10×20	0.15	228	571
	33	12.5×20	0.15	304	761
	47	12.5×20	0.15	390	975
	68	16×20	0.15	495	1238
	82	16×20	0.15	542	1357
	100	16×25	0.15	647	1619
	150	18×30	0.15	819	2047
	220	18×30	0.15	1076	2445

WV (Vdc)	Cap (μF)	Case size φD×L(mm)	tan δ	Ripple current(mA/105°C)	
				120Hz	100KHz
350 (2V)	6.8	10×16	0.20	142	357
	10	10×20	0.20	181	452
	22	12.5×20	0.20	247	619
	33	16×20	0.20	343	857
	47	16×20	0.20	409	1023
	68	16×25	0.20	533	1333
	82	18×25	0.20	580	1452
	100	18×25	0.20	666	1665
	120	18×30	0.20	790	1976
400 (2G)	150	18×35	0.20	914	2285
	6.8	10×16	0.20	162	404
	10	10×20	0.20	200	500
	15	12.5×20	0.20	219	547
	22	12.5×20	0.20	266	666
	33	16×20	0.20	362	904
	47	16×25	0.20	447	1119
	68	18×25	0.20	557	1395
	82	18×25	0.20	580	1452
450 (2W)	100	18×30	0.20	728	1823
	120	18×35	0.20	823	2062
	150	18×40	0.20	938	2347
	6.8	10×20	0.20	180	452
	10	12.5×20	0.20	219	547
	15	12.5×25	0.20	228	571
	22	16×20	0.20	276	690
	47	16×25	0.20	457	1142
	68	18×30	0.20	600	1500
100	82	18×35	0.20	680	1702
	100	18×40	0.20	762	1904

- Taping, Cutting Products & other customized demands are available upon request.
- Please check with us about the specified actual demanding.