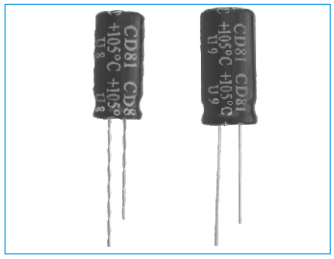
CD81 105℃,Standard Series



- Wide operating temperature range of –40℃~+105℃
- Standard series for general purpose
- Load life of 2000 hours at 105℃

CD110 ⟹ CD81
Wide temp.

Specifications

Item	Characteristics
Operating Temperature Range	–40℃ ~ +105℃
Rated Voltage Range	6.3V~450V
Nominal Capacitance Range	0.1 μ F~15000 μ F
Capacitance Tolerance	M (± 20%) (20℃,120Hz)

Leakage Current

6.3V~100V	160V~450V
I≤0.01CRUR or 3(μ A),whichever is greater.	I≤0.03CRUR +10(μ A)

CR:Nominal capacitance (μ F) UR:Rated voltage(V) (20℃, after 5 minutes)

Dissipation Factor (Max)

UR (V)	6.3	10	16	25	35	50	63	100	160~250	315~450
tan δ	0.24	0.20	0.16	0.14	0.12	0.10	0.09	0.08	0.12	0.15

0.02 is added to every 1000 μ F increase over 1000 μ F.

(20℃,120Hz)

Low Temperature Stability (Impedance Ratio)

UR (V)	6.3	10	16	25	35~100	160~200	250~350	400~450
Z(–25℃) / Z(+20℃)	5	4	3	2	2	3	4	6
Z(–40℃) / Z(+20℃)	10	8	6	4	3	4	8	10

(120Hz)

Load Life

After 2000 hours' application of rated voltage with rated ripple current at 105℃, the capacitors shall meet the following requirement:

Capacitance change	Within ± 20% of the initial value .
Dissipation factor	Not more than 200% of the initial specified value.
Leakage current	Not more than the initial specified value.

Shelf Life

After storage for 1000 hours at +105℃,the capacitors shall meet the requirement of load life above .

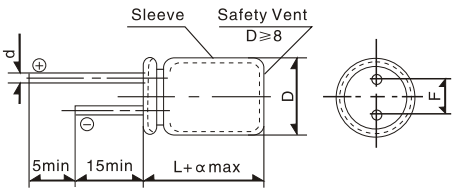
Rated Ripple Current & Frequency Multipliers

Cap. \ Freq.	50Hz	120Hz	300Hz	1kHz	10kHz~
0.1 μ F~6.8 μ F	0.65	1.00	1.35	1.75	2.30
10 μ F~68 μ F	0.75	1.00	1.25	1.50	1.75
100 μ F~1000 μ F	0.80	1.00	1.15	1.30	1.40
1500 μ F~	0.85	1.00	1.03	1.05	1.08

Rated Ripple Current & Temperature Multipliers

Temperature	+50℃	+70℃	+85℃	+105℃
Multipliers	2.10	1.78	1.40	1.00

Dimensions



mm

D	± 0.5			± 1.0									
	5	6.3	8	10			12.5		16			18	
L	11	11	11.5	12.5	16	20	20	25	25	31.5	35.5	35.5	40
F ± 0.5	2	2.5	3.5	5					7.5				
d ± 0.1	0.5			0.6					0.8				
α	1.5						2.0						

CD81 Series

■ Nominal capacitance,rated voltage,rated ripple current and case size table

U_R(V) / Item / C_R(μF)	6.3		10		16		25		35		50		63	
	D×L mm	I~	D×L mm	I~	D×L mm	I~	D×L mm	I~	D×L mm	I~	D×L mm	I~	D×L mm	I~
0.10											5×11	3		
0.15											5×11	4		
0.22											5×11	5		
0.33											5×11	6		
0.47											5×11	8	5×11	10
0.68											5×11	11	5×11	13
1.0											5×11	14	5×11	15
1.5											5×11	17	5×11	19
2.2									5×11	19	5×11	21	5×11	23
3.3									5×11	23	5×11	26	5×11	28
4.7							5×11	26	5×11	28	5×11	31	5×11	34
6.8							5×11	30	5×11	34	5×11	39	5×11	41
10					5×11	35	5×11	37	5×11	42	5×11	48	5×11	50
15					5×11	45	5×11	48	5×11	51	5×11	57	6.3×11	65
22			5×11	45	5×11	55	5×11	59	5×11	62	5×11	70	6.3×11	79
33	5×11	55	5×11	58	5×11	66	5×11	70	5×11	76	6.3×11	101	6.3×11	103
47	5×11	66	5×11	68	5×11	80	5×11	85	6.3×11	104	6.3×11	118	8×11.5	135
68	5×11	80	5×11	87	6.3×11	106	6.3×11	117	8×11.5	139	8×11.5	159	10×12.5	179
100	5×11	97	5×11	106	6.3×11	129	6.3×11	143	8×11.5	169	8×11.5	193	10×12.5	217
150	6.3×11	134	6.3×11	146	8×11.5	176	8×11.5	202	10×12.5	229	10×16	280	10×20	308
220	6.3×11	162	6.3×11	177	8×11.5	214	8×11.5	245	10×12.5	278	10×16	339	10×20	374
330	6.3×11	198	8×11.5	236	8×11.5	266	10×12.5	319	10×16	395	10×20	458	12.5×20	570
470	8×11.5	259	8×11.5	281	8×11.5	314	10×16	429	10×20	514	12.5×20	535	12.5×25	715
680	10×12.5	375	10×12.5	379	10×16	461	12.5×20	627	12.5×25	746	16×25	895	16×25	767
1000	10×12.5	454	10×16	520	10×20	626	10×20	680	12.5×25	905	16×25	1085	16×31.5	1043
1500	10×20	586	10×20	627	12.5×20	759	16×25	1018	16×25	1032	16×35.5	1213		
2200	12.5×20	793	12.5×20	849	12.5×25	1028	16×25	1233	16×31.5	1403	18×35.5	1559		
3300	12.5×20	939	12.5×25	1118	16×25	1323	16×31.5	1571	18×35.5	1707				
4700	16×25	1378	16×25	1425	16×31.5	1661	18×35.5	1925						
6800	16×25	1527	16×25	1572	18×35.5	1887								
10000	16×31.5	1852	18×35.5	2004										
15000	18×35.5	2131												

Rated ripple current (mA rms) (105℃,120Hz)

CD81 Series

■ Nominal capacitance,rated voltage,rated ripple current and case size table

U_R(V) / Item / C_R(μF)	100		160		200		250		315		350		400		450	
	D×L mm	I~	D×L mm	I~	D×L mm	I~	D×L mm	I~	D×L mm	I~	D×L mm	I~	D×L mm	I~	D×L mm	I~
0.10	5×11	5														
0.15	5×11	6														
0.22	5×11	7														
0.33	5×11	9														
0.47	5×11	11	6.3×11	12	6.3×11	12	6.3×11	12	6.3×11	12	6.3×11	12				
0.68	5×11	14	6.3×11	15	6.3×11	15	6.3×11	15	6.3×11	15	6.3×11	15				
1.0	5×11	17	6.3×11	18	6.3×11	18	6.3×11	18	6.3×11	18	6.3×11	18	8×11.5	18	8×11.5	18
1.5	5×11	21	6.3×11	22	6.3×11	22	6.3×11	22	8×11.5	24	8×11.5	24	10×12.5	26	10×12.5	26
2.2	5×11	25	6.3×11	26	6.3×11	26	8×11.5	29	8×11.5	29	8×11.5	29	10×12.5	32	10×12.5	32
3.3	5×11	31	8×11.5	33	8×11.5	33	10×12.5	36	10×12.5	36	10×12.5	36	10×16	42	10×16	42
4.7	5×11	37	8×11.5	38	10×12.5	43	10×12.5	43	10×16	50	10×16	50	10×20	55	10×20	55
6.8	6.3×11	45	10×12.5	47	10×16	60	10×16	60	10×20	67	12.5×20	73	12.5×20	73	12.5×20	73
10	6.3×11	55	10×12.5	56	10×16	73	10×20	82	12.5×20	89	12.5×20	89	12.5×20	89	12.5×20	89
15	8×11.5	85	10×16	81	10×20	100	12.5×20	107	12.5×25	109	12.5×25	109	16×25	123	16×25	123
22	8×11.5	104	10×20	111	10×20	122	12.5×25	132	12.5×25	132	16×25	149	16×25	149	16×25	149
33	10×12.5	145	12.5×20	162	12.5×25	178	12.5×25	178	16×25	196	16×25	196	16×31.5	217	16×31.5	217
47	10×16	186	12.5×25	218	12.5×25	218	16×25	237	16×31.5	258	16×35.5	272	18×35.5	286	18×35.5	286
68	10×20	218	16×25	265	16×31.5	310	16×35.5	318	18×35.5	325	18×40	346				
100	12.5×20	296	16×25	322	16×31.5	376	18×35.5	410	18×40	419						
150	12.5×25	355	16×35.5	470	18×35.5	474										
220	16×25	497	18×35.5	604	18×40	610										
330	16×25	609														
470	16×31.5	802														

Rated ripple current (mA rms) (105℃,120Hz)