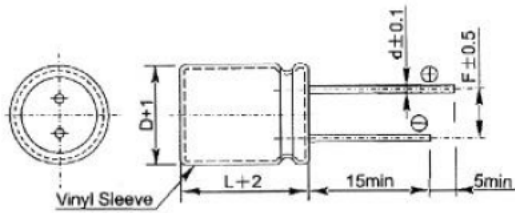


# ALUMINUM ELECTROLYTIC CAPACITORS

## CD 81(105 °C) Series



- \* Wide temperature range, stable and reliable performances.
- \*  $D \geq 8\text{mm}$  equipped with pressure release device.
- \* Be used in DC or pulse circuits under environment of high temperature.

D	5	6	8	10	12	13	16	18	22
F	2.0	2.5	3.5		5.0		7.5		10
d		0.5			0.6			0.8	

### Characteristics:

Operating Temp. Range	-40 ~ +105 deg. C (10~100V <sub>DC</sub> ) -25 ~ +105 deg. C (160~450V <sub>DC</sub> )																	
Rated Working Voltage U <sub>R</sub>	10 ~ 450V <sub>DC</sub>																	
Capacitance Range C <sub>R</sub>	1.0 ~ 4700uF (+20deg. C, 100 or 120Hz)																	
Capacitance Tol. $\Delta C/C_R$	$\pm 20\%$ , +30/-10% (+20deg. C, 100 or 120Hz)																	
Dissipation Factor tg $\delta$	At +20deg. C & 100 or 120Hz, for C <sub>R</sub> >1000uF, tg $\delta$ add 0.02 per another 1000uF																	
	<table border="1"> <tr> <td>U<sub>R</sub>(V)</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50, 63</td> <td>100</td> <td>160-250</td> <td>400, 450</td> </tr> <tr> <td>tg<math>\delta</math></td> <td>0.22</td> <td>0.20</td> <td>0.15</td> <td>0.12</td> <td>0.10</td> <td>0.08</td> <td>0.16</td> <td>0.20</td> </tr> </table>	U <sub>R</sub> (V)	10	16	25	35	50, 63	100	160-250	400, 450	tg $\delta$	0.22	0.20	0.15	0.12	0.10	0.08	0.16
U <sub>R</sub> (V)	10	16	25	35	50, 63	100	160-250	400, 450										
tg $\delta$	0.22	0.20	0.15	0.12	0.10	0.08	0.16	0.20										
Leakage Current I <sub>L</sub>	$\leq 0.01 C_R U_R$ or 3uA ( $\leq 100V_{DC}$ ) whichever is greater $\leq 0.03 C_R U_R + 10\mu A$ ( $\geq 160V_{DC}$ ) Measured after 2 minutes application of U <sub>R</sub> at +20deg. C																	
Load Life	After U <sub>R</sub> applied for 1000hrs. at +105deg. C, $\Delta C \leq \pm 25\%$ of initial value. tg $\delta \leq 200\%$ of specified value. I <sub>L</sub> $\leq$ specified value																	
Shelf Life	After shelf for 500 hours without voltage applied at +105deg. C, then restored for 24 hours at room temp. $\Delta C \leq \pm 25\%$ of initial value, tg $\delta \leq 200\%$ of specified value. I <sub>L</sub> $\leq 200\%$ of specified value.																	

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Case Size of Standard Products:

$C_R(\mu F) \backslash U_R(V)$	10	16	25	35	50	63	100	160	200	250	400	450
1.0					5x11	5x11	5x12	5x12	6x12	6x12	8x12	8x12
2.2					5x11	5x11	5x12	6x12	8x12	8x12	10x13	10x13
3.3					5x11	5x11	5x12	8x12	8x12	10x13	10x15	10x17
4.7					5x11	5x11	5x12	8x12	10x13	10x13	10x17	10x20
10			5x11	5x11	5x11	5x12	8x12	10x13	10x17	10x17	12x22	13x26
22		5x11	5x11	5x11	5x12	6x12	10x13	10x20	10x20	12x22	16x27	16x31
33	5x11	5x11	5x11	5x12	6x12	8x12	10x13	12x22	12x22	13x26	16x31	16x36
47	5x11	5x11	5x12	6x12	8x12	8x12	10x17	13x22	13x26	16x27	16x36	18x41
100	6x12	6x12	6x12	8x12	10x13	10x15	12x22	16x27	16x31	16x36		
220	6x12	8x12	8x14	10x13	10x17	12x22	16x27	18x36	18x41			
330	8x12	8x14	10x13	10x17	12x22	13x22	16x31					
470	8x14	10x13	10x17	12x22	13x22	16x27	18x36					
1000	10x17	10x20	12x25	13x26	16x27	16x36						
2200	13x22	13x26	16x27	16x31	18x36	22x42						
3300	13x26	16x27	16x31	18x36	22x42							
4700	16x27	16x31	18x36									

We can also provide the capacitors according to the customer's request.

Permissible Ripple Current  $I_{Rmax}$  (+105°C, 100Hz, mA rms):

$C_R(\mu F) \backslash U_R(V)$	10	16	25	35	50	63	100	160	200	250	400	450
1.0					11	11	14	15	16	16	19	20
2.2					18	19	21	24	26	27	30	32
3.3					22	24	28	34	35	38	39	41
4.7					30	33	36	43	47	48	51	55
10			29	37	46	55	60	70	76	80	82	90
22		37	42	51	66	81	108	113	115	124	146	166
33	43	49	58	72	88	101	122	150	156	167	171	184
47	72	78	86	98	116	136	166	190	210	225	243	250
100	93	115	126	153	174	215	256	329	335	365		
220	136	180	230	280	310	388	490	593	628			
330	210	260	320	410	480	560	636					
470	310	360	420	520	650	800	880					
1000	480	600	760	910	1020	1220						
2200	960	1100	1210	1410	1500	1600						
3300	1160	1300	1400	1600	1810							
4700	1400	1510	1750									

(Frequency Correction Factor for Ripple Current):

$U_R(V_{DC})$	$C_R(\mu F)$	(Frequency) Hz				
		50	100	1k	10k	100k
6.3 ~ 100	1.0 ~ 10	0.7	1.0	1.6	1.85	2.0
	22 ~ 220	0.75	1.0	1.4	1.55	1.6
	330 ~ 4700	0.8	1.0	1.15	1.25	1.3
160 ~ 450	1.0 ~ 220	0.7	1.0	1.4	1.55	1.6