

# CD296 SERIES



## ALUMINUM ELECTROLYTIC CAPACITORS

- Load life of 3000 hours at 105°C
- Wide temperature, Long life, High ripple current



### SPECIFICATIONS

Item	Characteristics							
Operating Temperature Range(°C)	-40~+105(250~450WV:-25~+105)							
Rated Voltage Range (V)	16~450							
Nominal capacitance range (μF)	47~47000							
Capacitance Tolerance(20°C,120Hz)	±20%							
Leakage current (μA)	I≤0.01CV or 1.5mA whichever is smaller (at 20°C ,after 5 minutes) C: Nominal Capacitance (μF) V: Rated Voltage (V)							
Dissipation Factor(20°C,120Hz)	Rated voltage (v)	16	25	35	50	63~100	160~400	400~450
	tanδ (MAX)	0.50	0.40	0.35	0.30	0.20	0.15	0.20
Temperature Stability(120Hz)	Rated voltage (v)		16~100		160-200		250-450	
	Impedance Ratio	Z-25°C/Z+20°C		4		4		4
Z-40°C/Z+20°C		15		-		-		
Load Life(+105°C)	Time		3000 hours					
	Leakage Current		Not more than the specified value.					
	Capacitance Change		Within ±20% of the initial value.					
	Dissipation Factor		Not more than 200% of the specified value.					
Shelf Life(+105°C)	Time		500 hours					
	Leakage Current		Not more than the specified value.					
	Capacitance Change		Within ±20% of the initial value.					
	Dissipation Factor		Not more than 200% of the specified value.					

After test: Rated voltage to be applied for 60 minutes, 24 to 48 hours before measurement

### DIMENSIONS

### MM

### MULTIPLIER FOR RIPPLE CURRENT

Frequency coefficient					
Freq(Hz)	50	120	1K	10K	20K
Rated Voltage(V) ≤100	0.95	1	1.10	1.15	1.15
160~250	0.87	1	1.11	1.18	1.2
≥315	0.80	1	1.14	1.14	1.2

  

Temperature coefficient					
Temperature(°C)	+40	+55	+70	+85	+105
Coefficient	2.7	2.5	2.1	1.7	1.0

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## ■ STANDARD RATINGS

WV(V)	16		25		35		50		63		80		100	
	Cap	Ripple	Cap	Ripple	Cap	Ripple	Cap	Ripple	Cap	Ripple	Cap	Ripple	Cap	Ripple
	μF	(A)	μF	(A)	μF	(A)	μF	(A)	μF	(A)	μF	(A)	μF	(A)
22x25	6800	1.6	4700	1.55	3300	1.43	2200	1.31	1200	1.25	820	1.11	560	1.07
22x30	10000	1.99	6800	1.91	3900	1.65	2700	1.70	1800	1.52	1200	1.39	820	1.35
22x35	12000	2.28	8200	2.14	5600	2.02	3300	1.98	2200	1.73	1500	1.61	1000	1.54
22x40	15000	2.64	10000	2.40	6800	2.28	3900	2.25	2700	1.97	1800	1.83	1200	1.74
22x45	18000	2.98	12000	2.69	-	-	4700	2.56	-	-	2200	2.09	1500	1.99
22x50	-	-	-	-	8200	2.67	6800	2.89	3300	2.32	-	-	-	-
25x25	1000	1.99	6800	1.91	4700	1.78	2700	1.7	1800	1.52	1200	1.39	820	1.35
25x30	12000	2.3	8200	2.16	5600	2.04	3300	2.00	2200	1.75	1500	1.62	1000	1.56
25x35	15000	2.68	10000	2.44	6800	2.31	3900	2.28	2700	1.99	2200	2.01	1200	1.76
25x40	18000	3.04	12000	2.74	8200	2.60	5600	2.81	3300	2.27	-	-	1500	2.03
25x45	22000	3.4	15000	3.15	10000	2.92	-	-	3900	2.54	2700	2.43	1800	2.28
25x50	27000	3.81	18000	3.54	12000	3.26	6800	3.37	4700	2.88	3300	2.76	2200	2.57
30x25	12000	2.38	8200	2.25	5600	2.12	3900	2.22	2700	1.93	1800	1.81	1200	1.71
30x30	18000	3.00	10000	2.70	8200	2.56	4700	2.58	3300	2.24	2200	2.10	1500	2.00
30x35	22000	3.39	15000	3.13	10000	2.92	5600	2.95	3900	2.55	2700	2.43	1800	2.27
30x40	27000	3.83	18000	3.54	12000	3.28	6800	3.39	4700	2.9	3300	2.78	2200	2.59
30x45	33000	4.3	22000	4.24	15000	3.74	8200	3.71	5600	3.28	3900	3.12	2700	2.94
30x50	39000	4.74	-	-	-	-	10000	4.09	6800	3.73	4700	3.56	3300	3.32
35x25	18000	3.10	12000	2.80	8200	2.78	4700	2.67	3300	2.41	2200	2.17	1500	2.07
35x30	27000	3.75	15000	3.22	12000	3.20	6800	3.31	4700	2.83	3300	2.71	2200	2.52
35x35	33000	4.24	22000	3.96	15000	3.69	8200	3.66	5600	3.24	3900	3.07	2700	2.90
35x40	39000	4.72	-	-	18000	4.16	10000	4.07	6800	3.71	4700	3.50	3300	3.31
35x45	47000	5.27	27000	4.75	-	-	12000	4.50	8200	4.16	5600	3.87	3900	3.69
35x50	-	-	33000	5.39	22000	4.92	-	-	10000	4.69	6800	4.19	4700	4.14

WV(V)	160		180		200		250		350		400		450	
	Cap	Ripple	Cap	Ripple	Cap	Ripple	Cap	Ripple	Cap	Ripple	Cap	Ripple	Cap	Ripple
	μF	(A)	μF	(A)	μF	(A)	μF	(A)	μF	(A)	μF	(A)	μF	(A)
22x25	330	1.16	270	1.08	220	1.08	180	0.94	68	0.56	68	0.47	47	0.45
22x30	390	1.43	330	1.30	330	1.30	220	1.10	100	0.70	82	0.56	68	0.56
22x35	470	1.52	470	1.50	390	1.41	270	1.13	120	0.73	120	0.64	82	0.64
22x40	560	1.62	560	1.62	470	1.50	330	1.20	150	0.79	150	0.70	100	0.70
22x45	680	1.70	-	-	560	1.58	390	1.26	180	0.81	-	-	120	0.73
22x50	820	1.81	680	1.76	680	1.68	470	1.37	220	0.93	180	0.78	150	0.78
25x25	470	1.55	390	1.35	330	1.35	220	1.15	100	0.70	82	0.65	68	0.65
25x30	560	1.73	470	1.62	470	1.47	330	1.30	150	0.82	120	0.70	100	0.70
25x35	680	1.81	560	1.69	560	1.65	390	1.41	180	0.89	150	0.73	120	0.73
25x40	820	1.98	680	1.72	680	1.80	470	1.52	220	0.97	180	0.82	150	0.82
25x45	1000	2.04	820	1.78	-	-	560	1.59	-	-	220	0.87	180	0.87
25x50	1200	2.12	1000	1.91	820	1.87	680	1.66	270	1.01	270	0.94	220	0.94
30x25	680	1.82	560	1.67	470	1.56	330	1.30	150	0.82	120	0.78	100	0.78
30x30	820	1.98	680	1.74	680	1.82	470	1.36	180	0.90	180	0.83	150	0.83
30x35	1000	2.14	820	1.85	820	1.99	560	1.57	270	1.05	220	0.86	180	0.86
30x40	1200	2.22	1000	2.01	-	-	680	1.76	-	-	270	0.95	220	0.95
30x45	1500	2.46	1200	2.19	1000	2.17	820	1.73	330	1.16	330	1.11	270	1.11
30x50	-	-	1500	2.36	1200	2.22	1000	1.87	390	1.26	390	1.15	330	1.15
35x25	820	1.93	680	1.92	680	1.96	470	1.40	220	0.98	180	0.86	150	0.86
35x30	1200	2.40	1000	2.16	820	2.07	560	1.56	270	1.01	270	0.91	220	0.91
35x35	1500	2.53	1200	2.34	1000	2.22	820	1.82	330	1.16	330	1.13	270	1.13
35x40	-	-	1500	2.56	1200	2.42	1000	1.99	390	1.26	390	1.26	330	1.26
35x45	1800	2.98	1800	2.67	1500	2.59	1200	2.10	470	1.35	470	1.31	390	1.31
35x50	2200	3.10	-	-	1800	2.70	-	-	560	1.51	560	1.50	470	1.50

- Ripple current: 105°C, 100Hz or 120Hz

The specific capacitance and case size are available on request.

## ■ TYPICAL CURVES

