

SEI CAPACITORS

SEI Capacitors, Inc.

335 Beinoris Drive, Wood Dale, IL 60191

Phone: 773-774-6666

Fax: 773-774-6690

www.capacitorindustries.com

CD110X SERIES

Aluminum Electrolytic Capacitors

- Features:
- Long rated life of 2,000 hours at 85 °C
 - Small size
 - High stability and reliability
 - For general electronic products applications



SPECIFICATION

Operating Temperature Range (°C)	-40 ~ +85							
Rated Voltage Range (V)	6.3 ~ 450							
Nominal Capacitance Range (uF)	0.1 ~ 22,000							
Capacitance Tolerance (20 °C, 120 Hz)	± 20%							
Leakage Current (uA)	Rated Voltage (V)	6.3 ~ 100			160 ~ 450			
		I ≤ 0.01CV or 3 whichever is greater (at 20 °C, after 2 minutes)			I ≤ 0.03CV + 10 (at 20 °C, after 2 minutes)			
C = Nominal capacitance (uF); V = Rated voltage (V)								
Dissipation Factor (20 °C, 120 Hz)	Rated Voltage (V)	6.3	10	16	25	35		
	D.F.	0.22	0.19	0.16	0.14	0.12		
	Rated Voltage (V)	50	63	100	160 ~ 250	350 ~ 450		
	D.F.	0.10	0.09	0.08	0.18	0.20		
When nominal capacitance is over 1,000 uF: 0.02 shall be added to the listed D.F. value with increase of every 1,000 uF.								
Temperature Stability (120 Hz)	Rated Voltage (V)		6.3	10	16 ~ 50	63	100	
	Impedance	Z - 25 °C / Z + 25 °C	4	3				
		Ration	Z - 40 °C / Z + 25 °C	8	6	4	3	3
	Rated Voltage (V)		160	200	250	350	400	450
	Impedance	Z - 25 °C / Z + 25 °C	6				8	15
		Ration	Z - 40 °C / Z + 25 °C					

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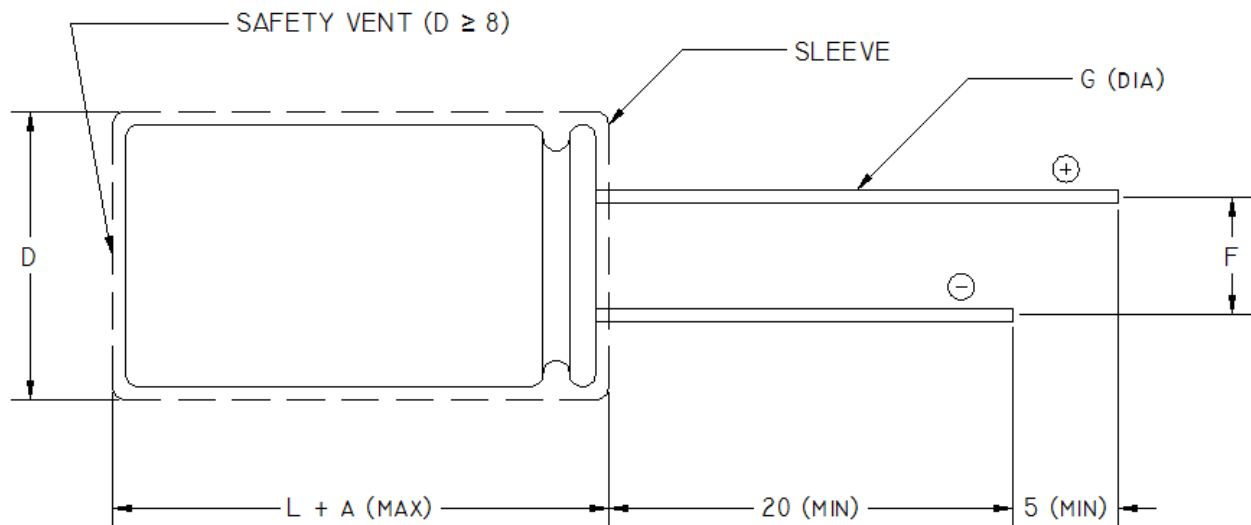
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Load Life (+85 °C)	Time	2,000 hours
	Leakage Current	Not more than the initial specified value
	Capacitance Change	Within $\pm 20\%$ of the initial value
	Dissipation Factor	Not more than 200% of the specified value
Shelf Life (+85 °C)	Time	1,000 hours
	Leakage Current	Not more than the initial specified value
	Capacitance Change	Within $\pm 20\%$ of the initial value
	Dissipation Factor	Not more than 200% of the specified value

DIMENSIONS



Dimensions are in millimeters (mm)

D	± 0.5			± 1.0			
	5	6.3	8	10	12.5	16	18
F ± 0.5	2	2.5	3.5	5		7.5	
G ± 0.1	0.5		0.6			0.8	
A	0 ~ +2.0						

Lead spacing and diameter

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RIPPLE CURRENT MULTIPLIER

Rated Voltage (V)	Frequency (Hz)	50 ~ 60	120	1K	10K	100K
	CV (uF, WV)					
6.3 ~ 16	All CV value	0.80	1	1.1	1.2	1.2
25 ~ 35	≤ 1,000	0.80	1	1.5	1.7	1.7
	> 1,000	0.80	1	1.2	1.3	1.3
50 ~ 100	≤ 1,000	0.80	1	1.6	1.9	1.9
	> 1,000	0.80	1	1.2	1.3	1.3
160 ~ 450	All CV value	0.80	1	1.3	1.5	1.6

Frequency Coefficient

Temperature (°C)	+70	+85
Coefficient	1.35	1

Temperature Coefficient

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STANDARD RATINGS

WV uF	6.3		10		16		25		35		50		63		100	
	D x L (mm)	Ripple (mA)	D x L (mm)	Ripple (mA)	D x L (mm)	Ripple (mA)	D x L (mm)	Ripple (mA)	D x L (mm)	Ripple (mA)	D x L (mm)	Ripple (mA)	D x L (mm)	Ripple (mA)	D x L (mm)	Ripple (mA)
0.1	-	-	-	-	-	-	-	-	-	-	5x11	3	-	-	5x11	2.1
0.22	-	-	-	-	-	-	-	-	-	-	5x11	6	-	-	5x11	4.7
0.33	-	-	-	-	-	-	-	-	-	-	5x11	9	-	-	5x11	7
0.47	-	-	-	-	-	-	-	-	-	-	5x11	13	-	-	5x11	10
1	-	-	-	-	-	-	-	-	-	-	5x11	21	-	-	5x11	21
2.2	-	-	-	-	-	-	-	-	-	-	5x11	31	-	-	5x11	30
3.3	-	-	-	-	-	-	-	-	-	-	5x11	38	-	-	5x11	40
4.7	-	-	-	-	-	-	5x11	38	5x11	40	5x11	45	5x11	45	5x11	45
10	-	-	-	-	5x11	50	5x11	55	5x11	59	5x11	66	5x11	66	6.3x11	75
22	-	-	5x11	50	5x11	75	5x11	82	5x11	87	5x11	98	6.3x11	100	6.3x11	130
33	5x11	60	5x11	65	5x11	92	5x11	100	5x11	107	5x11	126	6.3x11	140	8x11.5	180
47	5x11	70	5x11	99	5x11	110	5x11	118	5x11	130	6.3x11	155	8x11.5	170	10x12.5	230
100	5x11	100	5x11	146	5x11	160	6.3x11	199	6.3x11	214	8x11.5	260	10x12.5	300	10x20	370
220	5x11	200	6.3x11	240	6.3x11	264	8x11.5	349	10x12.5	443	10x12.5	443	10x16	470	12.5x25	620
330	6.3x11	270	6.3x11	290	8x11.5	383	10x12.5	510	10x12.5	542	10x16	595	10x20	710	12.5x25	760
470	6.3x11	322	8x11.5	417	8x11.5	457	10x12.5	545	10x16	664	12.5x20	887	12.5x20	900	16x25	1,000
1,000	8x11.5	546	10x12.5	650	10x16	791	10x20	996	12.5x20	1,210	12.5x25	1,400	16x25	1,300	18x40	1,380
2,200	10x20	1,010	10x20	1,080	12.5x20	1,350	12.5x25	1,660	16x25	1,950	16x35.5	2,340	-	-	-	-
3,300	10x20	1,230	12.5x20	1,430	12.5x25	1,690	16x25	2,030	16x35.5	2,510	18x35.5	2,810	-	-	-	-
4,700	12.5x20	1,710	12.5x25	1,780	16x25	2,100	16x31.5	2,650	18x35.5	2,990	-	-	-	-	-	-
6,800	12.5x25	1,930	16x25	2,220	16x35.5	2,580	18x35.5	3,290	-	-	-	-	-	-	-	-
10,000	16x25	2,450	16x35.5	2,700	18x35.5	3,130	-	-	-	-	-	-	-	-	-	-
15,000	16x35.5	2,860	18x35.5	3,100	-	-	-	-	-	-	-	-	-	-	-	-
22,000	18x40	3,340	-	-	-	-	-	-	-	-	-	-	-	-	-	-

WV uF	160		200		250		315		350		400		450	
	D x L (mm)	Ripple (mA)	D x L (mm)	Ripple (mA)	D x L (mm)	Ripple (mA)	D x L (mm)	Ripple (mA)	D x L (mm)	Ripple (mA)	D x L (mm)	Ripple (mA)	D x L (mm)	Ripple (mA)
0.47	6.3x11	15	6.3x11	15	6.3x11	15	6.3x11	15	6.3x11	15	6.3x11	15	8x11.5	18
1	6.3x11	22	6.3x11	22	6.3x11	22	6.3x11	22	6.3x11	22	6.3x11	22	8x11.5	25
2.2	6.3x11	32	6.3x11	32	6.3x11	32	8x11.5	38	8x11.5	38	8x11.5	38	10x12.5	43
3.3	6.3x11	40	6.3x11	40	8x11.5	48	10x12.5	53	10x12.5	53	10x12.5	54	10x16	59
4.7	6.3x11	48	8x11.5	56	8x11.5	56	10x12.5	65	10x12.5	65	10x16	71	10x20	76
10	8x11.5	81	10x12.5	94	10x16	101	10x20	115	10x20	115	12.5x20	123	12.5x20	123
22	10x16	151	10x20	170	12.5x20	182	12.5x20	182	12.5x25	197	12.5x25	197	16x25	226
33	10x20	202	12.5x20	223	12.5x25	243	16x25	277	16x25	277	16x25	277	16x31.5	304
47	12.5x20	266	12.5x20	265	12.5x25	295	16x25	330	16x25	330	18x20 16x25	361	16x35.5	380
100	12.5x25	422	16x25	483	16x31.5	528	18x31.5	567	18x31.5	507	-	-	-	-
220	16x31.5	783	18x35.5	882	-	-	-	-	-	-	-	-	-	-
330	18x31.5	1,080	-	-	-	-	-	-	-	-	-	-	-	-

Ripple Current: 85 °C, 100 Hz or 120 Hz; Specific capacitance and case sizes are available upon request.