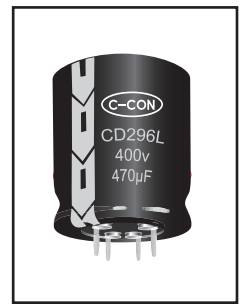


3000h at 105°C

- Long Life at High Temperature
- High Ripple Current
- Suit for high frequency regenerative voltage for AC servomotor, general inverter.

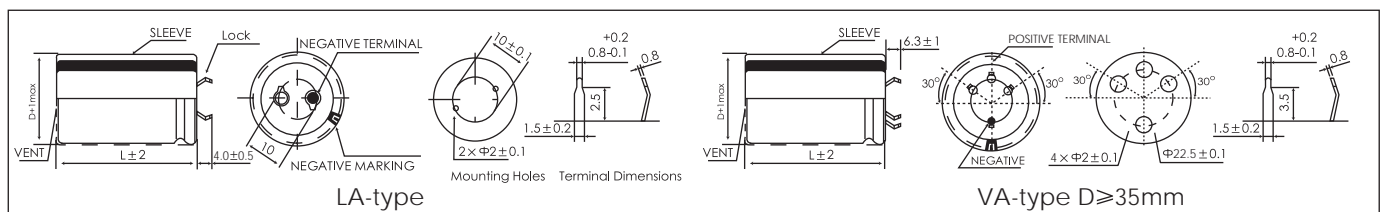


Items	Characteristics		
Operating Temperature Range (°C)	-40 ~ +105	-25 ~ +105	
Voltage Range (V)	350 ~ 420	450 ~ 500	
Capacitance Range (µF)	390 ~ 3300		
Capacitance Tolerance (20°C, 120Hz)	± 20%		
Leakage Current (µA)	After 5 minutes at 20°C application of rated voltage, leakage current is not more than 0.01CV or 1.5mA, whichever is smaller. C: Nominal Capacitance (µF) V: Rated Voltage (V)		
Dissipation Factor (20°C, 120Hz)	WV (V)	350~500	
	Tan δ	0.15	
Stability at Low Temperature (Impedance Ratio at 120Hz)	Rated Voltage (V)	350~420	450~500
	$Z_{-25°C} / Z_{+20°C}$	4	7
	$Z_{-40°C} / Z_{+20°C}$	7	-

	Useful Life		Load Life	Endurance Test	Shelf Life
Lifetime	6000h	>200000h	3000h	4000h	1000h
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value
Capacitance Change	Within ± 30% of initial value		Within ± 20% of initial value	Within ± 20% of initial value	Within ± 20% of initial value
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 200% of specified value	Not more than 200% of specified value
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 105°C	U_R $1.2 \times I_R$ 40°C	U_R I_R 105°C	U_R $I_R = 0$ 105°C	$U_R = 0$ $I_R = 0$ 105°C After test: U_R to be applied for 30min >24h before measurement

Dimensions

mm



Frequency Coefficient

Frequency	50/60Hz	120Hz	300Hz	1kHz	10kHz	≥50kHz
Factor	0.8	1.0	1.16	1.3	1.41	1.43

Temperature Coefficient

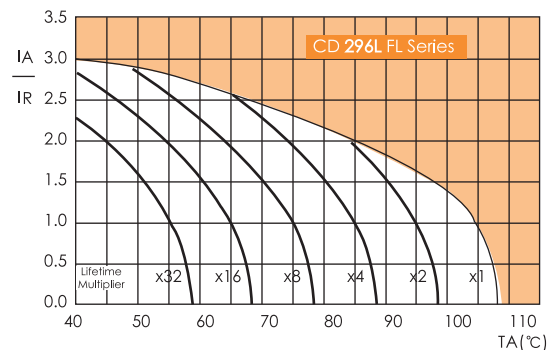
Temperature(°C)	+40	+55	+70	+85	+105
Factor	3.0	2.8	2.5	2.0	1.0

Ratings for CD 296L Series

U _R (Surge Voltage) Code	Rated Capacitance	Max ESR 20°C, 120Hz	Typ ESR 20°C, 120Hz	Rated Ripple Current 105°C, 120Hz	Size ΦD x L
(V)	(μF)	(mΩ)	(mΩ)	(Arms)	(mm)
350 (400) 2V	560	355	178	2.30	30×55
		355	178	2.33	35×40
	680	293	146	2.73	35×50
		293	146	2.68	40×40
	820	243	121	2.99	35×60
		243	121	3.05	40×45
		243	121	2.85	45×40
	1000	199	100	3.50	35×65
		199	100	3.37	40×55
		199	100	3.06	45×45
	1200	166	83	3.81	35×75
		166	83	3.81	40×65
		166	83	3.47	45×50
	1500	133	66	4.62	40×80
		133	66	4.27	45×65
	1800	111	55	5.43	40×95
		111	55	5.10	45×75
	2200	90	45	5.86	45×90
		90	45	5.86	50×75
	2700	74	37	6.77	45×100
		74	37	6.77	50×90
3300	60	30	6.77	50×105	
400 (450) 2G	470	423	169	2.11	35×45
		423	169	2.14	40×40
	560	355	142	2.48	35×50
		355	142	2.43	40×45
		355	142	2.35	45×40
	680	293	117	2.73	35×60
		293	117	2.78	40×50
		293	117	2.59	45×40
	820	243	97	3.17	35×65
		243	97	3.05	40×55
		243	97	2.90	45×45
	1000	199	80	3.48	35×80
		199	80	3.48	40×65
		199	80	3.17	45×55
	1200	166	66	4.13	35×90
		166	66	4.13	40×80
		166	66	4.00	45×60
	1500	133	53	4.39	40×90
		133	53	4.39	45×75
		133	53	4.39	50×70
	1800	111	44	5.30	45×90
111		44	5.30	50×80	
2200	90	36	5.90	50×90	
2700	74	29	6.50	50×105	
420 (470) 2X	390	510	203	1.92	35×40
		510	203	1.95	40×35
	470	423	169	2.27	35×45
		423	169	2.23	40×40
	560	355	142	2.56	35×50
		355	142	2.52	40×45
		355	142	2.35	45×40
	680	293	117	2.81	35×60
		293	117	2.78	40×50
		293	117	2.52	45×45
	820	243	97	3.26	35×70
		243	97	3.05	40×60
		243	97	2.87	45×50
	1000	199	80	3.67	35×80
		199	80	3.67	40×70
		199	80	3.38	45×60
	1200	166	66	4.33	40×80
		166	66	3.92	45×65
	1500	133	53	4.62	45×80
		133	53	4.62	50×75
	1800	111	44	5.42	45×95
111		44	5.42	50×85	
2200	90	36	6.00	50×100	

U _R (Surge Voltage) Code	Rated Capacitance	Max ESR 20°C, 120Hz	Typ ESR 20°C, 120Hz	Rated Ripple Current 105°C, 120Hz	Size ΦD x L
(V)	(μF)	(mΩ)	(mΩ)	(Arms)	(mm)
450 (500) 2W	390	510	225	2.00	35×40
		423	186	2.27	35×45
	470	423	186	2.23	40×40
		423	186	2.15	45×35
	560	355	156	2.47	35×55
		355	186	2.52	40×50
		355	186	2.35	45×40
	680	293	129	2.89	35×65
		293	129	2.78	40×60
		293	129	2.61	45×50
	820	243	107	3.24	35×75
		243	107	3.24	40×65
		243	107	3.10	45×50
	1000	199	88	3.77	35×90
		199	88	3.77	40×80
		199	88	3.68	45×65
	1200	166	73	4.43	40×95
		166	73	4.23	45×75
	1500	133	58	4.84	40×100
		133	58	4.84	45×90
	1800	111	49	5.30	45×105
111		49	5.30	50×95	
500 (550) 2H	390	510	225	1.80	35×50
		510	225	1.80	40×45
	470	423	186	2.00	35×55
		423	186	2.00	40×50
	560	355	156	2.25	35×65
		355	156	2.25	40×55
		355	156	2.25	45×50
	680	293	129	2.60	35×75
		293	129	2.60	40×70
		293	129	2.60	45×55
	820	243	107	2.85	40×75
		243	107	2.85	45×60
	1000	199	88	3.30	40×90
		199	88	3.30	45×75
	1200	166	73	4.00	40×100
		166	73	4.00	45×85
	1500	133	58	4.45	45×100
		133	58	4.45	50×95
	1800	111	49	4.85	50×105

Lifetime Diagram



IA = actual ripple current at 120Hz, IR = rated ripple current at 120Hz, 105°C
Multiplier of Useful Life as a function of ambient temperature and ripple current load