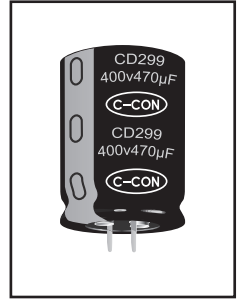


7000h at 105°C

- Extended Lifetime at 105°C
- High Ripple Current
- High Professional Industrial Power Supplies

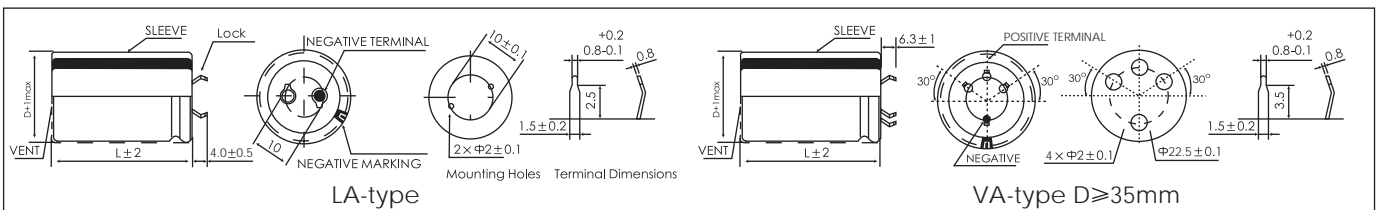


Items	Characteristics	
Operating Temperature Range (°C)	-40 ~ +105	-25 ~ +105
Voltage Range (V)	160 ~ 250	315 ~ 500
Capacitance Range (µF)	120 ~ 2200	
Capacitance Tolerance (20°C, 120Hz)	± 20%	
Leakage Current (µA)	After 5 minutes at 20°C application of rated voltage, leakage current is not more than 0.01CV or 1.5mA, whichever is smaller. C: Nominal Capacitance (µF) V: Rated Voltage (V)	
Dissipation Factor (20°C, 120Hz)	Rated Voltage (V)	160 180 200 250 315 400 450~500
	Tan δ (max)	0.15
Stability at Low Temperature (Impedance Ratio at 120Hz)	Rated Voltage (V)	≤ 250 315 ~ 500
	$Z_{-25°C} / Z_{+20°C}$	3 8
	$Z_{-40°C} / Z_{+20°C}$	12 -

	Useful Life		Load Life	Endurance Test	Shelf Life
Lifetime	9000h	>200000h	7000h	7000h	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 $1.4 \times I_R$ 50°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

Rated Voltage (V)	Frequency					
	50/60Hz	120Hz	300Hz	1kHz	10kHz	>40kHz
160 ~ 250	0.80	1.00	1.17	1.30	1.45	1.50
≥ 315	0.80	1.00	1.16	1.30	1.43	1.45

Temperature Coefficient

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



Ratings for CD 299 Series

U _R (Surge Voltage) Code	Rated Capa- cittance	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)
160 (200) 2C	560	355	249	1.5	22×40
		355	249	1.5	30×25
	680	293	205	1.7	22×45
		293	205	1.7	25×35
		293	205	1.7	30×30
	820	243	170	2	25×40
	1000	199	139	2.2	25×45
		199	139	2.2	30×35
	1200	166	116	2.3	25×50
		166	116	2.3	30×40
		166	116	2.3	35×35
	1500	133	93	2.5	30×45
		133	93	2.5	35×40
	1800	111	77	2.7	30×50
111		77	2.7	35×45	
2200	91	63	2.9	35×50	
180 (225) 2K	560	355	249	1.5	22×40
		355	249	1.5	25×35
	680	293	205	1.7	22×50
		293	205	1.7	25×40
		293	205	1.7	30×30
	820	243	170	2	25×45
	1000	243	170	2	30×35
		243	170	2	35×30
	1200	199	139	2.2	30×40
		166	116	2.3	30×45
		166	116	2.2	35×35
	1500	133	93	2.5	30×50
		133	93	2.5	35×40
	1800	111	77	2.7	35×45
2200	91	63	2.9	35×50	
200 (250) 2D	470	424	296	1.4	22×40
		424	296	1.4	25×35
		424	296	1.4	30×30
	560	355	249	1.5	22×45
		293	205	1.7	25×40
	680	293	205	1.7	30×35
		243	170	2	25×50
		243	170	2	30×40
	1000	243	170	2	35×30
		199	139	2.2	30×45
	1200	199	139	2.2	35×35
		166	116	2.3	30×50
	1500	166	116	2.3	35×40
		133	93	2.5	35×50
250 (300) 2E	330	603	422	1.2	22×40
		603	422	1.2	25×35
	390	510	357	1.3	22×45
		510	357	1.3	25×40
		510	357	1.3	30×30
	470	424	296	1.4	25×45
		424	296	1.4	30×35
	560	424	296	1.4	35×30
		355	249	1.5	25×50
	680	293	205	1.7	30×45
		293	205	1.7	35×35
	820	243	170	2	30×50
		243	170	2	35×40
		243	170	2	35×30
1000	199	139	2.2	30×45	
	199	139	2.2	35×35	
1200	166	116	2.3	35×40	
	166	116	2.3	35×50	
315 (365) 2F	220	905	498	1	22×45
		905	498	1	25×40
		905	498	1	30×30
	270	737	406	1.1	25×45
		737	406	1.1	30×35
		737	406	1.1	35×30
	330	603	332	1.2	25×50
		603	332	1.2	30×40
	390	510	281	1.3	30×45
		510	281	1.3	35×35
	470	424	233	1.4	30×50
		424	233	1.4	35×40
	560	355	196	1.5	35×45
	680	293	161	1.7	35×50
400 (450) 2G	120	1659	912	0.62	22×40
		1659	912	0.64	25×35
	150	1327	730	0.69	22×50
		1327	730	0.69	25×40
	180	1106	608	0.72	25×45
		1106	608	0.78	30×35
	220	905	498	0.83	25×50
		905	498	0.81	30×40
	270	737	406	0.89	30×35
		737	406	0.82	35×25
	330	603	332	1.07	30×40

U _R (Surge Voltage) Code	Rated Capa- cittance	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)
400 (450) 2G	330	603	332	1.02	35×30
		510	281	1.18	35×35
	390	510	281	1.21	30×45
		424	233	1.23	30×50
		424	233	1.22	35×40
	470	424	233	1.22	35×40
		356	196	1.5	30×55
	560	356	196	1.5	35×45
		680	293	1.61	1.79
	820	243	134	2.07	35×55
450 (500) 2W	120	2212	995	0.69	25×30
		1769	796	0.77	25×35
	150	1769	796	0.73	30×25
		1474	664	0.83	25×40
	180	1474	664	0.81	30×30
		1206	543	0.96	30×35
	220	1206	543	0.89	35×25
		983	442	1.09	30×40
	270	983	442	1.04	35×30
		804	362	1.21	30×45
	330	804	362	1.18	35×35
		680	306	1.24	30×50
	390	680	306	1.23	35×40
		565	254	1.41	30×55
	470	565	254	1.41	35×45
		474	213	1.58	30×60
	560	474	213	1.6	35×50
		680	390	1.76	1.83
820	324	146	2.07	35×60	
500 (550) 2H	120	2212	1106	0.72	22×50
		2212	1106	0.68	25×40
	150	1769	885	0.85	25×45
		1769	885	0.8	30×30
	180	1474	737	0.92	25×50
		1474	737	0.87	30×35
		1474	737	0.88	35×30
	220	1206	603	1.02	30×40
		1206	603	1.05	35×35
	270	983	492	1.09	30×45
		983	492	1.19	30×50
		983	492	1.18	35×40
	330	804	402	1.28	30×55
		804	402	1.28	35×45
	390	680	340	1.43	30×60
		680	340	1.45	35×50
	470	565	282	1.59	35×60

SNAP-IN/LUG

Lifetime Diagram

