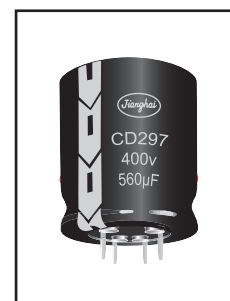
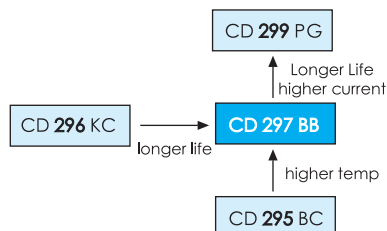


5000h at 105°C

- Extended Lifetime at 105°C
- High Ripple Current
- High Professional Switch Mode Power Supplies
- Frequency Converters



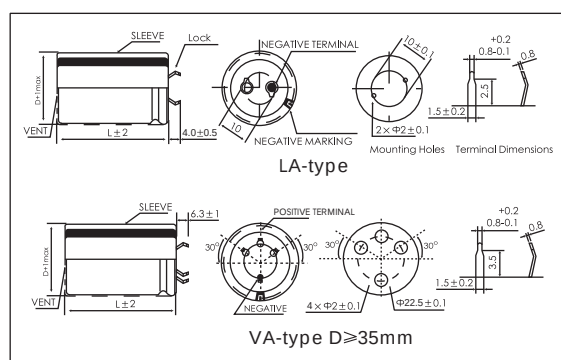
SNAP-IN/LUG

Items	Characteristics	
Operating Temperature Range (°C)	-40 ~ +105	-25 ~ +105
Voltage Range (V)	25 ~ 100	160 ~ 550
Capacitance Range (μF)	100 ~ 27000	
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)	25 35 50 63 80 100 160~400 450~550
	Tan δ (max)	0.45 0.40 0.35 0.30 0.25 0.20 0.15 0.20
Stability at Low Temperature (Impedance Ratio at 120Hz)	Rated Voltage (V)	25~100 160~250 315~550
	$Z_{-25^{\circ}\text{C}} / Z_{+20^{\circ}\text{C}}$	4 3 8
	$Z_{-40^{\circ}\text{C}} / Z_{+20^{\circ}\text{C}}$	15 - -

	Useful Life		Load Life	Endurance Test	Shelf Life
Lifetime	7000h	>200000h	5000h	5000h	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 $1.6 \times I_R$ 40°C	U_R I_R 105°C	U_R $I_R = 0$ 105°C	After test: U_R to be applied for 30min >24h before measurement $U_R = 0$ $I_R = 0$ 105°C

Dimensions

mm



Frequency Coefficient

Frequency	50/60Hz	120Hz	500Hz	1kHz	10kHz	≥40kHz
Rated Voltage (V)						
25 ~ 100	0.90	1.00	1.10	1.15	1.15	1.15
160 ~ 250	0.80	1.00	1.20	1.30	1.45	1.50
≥315	0.80	1.00	1.20	1.30	1.42	1.45

Temperature Coefficient

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

CD 297 BB SERIES



Ratings for CD 297 BB Series

SNAP-IN/LUG

U _r (Surge Voltage) Code	Rated Capa- cance	Max ESR 20°C, 120Hz	Typ ESR 20°C, 120Hz	Rated Ripple Current 105°C, 120Hz	Size ΦD x L	P/N	
(V)	(μF)	(mΩ)	(mΩ)	(Arms)	(mm)	-	
25 (32) 1E	8200	73	51	2.18	25×35	EC51EBB822M□□250035	
		73	51	2.19	30×25	EC51EBB822M□□300025	
	60	42	2.53	25×40	EC51EBB103M□□250040		
	50	35	2.79	25×45	EC51EBB123M□□250045		
	50	35	2.70	30×35	EC51EBB123M□□300035		
	15000	50	35	2.76	35×30	EC51EBB123M□□350030	
		40	28	3.13	30×40	EC51EBB153M□□300040	
	33	23	3.50	35×35	EC51EBB183M□□350035		
	35 (44) 1V	22000	27	19	3.92	30×50	EC51EBB223M□□300050
			27	19	3.95	35×40	EC51EBB223M□□350040
		27000	22	16	4.72	35×50	EC51EBB273M□□350050
			78	55	2.49	22×50	EC51VBB682M□□220050
78		55	2.28	30×30	EC51VBB682M□□300030		
65		45	2.80	25×45	EC51VBB822M□□250045		
53		37	3.04	30×40	EC51VBB103M□□300040		
10000		53	37	2.78	35×30	EC51VBB103M□□350030	
		44	31	3.38	30×45	EC51VBB123M□□300045	
		44	31	3.30	35×35	EC51VBB123M□□350035	
50 (63) 1H		15000	35	25	3.98	30×45	EC51VBB153M□□300045
			30	21	4.40	35×45	EC51VBB183M□□350045
	18000	119	83	2.20	25×35	EC51HBB392M□□250035	
		119	83	2.19	30×30	EC51HBB392M□□300030	
	4700	99	69	2.43	25×40	EC51HBB472M□□250040	
		83	58	2.72	25×45	EC51HBB562M□□250045	
		83	58	2.58	30×35	EC51HBB562M□□300035	
	5600	83	58	2.35	35×30	EC51HBB562M□□350030	
		68	48	3.01	30×40	EC51HBB682M□□300040	
	6800	68	48	2.91	35×35	EC51HBB682M□□350035	
		8200	57	40	3.63	30×50	EC51HBB822M□□300050
	57		40	3.36	35×40	EC51HBB822M□□350040	
63 (79) 1J	10000	46	33	3.79	35×45	EC51HBB103M□□350045	
		39	27	4.06	35×50	EC51HBB123M□□350050	
		147	103	2.10	22×45	EC51JBB272M□□220045	
	2700	147	103	2.03	25×35	EC51JBB272M□□250035	
		147	103	2.01	30×30	EC51JBB272M□□300030	
		121	84	2.33	25×40	EC51JBB332M□□250040	
	3900	102	72	2.58	25×45	EC51JBB392M□□250045	
		102	72	2.46	30×35	EC51JBB392M□□300035	
		102	72	2.31	35×30	EC51JBB392M□□350030	
	4700	85	59	2.82	30×40	EC51JBB472M□□300040	
		85	59	2.77	35×35	EC51JBB472M□□350035	
		71	50	3.22	30×45	EC51JBB562M□□300045	
80 (100) 1K	5600	71	50	3.20	35×40	EC51JBB562M□□350040	
		59	41	3.61	35×45	EC51JBB682M□□350045	
		49	34	3.94	35×50	EC51JBB822M□□350050	
	1500	221	155	1.70	22×40	EC51KBB152M□□220040	
		151	106	2.22	25×45	EC51KBB222M□□250045	
		151	106	2.02	30×30	EC51KBB222M□□300030	
	2700	123	86	2.50	30×35	EC51KBB272M□□300035	
		123	86	2.45	35×30	EC51KBB272M□□350030	
		101	70	2.69	30×40	EC51KBB332M□□300040	
	3300	101	70	2.60	35×35	EC51KBB332M□□350035	
		85	60	2.94	30×45	EC51KBB392M□□300045	
		85	60	3.00	35×40	EC51KBB392M□□350040	
100 (125) 2A	4700	71	49	3.44	35×45	EC51KBB472M□□350045	
		59	42	3.72	35×50	EC51KBB562M□□350050	
		51	36	3.93	35×60	EC51KBB682M□□350060	
	1200	221	155	1.76	25×35	EC52ABB122M□□250035	
		221	155	1.76	30×30	EC52ABB122M□□300030	
		177	124	2.00	22×50	EC52ABB152M□□220050	
	1500	177	124	2.03	25×40	EC52ABB152M□□250040	
		147	103	2.29	25×45	EC52ABB182M□□250045	
		147	103	2.19	30×35	EC52ABB182M□□300035	
	1800	147	103	2.15	35×30	EC52ABB182M□□350030	
		121	84	2.52	30×40	EC52ABB222M□□300040	
		121	84	2.48	35×35	EC52ABB222M□□350035	
160 (200) 2C	2700	98	69	2.86	30×45	EC52ABB272M□□300045	
		98	69	2.87	35×40	EC52ABB272M□□350040	
		80	56	3.25	35×45	EC52ABB332M□□350045	
	3300	68	48	3.56	35×50	EC52ABB392M□□350050	
		4700	56	39	3.72	35×50	EC52ABB472M□□350050
		560	355	249	1.26	22×45	EC52CBB561M□□220045
	680	293	205	1.44	22×45	EC52CBB681M□□220045	
		293	205	1.43	25×40	EC52CBB681M□□250040	
		293	205	1.50	30×35	EC52CBB681M□□300035	
	820	243	170	1.63	25×45	EC52CBB821M□□250045	
		243	170	1.66	30×40	EC52CBB821M□□300040	
		199	139	1.89	30×45	EC52CBB102M□□300045	
1000	199	139	1.89	35×35	EC52CBB102M□□350035		
	1200	166	116	2.16	30×50	EC52CBB122M□□300050	

U _R (Surge Voltage) Code	Rated Capa- cance	Max ESR 20°C, 120Hz	Typ ESR 20°C, 120Hz	Rated Ripple Current 105°C, 120Hz	Size ΦD x L	P/N
(V)	(μF)	(mΩ)	(mΩ)	(Arms)	(mm)	-
160 (200) 2C	1200	166	116	2.23	35 x 40	EC52CBB122M□□350040
	1500	133	93	2.61	35 x 45	EC52CBB152M□□350045
	1800	111	77	2.97	35 x 50	EC52CBB182M□□350050
	2200	90	62	3.22	30 x 55	EC52CBB222M□□300055
	3300	61	42	3.51	35 x 60	EC52CBB332M□□350060
200 (250) 2D	470	424	296	1.17	22 x 45	EC52DBB471M□□220045
		424	296	1.22	25 x 40	EC52DBB471M□□250040
		424	296	1.17	30 x 30	EC52DBB471M□□300030
	560	355	249	1.39	25 x 45	EC52DBB561M□□250045
		355	249	1.38	30 x 35	EC52DBB561M□□300035
		293	205	1.58	25 x 50	EC52DBB681M□□250050
	680	293	205	1.61	30 x 40	EC52DBB681M□□300040
		293	205	1.49	35 x 30	EC52DBB681M□□350030
		243	170	1.85	30 x 45	EC52DBB821M□□300045
	820	243	170	1.75	35 x 35	EC52DBB821M□□350035
		199	139	2.11	30 x 50	EC52DBB102M□□300050
		199	139	2.07	35 x 40	EC52DBB102M□□350040
	1200	166	116	2.38	30 x 50	EC52DBB122M□□300050
	1500	133	93	2.76	35 x 50	EC52DBB152M□□350050
	250 (300) 2E	330	603	422	1.01	22 x 45
603			422	1.00	30 x 30	EC52EBB331M□□300030
510			357	1.13	22 x 50	EC52EBB391M□□220050
390		510	357	1.13	25 x 40	EC52EBB391M□□250040
		510	357	1.15	30 x 35	EC52EBB391M□□300035
		424	296	1.29	25 x 45	EC52EBB471M□□250045
470		424	296	1.24	35 x 30	EC52EBB471M□□350030
		355	249	1.45	25 x 50	EC52EBB561M□□250050
		355	249	1.48	30 x 40	EC52EBB561M□□300040
355		249	1.49	35 x 35	EC52EBB561M□□350035	
680		293	205	1.71	30 x 45	EC52EBB681M□□300045
		293	205	1.74	35 x 40	EC52EBB681M□□350040
		820	243	170	1.94	30 x 50
1000		199	139	2.20	35 x 45	EC52EBB102M□□350045
1200		166	111	2.45	35 x 45	EC52EBB122M□□350045
315 (365) 2F	220	1206	844	0.72	22 x 30	EC52FBB221M□□220030
	270	983	688	0.81	25 x 30	EC52FBB271M□□250030
	330	804	563	0.90	30 x 25	EC52FBB331M□□300025
	390	681	476	1.04	22 x 45	EC52FBB391M□□220045
		681	476	1.05	25 x 35	EC52FBB391M□□250035
		470	565	395	1.15	30 x 30
	560	474	332	1.34	25 x 50	EC52FBB561M□□250050
		390	274	1.72	30 x 50	EC52FBB681M□□300050
		390	274	1.78	35 x 40	EC52FBB681M□□350040
	820	324	227	1.95	30 x 50	EC52FBB821M□□300050
	1000	268	186	2.35	35 x 45	EC52FBB102M□□350045
	1200	224	157	2.70	35 x 50	EC52FBB122M□□350050
	1500	178	125	3.15	35 x 60	EC52FBB152M□□350060
	178	120	3.46	35 x 75	EC52FBB152M□□350075	
	400 (450) 2G	150	1769	1239	0.65	25 x 30
220		1206	844	0.79	22 x 50	EC52GBB221M□□220050
		1206	844	0.85	25 x 35	EC52GBB221M□□250035
		1206	844	0.89	35 x 20	EC52GBB221M□□350020
270		983	688	0.96	35 x 25	EC52GBB271M□□350025
		804	563	1.07	30 x 35	EC52GBB331M□□300035
		804	563	1.12	30 x 50	EC52GBB331M□□300050
330		804	563	1.18	35 x 30	EC52GBB331M□□350030
		681	476	1.21	30 x 35	EC52GBB391M□□300035
		681	476	1.27	30 x 50	EC52GBB391M□□300050
470		565	395	1.31	30 x 50	EC52GBB471M□□300050
		565	395	1.33	35 x 50	EC52GBB471M□□350050
		476	333	1.49	30 x 50	EC52GBB561M□□300050
560		476	333	1.53	35 x 50	EC52GBB561M□□350050
		395	276	1.82	30 x 50	EC52GBB681M□□300050
	395	276	1.88	30 x 55	EC52GBB681M□□300055	
820	328	228	2.16	35 x 55	EC52GBB821M□□350055	
1000	270	188	2.57	35 x 60	EC52GBB102M□□350060	
265	182	2.82	35 x 75	EC52GBB102M□□350075		
1200	223	155	3.28	35 x 75	EC52GBB122M□□350075	
450 (500) 2W	120	2212	1548	0.58	22 x 30	EC52WBB121M□□220030
	150	1769	1239	0.66	22 x 35	EC52WBB151M□□220035
		1769	1239	0.68	25 x 40	EC52WBB151M□□250040
		1474	1032	0.74	25 x 45	EC52WBB181M□□250045
	180	1474	1032	0.77	30 x 30	EC52WBB181M□□300030
		1206	844	0.88	30 x 30	EC52WBB221M□□300030
		983	688	0.99	25 x 50	EC52WBB271M□□250050
	270	983	688	1.01	30 x 30	EC52WBB271M□□300030
		804	563	1.12	30 x 35	EC52WBB331M□□300035
		804	563	1.15	35 x 30	EC52WBB331M□□350030
	390	681	476	1.26	30 x 40	EC52WBB391M□□300040
		681	476	1.28	35 x 35	EC52WBB391M□□350035
		565	394	1.47	35 x 40	EC52WBB471M□□350040
	470	565	394	1.50	35 x 45	EC52WBB471M□□350045
		476	333	1.68	35 x 50	EC52WBB561M□□350050
395		276	1.92	35 x 50	EC52WBB681M□□350050	
680	395	276	1.97	35 x 60	EC52WBB681M□□350060	

Ratings for CD 297 BB Series

U_R (Surge Voltage) Code	Rated Capa- citance	Max ESR 20°C, 120Hz	Typ ESR 20°C, 120Hz	Rated Ripple Current 105°C, 120Hz	Size ΦD x L	P/N
(V)	(μF)	(mΩ)	(mΩ)	(Arms)	(mm)	-
450 (500) 2W	820	328	228	2.18	35 × 60	ECS2WBB821M□□350060
	1000	270	182	2.56	35 × 70	ECS2WBB102M□□350070
	1000	270	182	2.66	35 × 75	ECS2GBB102M□□350075
500 (550) 2H	100	2654	1327	0.67	25 × 30	ECS2HBB101M□□250030
	120	2212	1106	0.77	25 × 30	ECS2HBB121M□□250030
	180	1474	737	0.98	25 × 50	ECS2HBB181M□□250050
	220	1206	603	1.12	30 × 35	ECS2HBB221M□□300035
	270	983	492	1.25	30 × 50	ECS2HBB271M□□300050
	330	804	402	1.36	35 × 45	ECS2HBB331M□□350045
	390	681	340	1.54	35 × 50	ECS2HBB391M□□350050
	470	565	282	1.69	35 × 60	ECS2HBB471M□□350060
	560	476	238	1.86	35 × 60	ECS2HBB561M□□350060
	680	395	198	2.17	35 × 70	ECS2HBB681M□□350070
550 (600) 2Y	150	1769	885	0.92	30 × 35	ECS2YBB151M□□300035
	180	1474	737	1.03	30 × 40	ECS2YBB181M□□300040
	220	1026	603	1.15	30 × 50	ECS2YBB221M□□300050
	270	983	492	1.30	35 × 45	ECS2YBB271M□□350045
	330	804	402	1.48	35 × 55	ECS2YBB331M□□350055
	390	681	340	1.65	35 × 60	ECS2YBB391M□□350060
	470	565	282	1.90	35 × 60	ECS2YBB471M□□350060
	470	565	282	1.92	35 × 70	ECS2YBB471M□□350070
	560	473	237	2.05	35 × 80	ECS2YBB561M□□350080
	680	390	196	2.39	40 × 75	ECS2YBB568M□□400075

Customer products are available on request.

Lifetime Diagram

