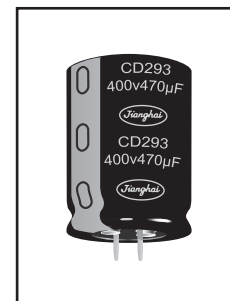
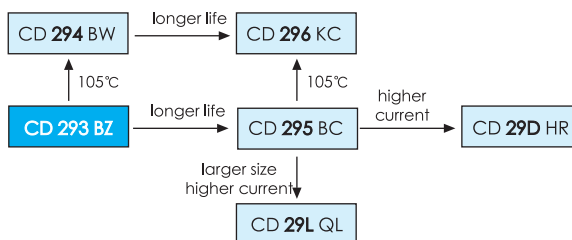


CD 293 BZ SERIES



2000h at 85°C

■ Standard 85°C

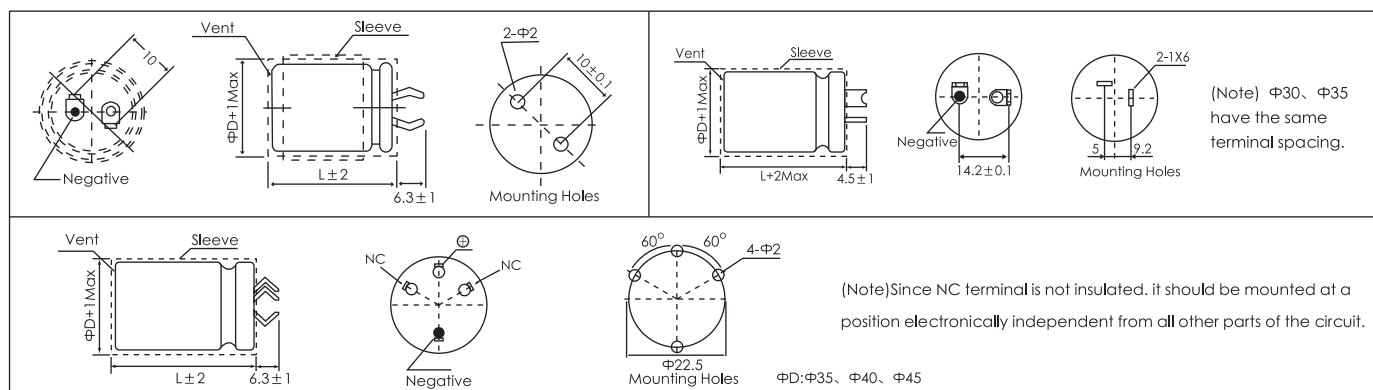


Items	Characteristics								
Operating Temperature Range (°C)	-40 ~ +85				-25 ~ +85				
Voltage Range (V)	10 ~ 400				420 ~ 500				
Capacitance Range (μF)	68 ~ 82000								
Capacitance Tolerance (20°C, 120Hz)	± 20%								
Leakage Current (μA)	After 5 minutes at 20°C application of rated voltage, 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) Cap (μF)	10~16	25	35~50	63	80~100	Rated Voltage (V) Φ (mm)	160~200	250~500
	≤ 2700	-	-	0.20	0.15	0.15	22 ~ 30	0.10	0.15
	3300 ~ 4700	-	0.35	0.25	0.20	0.15			
	5600 ~ 6800	0.40	0.35	0.30	0.20	0.20	35	0.12	0.15
	≥ 8200	0.40	0.35	0.35	0.25	0.25			
Stability at Low Temperature (Impedance Ratio at 120Hz)	Rated Voltage (V)	10	10~35	50~100	160~200	250~400	420~500		
	Z _{-25℃} / Z _{+20℃}	5	4	3		4			
	Z _{-40℃} / Z _{+20℃}	18	15	10	6	8	-		

	Useful Life		Load Life	Endurance Test	Shelf Life
Lifetime	4000h	> 65000h	2000h	3000h	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 ± 15% of initial value	Within ± 20% of initial value	Within ± 15% of initial value
Dissipation Factor	Not more than 300% of specified value		Not more than 150% of specified value	Not more than 200% of specified value	Not more than 150% of specified value
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 85°C	U_R $1.2 \times I_R$ 40°C	U_R I_R 85°C	U_R $I_R = 0$ 85°C	$U_R = 0$ $I_R = 0$ 85°C After test: U_R to be applied for 30min >24h before measurement

Dimensions

mm



Ratings for CD 293 BZ Series

U _R (Surge Voltage) Code	Rated Capa- citance	Max ESR 20°C, 120Hz	Typ ESR 20°C, 120Hz	Rated Ripple Current 85°C, 120Hz	Size ΦD x L	P/N
(V)	(μF)	(mΩ)	(mΩ)	(Arms)	(mm)	-
10 (13) 1A	10000	54	43	2.5	22×25	ECS1ABZ103M□□220025
	12000	45	36	2.9	22×25	ECS1ABZ123M□□220025
	15000	36	29	3.2	22×30	ECS1ABZ153M□□220030
		36	29	3.1	25×25	ECS1ABZ153M□□250025
	18000	30	24	3.6	22×35	ECS1ABZ183M□□220035
		30	24	3.6	25×30	ECS1ABZ183M□□250030
	22000	25	20	4	22×40	ECS1ABZ223M□□220040
		25	20	4.1	25×35	ECS1ABZ223M□□250035
		25	20	4.1	30×25	ECS1ABZ223M□□300025
	33000	17	13	4.6	25×40	ECS1ABZ333M□□250040
		17	13	4.8	30×30	ECS1ABZ333M□□300030
		17	13	4.8	35×25	ECS1ABZ333M□□350025
	39000	14	10.9	5.2	25×45	ECS1ABZ393M□□250045
		14	10.9	5.3	30×35	ECS1ABZ393M□□300035
		12	9.1	5.8	25×50	ECS1ABZ473M□□250050
	47000	12	9.1	6	30×40	ECS1ABZ473M□□300040
		12	9.1	6	35×30	ECS1ABZ473M□□350030
	56000	9.5	7.6	6.7	30×45	ECS1ABZ563M□□300045
		9.5	7.6	6.8	35×35	ECS1ABZ563M□□350035
		7.9	6.3	7.5	30×50	ECS1ABZ683M□□300050
	68000	7.9	6.3	7.7	35×40	ECS1ABZ683M□□350040
		6.5	5.2	8.7	35×45	ECS1ABZ823M□□350045
	82000	65	52	2.2	22×25	ECS1CBZ822M□□220025
16 (20) 1C	10000	54	43	2.6	22×30	ECS1CBZ103M□□220030
		54	43	2.6	25×25	ECS1CBZ103M□□250025
	12000	45	36	2.9	22×35	ECS1CBZ123M□□220035
		36	29	3.3	22×40	ECS1CBZ153M□□220040
	15000	36	29	3.3	25×30	ECS1CBZ153M□□250030
		36	29	3.4	30×25	ECS1CBZ153M□□300025
	18000	30	24	3.8	22×45	ECS1CBZ183M□□220045
		30	24	3.7	25×35	ECS1CBZ183M□□250035
	22000	25	20	4.2	22×50	ECS1CBZ223M□□220050
		25	20	4.2	25×40	ECS1CBZ223M□□250040
	27000	20	16	5	25×45	ECS1CBZ273M□□250045
		20	16	5	30×35	ECS1CBZ273M□□300035
	33000	17	13	5.6	30×40	ECS1CBZ333M□□300040
		17	13	5.6	35×30	ECS1CBZ333M□□350030
	39000	14	11	6.2	30×45	ECS1CBZ393M□□300045
		14	11	6.3	35×35	ECS1CBZ393M□□350035
	47000	12	9.1	7	30×50	ECS1CBZ473M□□300050
		12	9.1	7.2	35×40	ECS1CBZ473M□□350040
	56000	9.5	7.6	8	35×45	ECS1CBZ563M□□350045
25 (32) 1E	56000	83	67	2	22×25	ECS1EBZ562M□□220025
		69	55	2.3	22×30	ECS1EBZ682M□□220030
	68000	69	55	2.3	25×25	ECS1EBZ682M□□250025
		57	46	2.6	22×35	ECS1EBZ822M□□220035
	82000	47	38	2.9	22×40	ECS1EBZ103M□□220040
		47	38	2.8	25×30	ECS1EBZ103M□□250030
	10000	47	38	3	30×25	ECS1EBZ103M□□300025
		39	31	3.3	22×45	ECS1EBZ123M□□220045
	12000	39	31	3.2	25×35	ECS1EBZ123M□□250035
		39	31	3.4	30×30	ECS1EBZ123M□□300030
	15000	31	25	3.7	25×40	ECS1EBZ153M□□250040
		31	25	3.9	35×25	ECS1EBZ153M□□350025
	18000	26	21	4.3	25×50	ECS1EBZ183M□□250050
		26	21	4.2	30×35	ECS1EBZ183M□□300035
	22000	26	21	4.4	35×30	ECS1EBZ183M□□350030
		22	17	4.8	30×40	ECS1EBZ223M□□300040
	33000	22	17	5	35×35	ECS1EBZ223M□□350035
		15	12	6.5	35×40	ECS1EBZ333M□□350040
	39000	12	10	7.5	35×45	ECS1EBZ393M□□350045
	47000	10	8	8.8	35×50	ECS1EBZ473M□□350050
35 (44) 1V	33000	100	81	1.8	22×25	ECS1VBZ332M□□220025
		86	69	2.1	22×30	ECS1VBZ392M□□220030
	47000	71	57	2.2	25×25	ECS1VBZ472M□□250025
		72	57	2.3	22×35	ECS1VBZ562M□□220035
	56000	72	57	2.3	25×30	ECS1VBZ562M□□250030
		59	47	2.9	22×40	ECS1VBZ682M□□220040
	68000	59	47	2.6	25×35	ECS1VBZ682M□□250035
		59	47	2.7	30×25	ECS1VBZ682M□□300025
	82000	57	46	2.8	22×50	ECS1VBZ822M□□220050
		57	46	2.8	25×40	ECS1VBZ822M□□250040
	10000	57	46	2.8	30×30	ECS1VBZ822M□□300030
		47	38	3.1	25×45	ECS1VBZ103M□□250045
	12000	47	38	3.2	30×35	ECS1VBZ103M□□300035
		39	31	3.5	25×50	ECS1VBZ123M□□250050
	15000	39	31	3.5	30×40	ECS1VBZ123M□□300040
		39	31	3.6	35×30	ECS1VBZ123M□□350030
	18000	31	25	4.1	30×45	ECS1VBZ153M□□300045
		31	25	4.1	35×35	ECS1VBZ153M□□350035
	22000	26	21	4.6	30×50	ECS1VBZ183M□□300050
		26	21	4.7	35×40	ECS1VBZ183M□□350040
	27000	22	17	5.3	35×45	ECS1VBZ223M□□350045
	27000	18	14	7	35×50	ECS1VBZ273M□□350050

U _R (Surge Voltage) Code	Rated Capa- citance	Max ESR 20°C, 120Hz	Typ ESR 20°C, 120Hz	Rated Ripple Current 85°C, 120Hz	Size ΦD x L	P/N
(V)	(μF)	(mΩ)	(mΩ)	(Arms)	(mm)	-
50 (63) 1H	2200	120	97	1.7	22×25	ECS1HBZ222M□□220025
	2700	100	79	1.9	22×30	ECS1HBZ272M□□220030
		100	79	1.9	25×25	ECS1HBZ272M□□250025
	3300	100	81	2	22×35	ECS1HBZ332M□□220035
	3900	86	69	2.1	22×35	ECS1HBZ392M□□220035
		86	69	2.1	25×30	ECS1HBZ392M□□250030
	4700	71	57	2.4	22×40	ECS1HBZ472M□□220040
		71	57	2.4	25×35	ECS1HBZ472M□□250035
	5600	72	57	2.5	22×50	ECS1HBZ562M□□220050
		72	57	2.5	25×40	ECS1HBZ562M□□250040
	6800	72	57	2.5	30×30	ECS1HBZ562M□□300030
		59	47	2.8	25×45	ECS1HBZ682M□□250045
	8200	59	47	2.8	30×35	ECS1HBZ682M□□300035
		57	46	3.2	25×50	ECS1HBZ822M□□250050
	10000	57	46	3	30×40	ECS1HBZ822M□□300040
		57	46	3	35×30	ECS1HBZ822M□□350030
	12000	47	38	3.4	30×45	ECS1HBZ103M□□300045
		47	38	3.4	35×35	ECS1HBZ103M□□350035
	15000	39	31	3.8	30×50	ECS1HBZ123M□□300050
		39	31	3.8	35×40	ECS1HBZ123M□□350040
	15000	31	25	4.5	35×50	ECS1HBZ153M□□350050
	63 (79) 1J	1500	135	107	1.6	22×25
1800		110	89	1.8	22×30	ECS1JBZ182M□□220030
2200		91	73	2	22×30	ECS1JBZ222M□□220030
		91	73	2	25×25	ECS1JBZ222M□□250025
2700		74	59	2.2	22×35	ECS1JBZ272M□□220035
		74	59	2.3	25×30	ECS1JBZ272M□□250030
3300		81	65	2.3	22×40	ECS1JBZ332M□□220040
		81	65	2.3	25×35	ECS1JBZ332M□□250035
3900		81	65	2.3	30×25	ECS1JBZ332M□□300025
		69	55	2.6	25×40	ECS1JBZ392M□□250040
4700		69	55	2.6	30×30	ECS1JBZ392M□□300030
		69	55	2.7	35×25	ECS1JBZ392M□□350025
5600		56	45	3.0	25×45	ECS1JBZ472M□□250045
		56	45	3.0	30×30	ECS1JBZ472M□□300030
6800		48	38	3.1	25×45	ECS1JBZ562M□□250045
		48	38	3.2	30×35	ECS1JBZ562M□□300035
8200		48	38	3.3	35×30	ECS1JBZ562M□□350030
		40	32	3.6	30×40	ECS1JBZ682M□□300040
10000		40	32	3.7	35×35	ECS1JBZ682M□□350035
		41	33	3.7	30×50	ECS1JBZ822M□□300050
12000		41	33	3.8	35×40	ECS1JBZ822M□□350040
		34	27	4.3	35×45	ECS1JBZ103M□□350045
80 (100) 1K		12000	28	23	4.8	35×50
	1000	200	160	1.3	22×25	ECS1KBZ102M□□220025
	1200	165	133	1.5	22×30	ECS1KBZ122M□□220030
	1500	133	107	1.7	25×25	ECS1KBZ152M□□250025
	1800	111	89	1.9	22×35	ECS1KBZ182M□□220035
		111	89	1.9	25×30	ECS1KBZ182M□□250030
	2200	91	73	2.1	22×40	ECS1KBZ222M□□220040
		91	73	2.2	25×35	ECS1KBZ222M□□250035
	2700	91	73	2.2	30×25	ECS1KBZ222M□□300025
		74	59	2.5	22×50	ECS1KBZ272M□□220050
	3300	74	59	2.5	25×40	ECS1KBZ272M□□250040
		74	59	2.5	30×30	ECS1KBZ272M□□300030
	3900	74	59	2.5	35×25	ECS1KBZ272M□□350025
		61	49	2.8	25×45	ECS1KBZ332M□□250045
	4700	61	49	2.8	30×35	ECS1KBZ332M□□300035
		52	41	3.1	25×50	ECS1KBZ392M□□250050
	5600	52	41	3.2	30×40	ECS1KBZ392M□□300040
		52	41	3.2	35×30	ECS1KBZ392M□□350030
	6800	43	34	3.6	30×45	ECS1KBZ472M□□300045
		43	34	3.6	35×35	ECS1KBZ472M□□350035
	8200	48	38	3.8	30×50	ECS1KBZ562M□□300050
		48	38	3.8	35×40	ECS1KBZ562M□□350040
	10000	40	32	4.1	35×45	ECS1KBZ682M□□350045
12000	41	33	4.7	35×50	ECS1KBZ822M□□350050	
12000	34	27	5.2	35×50	ECS1KBZ103M□□350050	
12000	28	23	5.8	35×55	ECS1KBZ123M□□350055	
100 (125) 2A	680	293	235	1.1	22×25	ECS2ABZ681M□□220025
	820	243	195	1.2	22×30	ECS2ABZ821M□□220030
	1000	200	160	1.4	25×25	ECS2ABZ102M□□250025
	1200	166	133	1.6	22×35	ECS2ABZ122M□□220035
		166	133	1.6	25×30	ECS2ABZ122M□□250030
	1500	133	107	1.8	22×40	ECS2ABZ152M□□220040
		133	107	1.7	25×35	ECS2ABZ152M□□250035
	1800	133	107	1.8	30×25	ECS2ABZ152M□□300025
		111	89	2.1	22×50	ECS2ABZ182M□□220050
	1800	111	89	2	25×40	ECS2ABZ182M□□250040
1800	111	89	2.1	30×30	ECS2ABZ182M□□300030	
1800	111	89	2.2	35×25	ECS2ABZ182M□□350025	

CD 293 BZ SERIES



Ratings for CD 293 BZ Series

U _R (Surge Voltage) Code	Rated Capa- citance	Max ESR 20°C, 120Hz	Typ ESR 20°C, 120Hz	Rated Ripple Current 85°C, 120Hz	Size ΦD x L	P/N	
(V)	(μF)	(mΩ)	(mΩ)	(Arms)	(mm)	-	
100 (125) 2A	2200	91	73	2.2	25 × 45	ECS2ABZ222M□□250045	
		91	73	2.3	30 × 35	ECS2ABZ222M□□300035	
		91	73	2.5	35 × 30	ECS2ABZ222M□□350030	
	2700	74	59	2.6	25 × 50	ECS2ABZ272M□□250050	
		74	59	2.7	30 × 40	ECS2ABZ272M□□300040	
		61	49	3	30 × 45	ECS2ABZ332M□□300045	
	3300	61	49	3.1	35 × 35	ECS2ABZ332M□□350035	
		52	41	3.4	30 × 50	ECS2ABZ392M□□300050	
		52	41	3.4	35 × 40	ECS2ABZ392M□□350040	
	4700	43	34	4	35 × 50	ECS2ABZ472M□□350050	
	160 (200) 2C	220	600	483	1.1	22 × 25	ECS2CBZ221M□□220025
		270	490	393	1.2	22 × 25	ECS2CBZ271M□□220025
330		400	322	1.3	22 × 25	ECS2CBZ331M□□220025	
390		341	273	1.5	22 × 30	ECS2CBZ391M□□220030	
		341	273	1.5	25 × 25	ECS2CBZ391M□□250025	
470		283	226	1.6	25 × 30	ECS2CBZ471M□□250030	
		237	190	1.9	22 × 35	ECS2CBZ561M□□220035	
		237	190	1.9	25 × 30	ECS2CBZ561M□□250030	
560		237	190	2	30 × 25	ECS2CBZ561M□□300025	
		196	157	2.1	22 × 40	ECS2CBZ681M□□220040	
		196	157	2.2	25 × 35	ECS2CBZ681M□□250035	
680		162	130	2.5	22 × 50	ECS2CBZ821M□□220050	
		162	130	2.4	25 × 40	ECS2CBZ821M□□250040	
		162	130	2.5	30 × 30	ECS2CBZ821M□□300030	
820		195	156	2.4	35 × 25	ECS2CBZ821M□□350025	
		133	107	2.7	25 × 45	ECS2CBZ102M□□250045	
		133	107	2.8	30 × 35	ECS2CBZ102M□□300035	
1000		160	128	2.7	35 × 30	ECS2CBZ102M□□350030	
		111	89	3.1	25 × 50	ECS2CBZ122M□□250050	
		111	89	3.2	30 × 40	ECS2CBZ122M□□300040	
1200		133	107	3.0	35 × 35	ECS2CBZ122M□□350035	
		89	71	3.7	30 × 45	ECS2CBZ152M□□300045	
		107	85	3.5	35 × 40	ECS2CBZ152M□□350040	
1800		89	71	3.9	35 × 45	ECS2CBZ182M□□350045	
2200		73	58	4.5	35 × 50	ECS2CBZ222M□□350050	
270		495	393	1.2	22 × 25	ECS2KBZ271M□□220025	
330		400	322	1.4	22 × 30	ECS2KBZ331M□□220030	
390		340	273	1.5	25 × 25	ECS2KBZ391M□□250025	
470		283	226	1.7	22 × 35	ECS2KBZ471M□□220035	
		283	226	1.7	25 × 30	ECS2KBZ471M□□250030	
		283	226	1.8	30 × 25	ECS2KBZ471M□□300025	
560		237	190	1.9	22 × 40	ECS2KBZ561M□□220040	
		237	190	2.0	25 × 35	ECS2KBZ561M□□250035	
		196	157	2.3	22 × 50	ECS2KBZ681M□□220050	
680		196	157	2.2	25 × 40	ECS2KBZ681M□□250040	
		196	157	2.3	30 × 30	ECS2KBZ681M□□300030	
		235	188	2.2	35 × 25	ECS2KBZ681M□□350025	
820		162	130	2.5	25 × 45	ECS2KBZ821M□□250045	
		162	130	2.6	30 × 35	ECS2KBZ821M□□300035	
		195	156	2.5	35 × 30	ECS2KBZ821M□□350030	
1000		133	107	2.9	25 × 50	ECS2KBZ102M□□250050	
		133	107	2.9	30 × 40	ECS2KBZ102M□□300040	
		111	89	3.3	30 × 45	ECS2KBZ122M□□300045	
1200		133	107	3.1	35 × 35	ECS2KBZ122M□□350035	
1500		107	85	3.6	35 × 45	ECS2KBZ152M□□350045	
1800		89	71	4.1	35 × 50	ECS2KBZ182M□□350050	
220		600	483	1.1	22 × 25	ECS2DBZ221M□□220025	
270		492	393	1.2	22 × 30	ECS2DBZ271M□□220030	
330	402	322	1.4	22 × 30	ECS2DBZ331M□□220030		
	402	322	1.4	25 × 25	ECS2DBZ331M□□250025		
	341	273	1.6	22 × 35	ECS2DBZ391M□□220035		
390	341	273	1.6	25 × 30	ECS2DBZ391M□□250030		
	283	226	1.8	22 × 40	ECS2DBZ471M□□220040		
	283	226	1.9	30 × 25	ECS2DBZ471M□□300025		
470	237	190	2.0	22 × 45	ECS2DBZ561M□□220045		
	237	190	2.0	25 × 35	ECS2DBZ561M□□250035		
	237	190	2.1	30 × 30	ECS2DBZ561M□□300030		
560	285	228	2.0	35 × 25	ECS2DBZ561M□□350025		
	196	157	2.3	25 × 40	ECS2DBZ681M□□250040		
	196	157	2.4	30 × 35	ECS2DBZ681M□□300035		
680	162	130	2.6	25 × 50	ECS2DBZ821M□□250050		
	162	130	2.7	30 × 40	ECS2DBZ821M□□300040		
	195	156	2.5	35 × 30	ECS2DBZ821M□□350030		
820	133	107	3.1	30 × 45	ECS2DBZ102M□□300045		
	160	128	2.8	35 × 35	ECS2DBZ102M□□350035		
	111	89	3.4	30 × 50	ECS2DBZ122M□□300050		
1200	133	107	3.2	35 × 40	ECS2DBZ122M□□350040		
1500	107	85	3.8	35 × 50	ECS2DBZ152M□□350050		

U _R (Surge Voltage) Code	Rated Capa- citance	Max ESR 20°C, 120Hz	Typ ESR 20°C, 120Hz	Rated Ripple Current 85°C, 120Hz	Size ΦD x L	P/N
(V)	(μF)	(mΩ)	(mΩ)	(Arms)	(mm)	-
250 (300) 2E	100	1990	1592	0.68	22×25	ECS2EBZ101M□□220025
	180	1106	885	0.94	22×25	ECS2EBZ181M□□220025
	220	905	724	1.1	22×30	ECS2EBZ221M□□220030
		905	724	1.1	25×25	ECS2EBZ221M□□250025
	270	737	590	1.2	22×35	ECS2EBZ271M□□220035
		603	483	1.4	22×40	ECS2EBZ331M□□220040
	330	603	483	1.4	25×30	ECS2EBZ331M□□250030
		603	483	1.5	30×25	ECS2EBZ331M□□300025
		511	409	1.6	22×45	ECS2EBZ391M□□220045
	390	511	409	1.6	25×35	ECS2EBZ391M□□250035
		424	339	1.8	22×50	ECS2EBZ471M□□220050
		424	339	1.8	25×40	ECS2EBZ471M□□250040
	470	424	339	1.8	30×30	ECS2EBZ471M□□300030
		424	339	2.4	35×25	ECS2EBZ471M□□350025
		356	285	2.0	25×45	ECS2EBZ561M□□250045
	560	356	285	2.0	30×35	ECS2EBZ561M□□300035
		293	235	2.3	30×40	ECS2EBZ681M□□300040
	680	293	235	2.6	35×30	ECS2EBZ681M□□350030
		243	195	2.6	30×45	ECS2EBZ821M□□300045
	820	243	195	2.6	35×35	ECS2EBZ821M□□350035
		1000	199	160	3.0	35×40
	1200	166	133	3.4	35×45	ECS2EBZ122M□□350045
315 (365) 2F	100	1990	1592	0.67	22×25	ECS2FBZ101M□□220025
	150	1327	1062	0.85	22×30	ECS2FBZ151M□□220030
		1327	1062	0.85	25×25	ECS2FBZ151M□□250025
	180	1106	885	0.96	22×35	ECS2FBZ181M□□220035
		1106	885	0.96	25×30	ECS2FBZ181M□□250030
	220	905	724	1.1	22×40	ECS2FBZ221M□□220040
		905	724	1.1	25×35	ECS2FBZ221M□□250035
		905	724	1.1	30×25	ECS2FBZ221M□□300025
	270	737	590	1.2	22×45	ECS2FBZ271M□□220045
		737	590	1.3	25×40	ECS2FBZ271M□□250040
		737	590	1.3	30×30	ECS2FBZ271M□□300030
		737	590	1.3	35×25	ECS2FBZ271M□□350025
	330	603	483	1.4	25×45	ECS2FBZ331M□□250045
		603	483	1.4	30×35	ECS2FBZ331M□□300035
	390	511	409	1.6	25×50	ECS2FBZ391M□□250050
		511	409	1.6	30×40	ECS2FBZ391M□□300040
		511	409	1.6	35×30	ECS2FBZ391M□□350030
	470	424	339	1.8	30×45	ECS2FBZ471M□□300045
		424	339	1.8	35×35	ECS2FBZ471M□□330035
		356	285	2.0	30×50	ECS2FBZ561M□□300050
	560	356	285	2.0	35×40	ECS2FBZ561M□□350040
		680	293	235	2.3	35×45
350 (400) 2V	82	2427	1941	0.64	22×25	ECS2VBZ820M□□220025
	100	1990	1592	0.80	22×25	ECS2VBZ101M□□220025
	120	1658	1327	0.82	22×30	ECS2VBZ121M□□220030
		1658	1327	0.81	25×25	ECS2VBZ121M□□250025
	150	1327	1062	0.94	22×35	ECS2VBZ151M□□220035
		1327	1062	0.94	25×30	ECS2VBZ151M□□250030
	180	1106	885	1.1	22×40	ECS2VBZ181M□□220040
		1106	885	1.1	30×25	ECS2VBZ181M□□300025
	220	905	724	1.2	22×45	ECS2VBZ221M□□220045
		905	724	1.2	25×35	ECS2VBZ221M□□250035
		905	724	1.2	30×30	ECS2VBZ221M□□300030
		905	724	1.3	35×25	ECS2VBZ221M□□350025
	270	737	590	1.4	25×45	ECS2VBZ271M□□250045
		737	590	1.4	30×35	ECS2VBZ271M□□300035
	330	603	483	1.6	25×50	ECS2VBZ331M□□250050
		603	483	1.6	35×30	ECS2VBZ331M□□350030
		511	409	1.7	30×40	ECS2VBZ391M□□300040
	390	511	409	1.8	35×35	ECS2VBZ391M□□350035
		424	339	2.0	30×45	ECS2VBZ471M□□300045
	470	424	339	2.0	35×40	ECS2VBZ471M□□350040
		356	285	2.3	35×45	ECS2VBZ561M□□350045
	680	293	535	2.6	35×50	ECS2VBZ681M□□350050
820	243	195	2.8	35×60	ECS2VBZ821M□□350060	
400 (450) 2G	68	2926	2341	0.55	22×25	ECS2GBZ680M□□220025
	82	2427	1941	0.65	22×25	ECS2GBZ820M□□220025
	100	1990	1592	0.70	22×30	ECS2GBZ101M□□220030
		1990	1592	0.70	25×25	ECS2GBZ101M□□250025
	120	1658	1327	0.79	22×30	ECS2GBZ121M□□220030
		1327	1062	0.90	22×35	ECS2GBZ151M□□220035
	150	1327	1062	0.89	25×30	ECS2GBZ151M□□250030
		1106	885	1.0	22×40	ECS2GBZ181M□□220040
	180	1106	885	1.0	25×30	ECS2GBZ181M□□250030
		905	724	1.1	22×50	ECS2GBZ221M□□220050
	220	905	724	1.2	25×40	ECS2GBZ221M□□250040
		737	590	1.3	25×45	ECS2GBZ271M□□250045
270	737	590	1.5	30×30	ECS2GBZ271M□□300030	

Ratings for CD 293 BZ Series

U _r (Surge Voltage) Code	Rated Capa- citance	Max ESR 20°C, 120Hz	Typ ESR 20°C, 120Hz	Rated Ripple Current 85°C, 120Hz	Size ΦD x L	P/N
(V)	(μF)	(mΩ)	(mΩ)	(Arms)	(mm)	-
400 (450) 2G	330	603	483	1.6	25 × 45	ECS2GBZ331M□□250045
		603	483	1.7	30 × 35	ECS2GBZ331M□□300035
	390	511	409	1.8	35 × 30	ECS2GBZ391M□□350030
		511	409	1.9	30 × 40	ECS2GBZ391M□□300040
	470	424	339	2.1	35 × 35	ECS2GBZ471M□□350035
	560	356	285	2.3	35 × 40	ECS2GBZ561M□□350040
	680	293	235	2.7	35 × 45	ECS2GBZ681M□□350045
	820	242	194	3.1	35 × 50	ECS2GBZ821M□□350050
	1000	133	107	3.7	35 × 60	ECS2GBZ102M□□350060
	100	1990	1592	0.71	22 × 30	ECS2XBZ102M□□220030
1990		1592	0.72	25 × 25	ECS2XBZ102M□□250025	
420 (470) 2X	120	1658	1327	0.81	22 × 35	ECS2XBZ121M□□220035
		1658	1327	0.82	25 × 30	ECS2XBZ121M□□250030
	150	1327	1062	0.96	25 × 30	ECS2XBZ151M□□250030
	180	1106	885	1.1	25 × 35	ECS2XBZ181M□□250035
		1106	885	1.2	30 × 30	ECS2XBZ181M□□300030
	220	905	724	1.2	25 × 40	ECS2XBZ221M□□250040
		905	724	1.3	30 × 30	ECS2XBZ221M□□300030
	270	737	590	1.3	25 × 45	ECS2XBZ271M□□250045
		737	590	1.4	30 × 35	ECS2XBZ271M□□300035
	330	603	483	1.7	30 × 40	ECS2XBZ331M□□300040
	390	511	409	1.8	30 × 45	ECS2XBZ391M□□300045
		511	409	1.9	35 × 35	ECS2XBZ391M□□350035
	470	424	339	2.1	30 × 50	ECS2XBZ471M□□300050
		424	339	2.2	35 × 40	ECS2XBZ471M□□350040
	560	356	285	2.4	35 × 45	ECS2XBZ561M□□350045
	680	293	235	2.8	35 × 50	ECS2XBZ681M□□350050
	820	242	194	3.2	35 × 60	ECS2XBZ821M□□350060
	1000	133	107	4.0	40 × 60	ECS2XBZ102M□□400060

U_r (Surge Voltage) Code	Rated Capacitance	Max ESR 20°C, 120Hz	Typ ESR 20°C, 120Hz	Rated Ripple Current 85°C, 120Hz	Size ΦD x L	P/N
(V)	(μF)	(mΩ)	(mΩ)	(Arms)	(mm)	-
450 (500) 2W	68	2926	2341	0.57	22 × 25	ECS2WBZ680M□□220025
		82	2427	0.68	22 × 30	ECS2WBZ820M□□220030
		100	1990	0.73	25 × 25	ECS2WBZ101M□□250025
	120	1658	1327	0.80	22 × 35	ECS2WBZ121M□□220035
		1658	1327	0.83	25 × 30	ECS2WBZ121M□□250030
	150	1327	1062	0.95	22 × 45	ECS2WBZ151M□□220045
		1327	1062	0.95	25 × 35	ECS2WBZ151M□□250035
	180	1106	885	1.1	25 × 40	ECS2WBZ181M□□250040
		1106	885	1.1	30 × 30	ECS2WBZ181M□□300030
	220	905	724	1.2	25 × 45	ECS2WBZ221M□□250045
		905	724	1.3	30 × 35	ECS2WBZ221M□□300035
	270	737	590	1.5	30 × 40	ECS2WBZ271M□□300040
	330	603	480	1.7	30 × 45	ECS2WBZ331M□□300045
	390	511	409	1.9	35 × 40	ECS2WBZ391M□□350040
	470	424	339	2.2	30 × 50	ECS2WBZ471M□□300050
	560	356	285	2.4	35 × 50	ECS2WBZ561M□□350050
	680	293	235	2.8	35 × 55	ECS2WBZ681M□□350055
	820	242	194	3.2	35 × 60	ECS2WBZ821M□□350060
500 (550) 2H	1000	133	107	4.2	35 × 70	ECS2WBZ102M□□350070
	100	1990	1592	0.9	25 × 30	ECS2HBZ101M□□250030
	120	1658	1327	1.0	25 × 35	ECS2HBZ121M□□250035
	150	1327	1062	1.2	30 × 30	ECS2HBZ151M□□300030
	180	1106	885	1.4	25 × 45	ECS2HBZ181M□□250045
		1106	885	1.3	30 × 35	ECS2HBZ181M□□300035
	220	905	724	1.6	25 × 50	ECS2HBZ221M□□250050
		905	724	1.5	30 × 40	ECS2HBZ221M□□300040
	270	737	590	1.8	30 × 45	ECS2HBZ271M□□300045
	330	603	483	2.0	35 × 35	ECS2HBZ331M□□350035
	390	511	409	2.3	35 × 40	ECS2HBZ391M□□350040
	470	424	339	2.6	35 × 50	ECS2HBZ471M□□350050
	560	356	285	2.9	35 × 55	ECS2HBZ561M□□350055
	680	293	235	3.2	35 × 65	ECS2HBZ681M□□350065

Customer products are available on request.

Frequency Coefficient

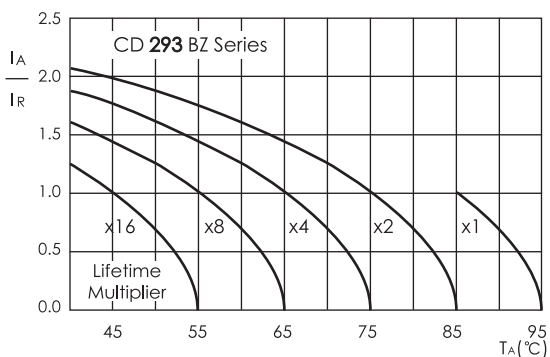
Frequency	50/60Hz	120Hz	300Hz	1kHz	10kHz	≥50kHz
Voltage (V)						
≤ 50	0.88	1.00	1.07	1.15	1.15	1.15
63 ~ 100	0.80	1.00	1.17	1.32	1.45	1.50
≥ 160	0.80	1.00	1.16	1.30	1.41	1.43

Temperature Coefficient

Temperature(°C)	+40	+55	+70	+85
Rated Voltage(V)				
< 160	2.1	1.8	1.5	1.0
≥ 160	1.7	1.5	1.3	1.0

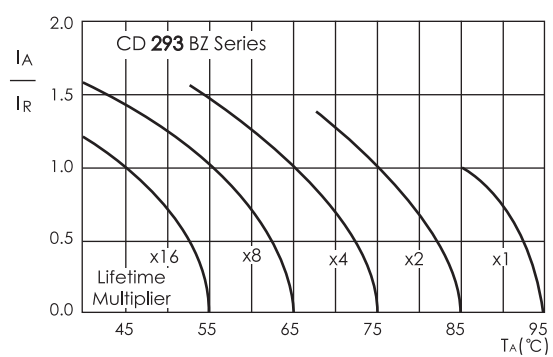
Lifetime Diagram

Lifetime Diagram $U_r < 160V$



I_A = actual ripple current at 120Hz, I_R = rated ripple current at 120Hz, 85°C
Multiplier of Useful Life as a function of ambient temperature and ripple current load

Lifetime Diagram $U_r \geq 160V$



I_A = actual ripple current at 120Hz, I_R = rated ripple current at 120Hz, 85°C
Multiplier of Useful Life as a function of ambient temperature and ripple current load