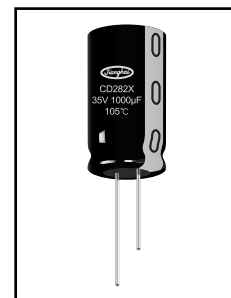
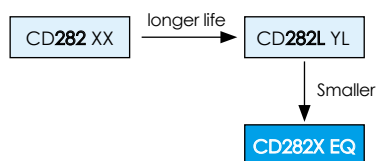


4000-10000h at 105°C

- Miniaturized
- Ultra Low Impedance
- High ripple current
- Switching power supplies



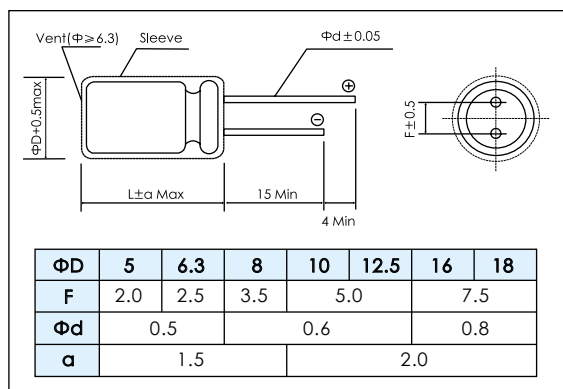
MINIATURE

Items	Characteristics								
Operating Temperature Range (℃)	-40 ~ +105								
Voltage range (V)	6.3 ~ 100								
Capacitance Range (μF)	1 ~ 15000								
Capacitance Tolerance(20℃ , 120Hz)	± 20%								
Leakage Current (μA)	After 2 minutes at 20℃ application of rated voltage, leakage current is not more than 0.01CV or 3μA, whichever is greater. C: Nominal Capacitance (μF) V: Rated Voltage (V)								
Dissipation Factor (20℃ , 120Hz)	Rated Voltage (V)	6.3	10	16	25	35	50	63	100
	Tan δ (max)	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08
	For Capacitances > 1000μF add 0.02 to every 1000μF								
Stability at Low Temperature (Impedance Ratio at 120Hz)	Rated Voltage (V)	6.3	10	16	25	35	50	63	100
	Z _{-25℃} / Z _{+20℃}	4	3	2					
	Z _{-40℃} / Z _{+20℃}	8	6	4	3				

	Useful Life				Load Life		Endurance Test		Shelf Life	
Lifetime		6.3~10V	16~100V	≥ 250000h	6.3~10V	16~100V	6.3~10V	16~100V	1000h	
	Φ 5	6000	7000		4000	5000	6000	7000		
	Φ 6.3-8	8000	9000		6000	7000	8000	9000		
	Φ 10-18	10000	12000		8000	10000	10000	12000		
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 ± 40% of initial value				Within ± 25% of initial value		Within ± 25% 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℃		U _R 1.4 x I _R 40℃		U _R I _R 105℃		U _R I _R = 0 105℃		U _R = 0 I _R = 0 105℃ After test: U _R to be applied for 30 min > 24h before measurement	

Dimensions

mm



Frequency Coefficient

Frequency Cap (µF)	120Hz	1kHz	10kHz	100kHz
1	0.35	0.60	0.80	1.00
2.2 ~ 10	0.42	0.60	0.80	1.00
22 ~ 47	0.55	0.75	0.90	1.00
100 ~ 330	0.70	0.85	0.95	1.00
470 ~ 1000	0.75	0.90	0.98	1.00
2200 ~ 15000	0.80	0.95	1.00	1.00

Temperature Coefficient

Temperature(°C)	+65	+85	+105
Coefficient	2.0	1.7	1.0

Ratings for CD282X EQ Series

U _r (Surge Voltage) Code	Rated Capa- citance	Max Imp 20°C, 100kHz	Max Imp -10°C, 100kHz	Rated Ripple Current 105°C, 100kHz	Size ΦD x L	P/N
(V)	(μF)	(Ω)	(Ω)	(mAmps)	(mm)	-
6.3 (7.2) 0J	100	0.9	3.6	150	5X11.5	ECR0JEQ101M □ □ 050011
	180	0.4	1.2	250	5X11.5	ECR0JEQ181M □ □ 050011
	220	0.4	1.2	250	5X11.5	ECR0JEQ221M □ □ 050011
	330	0.22	0.87	340	6.3X11.5	ECR0JEQ331M □ □ 063011
	470	0.22	0.87	400	6.3X11.5	ECR0JEQ471M □ □ 063011
	1000	0.13	0.52	640	8X11.5	ECR0JEQ102M □ □ 080011
	1200	0.08	0.32	865	10X12.5	ECR0JEQ122M □ □ 100012
	1500	0.087	0.35	840	8X16	ECR0JEQ122M □ □ 080016
	1500	0.069	0.27	1050	8X20	ECR0JEQ152M □ □ 080020
	2200	0.062	0.25	1300	10X16	ECR0JEQ182M □ □ 100016
	3300	0.046	0.18	1400	10X20	ECR0JEQ332M □ □ 100020
	3900	0.041	0.14	1900	12.5X20	ECR0JEQ392M □ □ 125020
	4700	0.032	0.11	2230	12.5X25	ECR0JEQ472M □ □ 125025
	6800	0.032	0.11	2230	12.5X25	ECR0JEQ682M □ □ 125025
	10000	0.021	0.06	2930	16X25	ECR0JEQ103M □ □ 160025
	12000	0.019	0.056	3450	16X31.5	ECR0JEQ123M □ □ 160031
	15000	0.015	0.044	3610	16X35.5	ECR0JEQ153M □ □ 160035
10 (13) 1A	100	0.9	3.6	150	5X11.5	ECR1AEQ101M □ □ 050011
	220	0.4	1.6	250	5X11.5	ECR1AEQ121M □ □ 050011
	330	0.22	0.87	400	6.3X11.5	ECR1AEQ331M □ □ 063011
	560	0.13	0.52	640	8X11.5	ECR1AEQ561M □ □ 080011
	820	0.087	0.35	840	8X16	ECR1AEQ821M □ □ 080016
	1000	0.08	0.32	865	10X12.5	ECR1AEQ821M □ □ 100012
	1200	0.069	0.27	1050	8X20	ECR1AEQ122M □ □ 080020
	1500	0.062	0.25	1300	10X16	ECR1AEQ122M □ □ 100016
	1800	0.046	0.18	1400	10X20	ECR1AEQ182M □ □ 100020
	2200	0.046	0.18	1400	10X20	ECR1AEQ222M □ □ 100020
	3300	0.041	0.14	1900	12.5X20	ECR1AEQ332M □ □ 125020
	4700	0.032	0.11	2230	12.5X25	ECR1AEQ472M □ □ 125025
	6800	0.021	0.06	2930	16X25	ECR1AEQ682M □ □ 160025
	10000	0.019	0.056	3450	16X31.5	ECR1AEQ103M □ □ 160031
	12000	0.015	0.044	3610	16X35.5	ECR1AEQ123M □ □ 160035
16 (20) 1C	47	0.4	1.2	250	5X11.5	ECR1CEQ470M □ □ 050011
	100	0.4	1.2	250	5X11.5	ECR1CEQ101M □ □ 050011
	220	0.22	0.87	400	6.3X11.5	ECR1CEQ221M □ □ 063011
	330	0.22	0.87	400	6.3X11.5	ECR1CEQ331M □ □ 063011
	470	0.13	0.52	640	8X11.5	ECR1CEQ471M □ □ 080011
	680	0.087	0.35	840	8X16	ECR1CEQ681M □ □ 080016
	820	0.08	0.32	865	10X12.5	ECR1CEQ681M □ □ 100012
	1000	0.069	0.27	1050	8X20	ECR1CEQ821M □ □ 080020
	1200	0.062	0.25	1210	10X16	ECR1CEQ102M □ □ 100016
	1500	0.046	0.18	1400	10X20	ECR1CEQ152M □ □ 100020
	1800	0.042	0.17	1650	10X25	ECR1CEQ182M □ □ 100025
	2200	0.041	0.14	1900	12.5X20	ECR1CEQ222M □ □ 125020
	3300	0.032	0.11	2230	12.5X25	ECR1CEQ332M □ □ 125025
	4700	0.021	0.06	2930	16X25	ECR1CEQ472M □ □ 160025
	5600	0.021	0.06	2930	16X25	ECR1CEQ562M □ □ 160025
	6800	0.019	0.056	3450	16X31.5	ECR1CEQ682M □ □ 160031
25 (32) 1E	8200	0.019	0.056	3450	16X31.5	ECR1CEQ822M □ □ 160031
	10000	0.015	0.044	3610	16X35.5	ECR1CEQ103M □ □ 160035
	33	0.4	1.2	250	5X11.5	ECR1EEQ330M □ □ 050011
	47	0.4	1.2	250	5X11.5	ECR1EEQ470M □ □ 050011
	68	0.4	1.2	250	5X11.5	ECR1EEQ680M □ □ 050011
	100	0.4	1.2	250	5X11.5	ECR1EEQ101M □ □ 050011
	150	0.22	0.87	400	6.3X11.5	ECR1EEQ151M □ □ 063011
	220	0.22	0.87	400	6.3X11.5	ECR1EEQ221M □ □ 063011
	330	0.13	0.52	640	8X11.5	ECR1EEQ331M □ □ 080011
	390	0.087	0.35	840	8X16	ECR1EEQ391M □ □ 080016
	470	0.08	0.32	865	10X12.5	ECR1EEQ471M □ □ 100012
	560	0.069	0.27	1050	8X20	ECR1EEQ561M □ □ 080020
	680	0.062	0.25	1300	10X16	ECR1EEQ681M □ □ 100016
	1000	0.046	0.18	1400	10X20	ECR1EEQ102M □ □ 100020
	1200	0.042	0.17	1650	10X25	ECR1EEQ122M □ □ 100025
	1500	0.041	0.14	1900	12.5X20	ECR1EEQ152M □ □ 125020
35 (44) 1V	2200	0.032	0.11	2230	12.5X25	ECR1EEQ222M □ □ 125025
	3300	0.021	0.06	2930	16X25	ECR1EEQ332M □ □ 160025
	3900	0.021	0.06	2930	16X25	ECR1EEQ392M □ □ 160025
	4700	0.019	0.056	3450	16X31.5	ECR1EEQ472M □ □ 160031
	5600	0.015	0.044	3610	16X35.5	ECR1EEQ562M □ □ 160035
	33	0.4	1.2	250	5X11.5	ECR1VEQ330M □ □ 050011
	47	0.4	1.2	250	5X11.5	ECR1VEQ470M □ □ 050011
	100	0.22	0.87	400	6.3X11.5	ECR1VEQ101M □ □ 063011
	220	0.13	0.52	640	8X11.5	ECR1VEQ221M □ □ 080011
	270	0.087	0.35	840	8X16	ECR1VEQ271M □ □ 080016
	330	0.08	0.32	865	10X12.5	ECR1VEQ331M □ □ 100012
	390	0.069	0.27	1050	8X20	ECR1VEQ391M □ □ 100012
	470	0.062	0.25	1210	10X16	ECR1VEQ471M □ □ 100016
	680	0.046	0.18	1400	10X20	ECR1VEQ681M □ □ 100020
	820	0.042	0.17	1650	10X25	ECR1VEQ821M □ □ 100025
	1000	0.041	0.14	1900	12.5X20	ECR1VEQ102M □ □ 125020
3900	1500	0.032	0.11	2230	12.5X25	ECR1VEQ152M □ □ 125025
	2200	0.021	0.06	2930	16X25	ECR1VEQ222M □ □ 160025
	2700	0.021	0.06	2930	16X25	ECR1VEQ272M □ □ 160025
	3300	0.019	0.056	3450	16X31.5	ECR1VEQ332M □ □ 160031
	3900	0.015	0.044	3610	16X35.5	ECR1VEQ392M □ □ 160035

U _r (Surge Voltage) Code	Rated Capa- citance	Max Imp 20°C, 100kHz	Max Imp -10°C, 100kHz	Rated Ripple Current 105°C, 100kHz	Size ΦD x L	P/N
(V)	(μF)	(Ω)	(Ω)	(mAmps)	(mm)	-
50 (63) 1H	1	4	16	30	5X11.5	ECR1HEQ010M □ □ 050011
	2.2	2.5	10	43	5X11.5	ECR1HEQ2R2M □ □ 050011
	3.3	2.2	8.8	53	5X11.5	ECR1HEQ3R3M □ □ 050011
	4.7	1.9	7.6	88	5X11.5	ECR1HEQ4R7M □ □ 050011
	10	1.5	4	100	5X11.5	ECR1HEQ100M □ □ 050011
	22	0.7	2.8	180	5X11.5	ECR1HEQ220M □ □ 050011
	33	0.7	2.8	250	5X11.5	ECR1HEQ330M □ □ 050011
	47	0.3	1.2	295	6.3X11.5	ECR1HEQ470M □ □ 063011
	56	0.3	1.2	295	6.3X11.5	ECR1HEQ560M □ □ 063011
	100	0.17	0.68	555	8X11.5	ECR1HEQ101M □ □ 080011
	150	0.12	0.48	730	8X16	ECR1HEQ151M □ □ 080016
	180	0.12	0.48	760	10X12.5	ECR1HEQ181M □ □ 100012
		0.091	0.36	910	8X20	ECR1HEQ181M □ □ 080020
	220	0.084	0.34	1050	10X16	ECR1HEQ221M □ □ 100016
	330	0.06	0.24	1220	10X20	ECR1HEQ331M □ □ 100020
	470	0.055	0.22	1440	10X25	ECR1HEQ471M □ □ 100025
		0.045	0.15	1660	12.5X20	ECR1HEQ471M □ □ 125020
	560	0.045	0.15	1660	12.5X20	ECR1HEQ561M □ □ 125020
	820	0.034	0.11	1950	12.5X25	ECR1HEQ821M □ □ 125025
	1000	0.032	0.096	2730	16X25	ECR1HEQ102M □ □ 160025
1200	0.025	0.075	2730	16X25	ECR1HEQ122M □ □ 160025	
1800	0.022	0.066	3010	16X31.5	ECR1HEQ182M □ □ 160031	
2200	0.019	0.057	3150	16X35.5	ECR1HEQ222M □ □ 160035	
63 (79) 1J	10	0.88	3.5	173	5X11.5	ECR1JEQ100M □ □ 050011
	22	0.88	3.5	173	5X11.5	ECR1JEQ220M □ □ 050011
	33	0.35	1.4	278	6.3X11.5	ECR1JEQ330M □ □ 063011
	56	0.22	0.88	500	8X11.5	ECR1JEQ560M □ □ 080011
	82	0.16	0.64	665	8X16	ECR1JEQ820M □ □ 080016
	100	0.15	0.6	725	10X12.5	ECR1JEQ101M □ □ 100012
	120	0.12	0.48	820	8X20	ECR1JEQ121M □ □ 080020
	220	0.078	0.31	1200	10X20	ECR1JEQ221M □ □ 100020
	330	0.06	0.19	1570	12.5X20	ECR1JEQ331M □ □ 125020
	390	0.06	0.19	1570	12.5X20	ECR1JEQ391M □ □ 125020
	470	0.043	0.14	1990	12.5X25	ECR1JEQ471M □ □ 125025
	560	0.043	0.14	1990	12.5X25	ECR1JEQ561M □ □ 125025
	1000	0.032	0.096	2730	16X25	ECR1JEQ102M □ □ 160025
	1200	0.021	0.063	2850	16X31.5	ECR1JEQ122M □ □ 160031
	1500	0.019	0.057	2900	16X35.5	ECR1JEQ152M □ □ 160035
	1	4.5	15	20	5X11.5	ECR2AEQ010M □ □ 050011
	2.2	3	13	30	5X11.5	ECR2AEQ2R2M □ □ 050011
	3.3	2.7	11	40	5X11.5	ECR2AEQ3R3M □ □ 050011
	4.7	2.5	10	65	5X11.5	ECR2AEQ4R7M □ □ 050011
	6.8	1.4	5.6	125	5X11.5	ECR2AEQ6R8M □ □ 050011
10	0.57	2.3	267	6.3X11.5	ECR2AEQ100M □ □ 063011	
22	0.57	2.3	267	6.3X11.5	ECR2AEQ150M □ □ 063011	
33	0.36	1.4	462	8X11.5	ECR2AEQ330M □ □ 080011	
47	0.25	1	585	8X16	ECR2AEQ470M □ □ 080016	
56	0.19	0.76	735	8X20	ECR2AEQ560M □ □ 080020	
68	0.11	0.47	780	10X16	ECR2AEQ680M □ □ 100016	
100	0.12	0.52	1040	10X20	ECR2AEQ101M □ □ 100020	
150	0.11	0.47	1170	10X25	ECR2AEQ151M □ □ 100025	
180	0.085	0.31	1430	12.5X20	ECR2AEQ181M □ □ 125020	
220	0.06	0.23	1620	12.5X25	ECR2AEQ221M □ □ 125025	
330	0.044	0.16	2210	16X25	ECR2AEQ331M □ □ 160025	
470	0.032	0.095	2400	16X31.5	ECR2AEQ471M □ □ 160031	
560	0.029	0.086	2600	16X35.5	ECR2AEQ561M □ □ 160035	

Typical Curves

