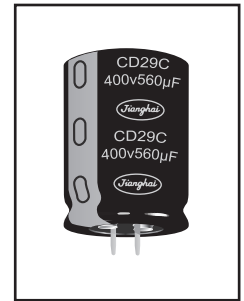


CD 29C QC SERIES



2000h at 105°C

- Load life 2000 hours at 105°C
- High ripple current
- Downsized from CD294
- PCB Mounting
- General industrial electronics

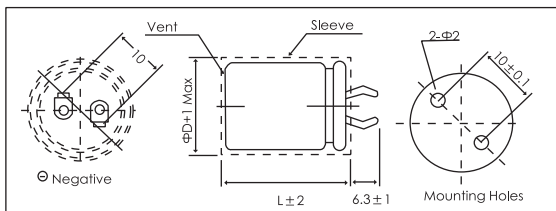


Items	Characteristics				
Operating Temperature Range (°C)	-40 ~ +105		-25 ~ +105		
Voltage Range (V)	200 ~ 250		400 ~ 450		
Capacitance Range (μF)	100 ~ 2700				
Capacitance Tolerance (20°C, 120Hz)	± 20%				
Leakage Current (μA)	After 5 minutes at 20°C application of rated voltage, leakage current is 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)	200	250	400	450
	Tan δ (max)	0.15			0.20
Stability at Low Temperature (Impedance Ratio at 120Hz)	Rated Voltage (V)	200	250	400	450
	Impedance Ratio	$Z_{-25°C} / Z_{+20°C}$	4		8
		$Z_{-40°C} / Z_{+20°C}$	12		-

	Useful Life		Load Life	Endurance Test	Shelf Life
Lifetime	4000h	≥ 180000h	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 ± 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 130% 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 $1.4 \times I_R$ 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



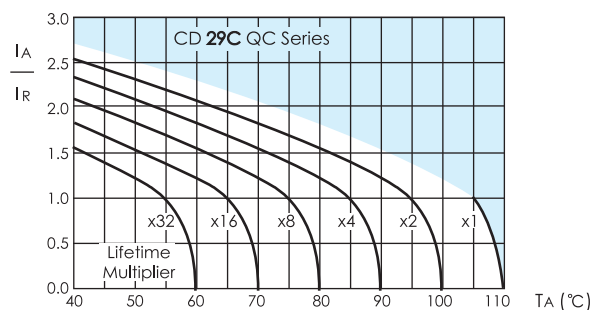
Temperature Coefficient

Temperature(°C)	+40	+55	+70	+80	+105
Coefficient	2.7	2.5	2.1	1.7	1.0

Frequency Coefficient

Voltage (V)	Frequency					
	50/60Hz	120Hz	300Hz	1kHz	10kHz	≥ 50kHz
200 ~ 250	0.80	1.00	1.17	1.32	1.45	1.50
400 ~ 450	0.80	1.00	1.16	1.30	1.41	1.43

Lifetime Diagram



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

Ratings for CD 29C QC Series

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)	-
200 (250) 2D	330	603	422	1.01	22 x 25	ECS2DQC331M□□220025
	390	510	357	1.10	22 x 30	ECS2DQC391M□□220030
	470	423	296	1.20	22 x 30	ECS2DQC471M□□220030
		423	296	1.20	25 x 25	ECS2DQC471M□□250025
	560	355	248	1.48	22 x 35	ECS2DQC561M□□220035
		355	248	1.48	25 x 30	ECS2DQC561M□□250030
	680	292	204	1.62	22 x 40	ECS2DQC681M□□220040
		292	204	1.60	25 x 30	ECS2DQC681M□□250030
		292	204	1.60	30 x 25	ECS2DQC681M□□300025
	820	242	169	1.75	22 x 45	ECS2DQC821M□□220045
		242	169	1.75	25 x 35	ECS2DQC821M□□250035
		242	169	1.75	30 x 30	ECS2DQC821M□□300030
	1000	199	139	2.04	22 x 50	ECS2DQC102M□□220050
		199	139	2.04	25 x 40	ECS2DQC102M□□250040
		199	139	2.04	30 x 35	ECS2DQC102M□□300035
		199	139	2.04	35 x 25	ECS2DQC102M□□350025
	1200	165	116	2.30	25 x 45	ECS2DQC122M□□250045
		165	116	2.30	30 x 35	ECS2DQC122M□□300035
	1500	132	92	2.57	30 x 40	ECS2DQC152M□□300040
		132	92	2.57	35 x 30	ECS2DQC152M□□350030
	1800	110	77	2.68	30 x 50	ECS2DQC182M□□300050
		110	77	2.68	35 x 35	ECS2DQC182M□□350035
	2200	90	63	2.92	35 x 45	ECS2DQC222M□□350045
2700	73	51	3.30	35 x 50	ECS2DQC272M□□350050	
250 (300) 2E	220	904	633	0.95	22 x 25	ECS2EQC221M□□220025
	270	737	516	1.12	22 x 25	ECS2EQC271M□□220025
	330	603	422	1.21	22 x 30	ECS2EQC331M□□220030
		603	422	1.21	25 x 25	ECS2EQC331M□□250025
	390	510	357	1.38	22 x 35	ECS2EQC391M□□220035
		510	357	1.38	25 x 25	ECS2EQC391M□□250025
	470	423	296	1.56	22 x 40	ECS2EQC471M□□220040
		423	296	1.56	25 x 30	ECS2EQC471M□□250030
	560	355	248	1.74	22 x 45	ECS2EQC561M□□220045
		355	248	1.74	25 x 35	ECS2EQC561M□□250035
	680	292	204	1.92	22 x 50	ECS2EQC681M□□220050
		292	204	1.92	25 x 40	ECS2EQC681M□□250040
		292	204	1.92	30 x 30	ECS2EQC681M□□300030
	820	242	169	2.13	25 x 45	ECS2EQC821M□□250045
		242	169	2.13	30 x 35	ECS2EQC821M□□300035
	1000	199	139	2.40	25 x 50	ECS2EQC102M□□250050
		199	139	2.40	30 x 40	ECS2EQC102M□□300040
		199	139	2.40	35 x 30	ECS2EQC102M□□350030
	1200	165	116	2.55	30 x 40	ECS2EQC122M□□300040
	1500	132	92	2.73	30 x 50	ECS2EQC152M□□300050
		132	92	2.73	35 x 40	ECS2EQC152M□□350040
	1800	110	77	2.82	35 x 45	ECS2EQC182M□□350045
	2200	90	63	2.95	35 x 50	ECS2EQC222M□□350050

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)	-
400 (450) 2G	120	1658	1161	0.65	22 x 25	ECS2GQC121M□□220025
	150	1327	774	0.73	22 x 30	ECS2GQC151M□□220030
	180	1105	774	0.73	25 x 25	ECS2GQC181M□□250025
		904	633	0.82	22 x 35	ECS2GQC221M□□220035
	220	904	633	0.87	25 x 30	ECS2GQC221M□□250030
		737	516	0.93	22 x 40	ECS2GQC271M□□220040
	270	737	516	1.05	25 x 35	ECS2GQC271M□□250035
		737	516	1.02	30 x 25	ECS2GQC271M□□300025
		603	422	1.16	22 x 50	ECS2GQC331M□□220050
	330	603	422	1.14	25 x 40	ECS2GQC331M□□250040
		603	422	1.14	30 x 30	ECS2GQC331M□□300030
		603	422	1.13	35 x 25	ECS2GQC331M□□350025
	390	510	357	1.45	25 x 45	ECS2GQC391M□□250045
		510	357	1.47	30 x 35	ECS2GQC391M□□300035
		510	357	1.50	35 x 30	ECS2GQC391M□□350030
	470	423	296	1.54	25 x 50	ECS2GQC471M□□250050
		423	296	1.61	30 x 40	ECS2GQC471M□□300040
		423	296	1.50	35 x 30	ECS2GQC471M□□350030
	560	355	248	1.70	30 x 45	ECS2GQC561M□□300045
		355	248	1.67	35 x 35	ECS2GQC561M□□350035
	680	292	204	1.82	30 x 50	ECS2GQC681M□□300050
		292	204	1.87	35 x 40	ECS2GQC681M□□350040
	820	242	169	2.08	35 x 45	ECS2GQC821M□□350045
199		169	2.14	35 x 50	ECS2GQC821M□□350050	
450 (500) 2W	100	2653	1393	0.67	22 x 25	ECS2WQC101M□□220025
	120	2212	1161	0.71	22 x 30	ECS2WQC121M□□220030
		2212	1161	0.72	25 x 25	ECS2WQC121M□□250025
	150	1206	928	0.75	22 x 30	ECS2WQC151M□□220030
		1206	928	0.77	22 x 45	ECS2WQC151M□□220045
	180	1474	774	0.79	22 x 40	ECS2WQC181M□□220040
		1474	774	0.79	25 x 30	ECS2WQC181M□□250030
	220	1206	633	0.85	22 x 45	ECS2WQC221M□□220045
		1206	633	0.87	25 x 35	ECS2WQC221M□□250035
		1206	633	0.89	30 x 30	ECS2WQC221M□□300030
	270	983	516	1.00	22 x 50	ECS2WQC271M□□220050
		983	516	1.10	25 x 40	ECS2WQC271M□□250040
		983	516	1.01	30 x 30	ECS2WQC271M□□300030
		983	516	1.00	35 x 25	ECS2WQC271M□□350025
	330	804	422	1.28	25 x 50	ECS2WQC331M□□250050
		804	422	1.31	30 x 35	ECS2WQC331M□□300035
		804	422	1.25	35 x 30	ECS2WQC331M□□350030
	390	680	357	1.41	30 x 40	ECS2WQC391M□□300040
		680	357	1.45	35 x 35	ECS2WQC391M□□350035
	470	565	296	1.61	35 x 40	ECS2WQC471M□□350040
		565	296	1.52	30 x 45	ECS2WQC471M□□300045
	560	474	248	1.75	35 x 45	ECS2WQC561M□□350045
	680	390	204	1.93	35 x 50	ECS2WQC681M□□350050

Customer products are available on request.