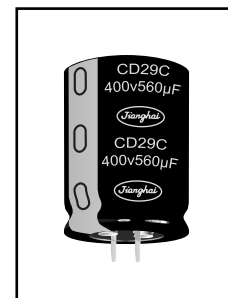
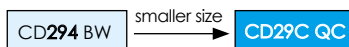


CD29C QC SERIES



2000h at 105°C

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

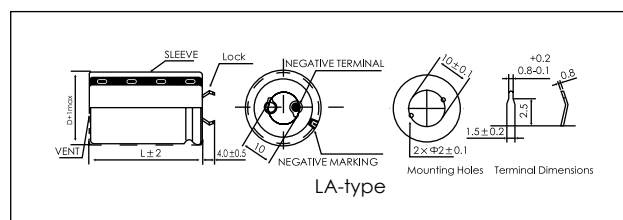


Items	Characteristics																					
Operating Temperature Range (°C)	-40 ~ +105			-25 ~ +105																		
Voltage range (V)	200 ~ 250			400 ~ 450																		
Capacitance Range (μF)	180 ~ 2700																					
Capacitance Tolerance (20°C , 120Hz)	± 20%																					
Leakage 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)	<table><tr><td>Rated Voltage (V)</td><td>200</td><td>250</td><td>400</td><td>450</td></tr><tr><td>Tan δ (max)</td><td colspan="3">0.15</td><td>0.20</td></tr></table>					Rated Voltage (V)	200	250	400	450	Tan δ (max)	0.15			0.20							
	Rated Voltage (V)	200	250	400	450																	
Tan δ (max)	0.15			0.20																		
Stability at Low Temperature (Impedance Ratio at 120Hz)	<table><tr><td colspan="2">Rated Voltage (V)</td><td>200</td><td>250</td><td>400</td><td>450</td></tr><tr><td rowspan="2">Impedance Ratio</td><td>Z_{-25°C} / Z_{+20°C}</td><td colspan="2">4</td><td colspan="2">8</td></tr><tr><td>Z_{-40°C} / Z_{+20°C}</td><td colspan="2">12</td><td colspan="2">-</td></tr></table>					Rated Voltage (V)		200	250	400	450	Impedance Ratio	Z _{-25°C} / Z _{+20°C}	4		8		Z _{-40°C} / Z _{+20°C}	12		-	
	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
Life Time	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 × 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 30 min > 24h before measurement

Dimensions

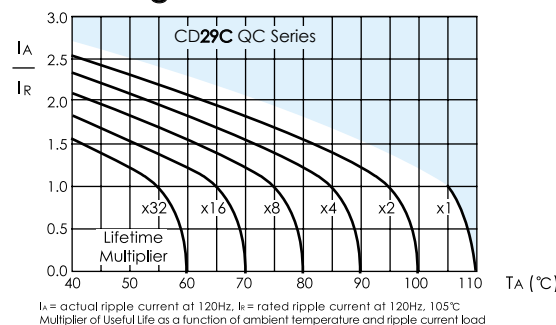
mm



Temperature Coefficient

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

Life Time Diagram



Frequency Coefficient

Frequency	50/60Hz	120Hz	300Hz	1kHz	10kHz	≥ 50kHz
Voltage (V)						
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

Ratings for CD29C QC Series

U _r (Surge Voltage) Code	Rated Capacitance	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	560	355	248	1.48	25X30	ECS2DQC561M □□ 250030
	680	292	204	1.62	22X40	ECS2DQC681M □□ 220040
		292	204	1.6	25X30	ECS2DQC681M □□ 250030
		292	204	1.6	30X25	ECS2DQC681M □□ 300025
	820	242	169	1.75	22X45	ECS2DQC821M □□ 220045
		242	169	1.75	25X35	ECS2DQC821M □□ 250035
		242	169	1.75	30X30	ECS2DQC821M □□ 300030
	1000	199	139	2.04	22X50	ECS2DQC102M □□ 220050
		199	139	2.04	25X40	ECS2DQC102M □□ 250040
		199	139	2.04	30X35	ECS2DQC102M □□ 300035
		199	139	2.04	35X25	ECS2DQC102M □□ 350025
	1200	165	116	2.3	25X45	ECS2DQC122M □□ 250045
		165	116	2.3	30X35	ECS2DQC122M □□ 300035
	1500	132	92	2.57	30X40	ECS2DQC152M □□ 300040
		132	92	2.57	35X30	ECS2DQC152M □□ 350030
	1800	110	77	2.68	30X50	ECS2DQC182M □□ 300050
		110	77	2.68	35X35	ECS2DQC182M □□ 350035
	2200	90	63	2.92	35X45	ECS2DQC222M □□ 350045
	2700	73	51	3.3	35X50	ECS2DQC272M □□ 350050
250 (300) 2E	470	423	296	1.56	22X40	ECS2EQC471M □□ 220040
		423	296	1.56	25X30	ECS2EQC471M □□ 250030
	560	355	248	1.74	22X45	ECS2EQC561M □□ 220045
		355	248	1.74	25X35	ECS2EQC561M □□ 250035
	680	292	204	1.92	22X50	ECS2EQC681M □□ 220050
		292	204	1.92	25X40	ECS2EQC681M □□ 250040
		292	204	1.92	30X30	ECS2EQC681M □□ 300030
	820	242	169	2.13	25X45	ECS2EQC821M □□ 250045
		242	169	2.13	30X35	ECS2EQC821M □□ 300035
	1000	199	139	2.4	25X50	ECS2EQC102M □□ 250050
		199	139	2.4	30X40	ECS2EQC102M □□ 300040
		199	139	2.4	35X30	ECS2EQC102M □□ 350030
	1200	165	116	2.55	30X40	ECS2EQC122M □□ 300040
	1500	132	92	2.73	30X50	ECS2EQC152M □□ 300050
		132	92	2.73	35X40	ECS2EQC152M □□ 350040
	1800	110	77	2.82	35X45	ECS2EQC182M □□ 350045
	2200	90	63	2.95	35X50	ECS2EQC222M □□ 350050

U _r (Surge Voltage) Code	Rated Capacitance	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	220	904	633	0.87	25X30	ECS2GQC221M □□ 250030
	270	737	516	0.93	22X40	ECS2GQC271M □□ 220040
		737	516	1.05	25X35	ECS2GQC271M □□ 250035
		737	516	1.02	30X25	ECS2GQC271M □□ 300025
	330	603	422	1.16	22X50	ECS2GQC331M □□ 220050
		603	422	1.14	25X40	ECS2GQC331M □□ 250040
		603	422	1.14	30X30	ECS2GQC331M □□ 300030
		603	422	1.13	35X25	ECS2GQC331M □□ 350025
	390	510	357	1.45	25X45	ECS2GQC391M □□ 250045
		510	357	1.47	30X35	ECS2GQC391M □□ 300035
		510	357	1.5	35X30	ECS2GQC391M □□ 350030
	470	423	296	1.54	25X50	ECS2GQC471M □□ 250050
		423	296	1.61	30X40	ECS2GQC471M □□ 300040
		423	296	1.5	35X30	ECS2GQC471M □□ 350030
	560	355	248	1.7	30X45	ECS2GQC561M □□ 300045
		355	248	1.67	35X35	ECS2GQC561M □□ 350035
	680	292	204	1.82	30X50	ECS2GQC681M □□ 300050
		292	204	1.87	35X40	ECS2GQC681M □□ 350040
	820	242	169	2.08	35X45	ECS2GQC821M □□ 350045
		242	169	2.14	30X60	ECS2GQC821M □□ 300060
450 (500) 2W	180	1474	774	0.79	25X30	ECS2WQC181M □□ 250030
	220	1206	633	0.85	22X45	ECS2WQC221M □□ 220045
		1206	633	0.87	25X35	ECS2WQC221M □□ 250035
		1206	633	0.89	30X30	ECS2WQC221M □□ 300030
	270	983	516	1	22X50	ECS2WQC271M □□ 220050
		983	516	1.1	25X40	ECS2WQC271M □□ 250040
		983	516	1.01	30X30	ECS2WQC271M □□ 300030
		983	516	1	35X25	ECS2WQC271M □□ 350025
	330	804	422	1.28	25X50	ECS2WQC331M □□ 250050
		804	422	1.31	30X35	ECS2WQC331M □□ 300035
		804	422	1.25	35X30	ECS2WQC331M □□ 350030
	390	680	357	1.41	30X40	ECS2WQC391M □□ 300040
		680	357	1.45	35X35	ECS2WQC391M □□ 350035
	470	565	296	1.61	35X40	ECS2WQC471M □□ 350040
		565	296	1.52	30X45	ECS2WQC471M □□ 300045
	560	474	248	1.75	35X45	ECS2WQC561M □□ 350045
	680	390	204	1.93	35X50	ECS2WQC681M □□ 350050

Customer products are available on request.