

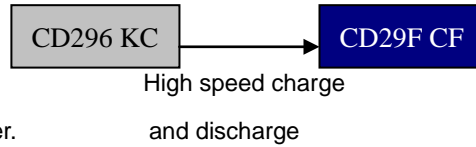
CD 29F CF SERIES



3000h at 105°C

- Long life at High Temperature
- High Ripple Current
- Suit for high frequency regenerative

Voltage for AC servomotor, general inverter.



Items	Characteristics								
Operating Temperature Range(°C)	-25 ~ +105								
Voltage Range (V)	350~450								
Capacitance Range(µF)	120~820								
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 border="1"> <tr> <td>Rated Voltage(V)</td> <td>350</td> <td>400</td> <td>450</td> </tr> <tr> <td>Tan δ(max)</td> <td colspan="3">0.15</td> </tr> </table>	Rated Voltage(V)	350	400	450	Tan δ(max)	0.15		
Rated Voltage(V)	350	400	450						
Tan δ(max)	0.15								
Charge and discharge	<p>After an application of charge and discharge with the voltage waveform shown below, for 50million times(charge and discharge voltage difference ΔV=rated voltage\times0.35,cycle3Hz)at 15~35 °C ,the capacitor shall meet the following specifications.</p> <table border="1"> <tr> <td>Capacitance Change</td> <td>Within ±20% of initial value</td> </tr> <tr> <td>Tan δ</td> <td>200%or less of initial specified value</td> </tr> <tr> <td>Leakage Current</td> <td>initial specified value or less</td> </tr> <tr> <td>Appearance</td> <td>There shall be found to no remarkable abnormality on the capacitor</td> </tr> </table>	Capacitance Change	Within ±20% of initial value	Tan δ	200%or less of initial specified value	Leakage Current	initial specified value or less	Appearance	There shall be found to no remarkable abnormality on the capacitor
Capacitance Change	Within ±20% of initial value								
Tan δ	200%or less of initial specified value								
Leakage Current	initial specified value or less								
Appearance	There shall be found to no remarkable abnormality on the capacitor								
Stability at Low Temperature (Impedance Ratio at 120Hz)	<table border="1"> <tr> <td>Rated Voltage(V)</td> <td>350</td> <td>400</td> <td>450</td> </tr> <tr> <td>Z_{-25°C}/Z_{+20°C}</td> <td colspan="3">8</td> </tr> </table>	Rated Voltage(V)	350	400	450	Z _{-25°C} /Z _{+20°C}	8		
Rated Voltage(V)	350	400	450						
Z _{-25°C} /Z _{+20°C}	8								

	Useful Life		Load Life	Endurance Test	Shelf Life
Life Time	6000h	≥200000h	3000h	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 200% of specified value	Not more than 200% of specified value

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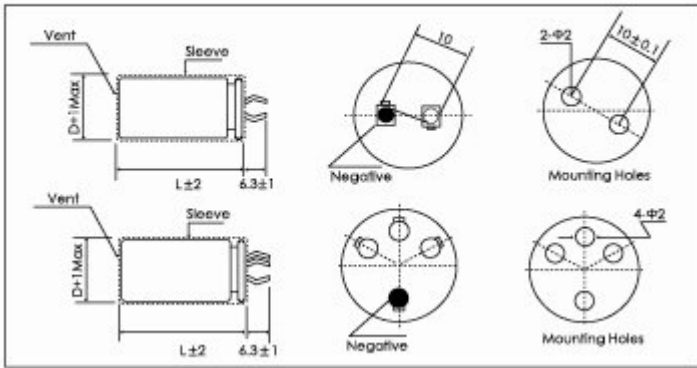
Condition:						After test: $U_R = 0$ $I_R = 0$ 105°C U_R to be applied for 30min>24h before measurement
Applied Voltage	U_R	U_R	U_R	U_R		
Applied Current	I_R	$1.4 \times I_R$	I_R	$I_R = 0$		
Applied Temperature	105°C	40°C	105°C	105°C		

Frequency coefficient

Frequency(Hz)	50/60	120	300	1k	10k	$\geq 50k$
Factor	0.80	1.00	1.16	1.30	1.41	1.45

Dimensions

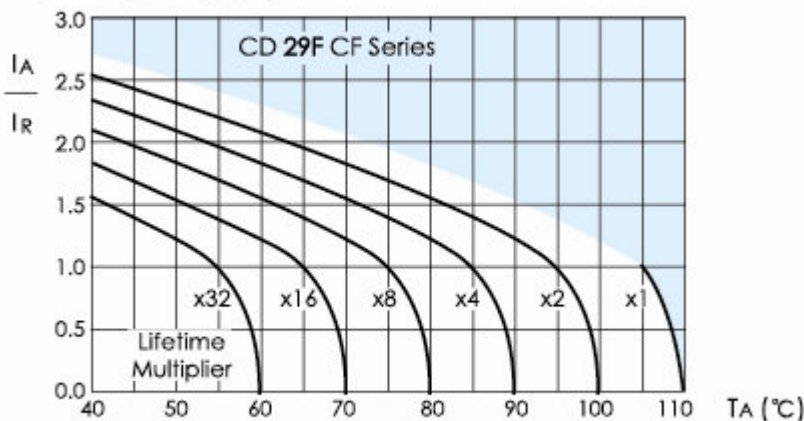
mm



Temperature Coefficient

Temperature($^\circ\text{C}$)	40	55	70	80	105
Factor	2.7	2.5	2.1	1.7	1.0

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 CD29F CF Series

U_R (Surge Voltage) Code	Rated Capacitance	Max ESR 20 $^\circ\text{C}$, 120Hz	Typ ESR 20 $^\circ\text{C}$, 120Hz	Rated Ripple Current 105 $^\circ\text{C}$, 100kHz	Size Φ DxL	P/N
(V)	(μF)	(m Ω)	(m Ω)	(Arms)	(mm)	-
350 (400) 2V	150	1327	487	0.89	22x35	ECS2VCF151M□□220035
		1327	487	0.89	25x30	ECS2VCF151M□□250030
	180	1106	405	0.92	22x35	ECS2VCF181M□□220035
		1106	405	0.92	25x30	ECS2VCF181M□□250030

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	220	905	332	1.05	22x40	ECS2VCF221M□□220040
		905	332	1.05	25x35	ECS2VCF221M□□250035
		905	332	1.05	30x30	ECS2VCF221M□□300030
	270	737	270	1.10	22x45	ECS2VCF271M□□220045
		737	270	1.10	25x40	ECS2VCF271M□□250040
		737	270	1.10	30x30	ECS2VCF271M□□300030
	330	603	221	1.21	22x50	ECS2VCF331M□□220050
		603	221	1.21	25x45	ECS2VCF331M□□250045
		603	221	1.21	30x40	ECS2VCF331M□□300040
	390	510	177	1.32	25x50	ECS2VCF391M□□250050
		510	177	1.32	30x45	ECS2VCF391M□□300045
		510	177	1.32	35x35	ECS2VCF391M□□350035
	470	423	147	1.40	30x45	ECS2VCF471M□□300045
		423	147	1.40	35x40	ECS2VCF471M□□350040
560	355	123	1.50	30x50	ECS2VCF561M□□300050	
	355	123	1.50	35x45	ECS2VCF561M□□350045	
680	293	101	1.72	35x45	ECS2VCF681M□□350045	
820	243	89	1.95	35x50	ECS2VCF821M□□350050	
400 (450) 2G	150	1327	487	0.85	22x35	ECS2GCF151M□□220035
	180	1106	405	0.95	22x40	ECS2GCF181M□□220040
	220	905	332	1.05	22x45	ECS2GCF221M□□220045
		905	332	1.05	25x40	ECS2GCF221M□□250040
	270	737	270	1.22	22x50	ECS2GCF271M□□220050
		737	270	1.22	25x45	ECS2GCF271M□□250045
		737	270	1;22	30x40	ECS2GCF271M□□300040
	330	603	201	1.45	25x50	ECS2GCF331M□□250050
		603	201	1.45	30x40	ECS2GCF331M□□300040
	390	510	170	1.55	30x45	ECS2GCF391M□□300045
		510	170	1.55	35x40	ECS2GCF391M□□350040
	470	423	136	1.75	30x50	ECS2GCF471M□□300050
		423	136	1.75	35x45	ECS2GCF471M□□350045
	560	355	114	1.92	35x45	ECS2GCF561M□□350045
680	293	88	2.12	35x50	ECS2GCF681M□□350050	
450 (500) 2W	120	1659	608	0.72	22x35	ECS2WCF121M□□220035
	150	1327	487	0.79	22x40	ECS2WCF151M□□220040
	180	1106	405	0.88	22x45	ECS2WCF181M□□220045
		1106	405	0.88	25x40	ECS2WCF181M□□250040
	220	905	332	1.04	25x45	ECS2WCF221M□□250045
		905	332	1.04	30x40	ECS2WCF221M□□300040
	270	737	270	1.25	25x50	ECS2WCF271M□□250050
		737	270	1.25	30x45	ECS2WCF271M□□300045
	330	603	201	1.37	30x45	ECS2WCF331M□□300045
	390	510	170	1.60	35x40	ECS2WCF391M□□350040
	470	423	136	1.80	30x50	ECS2WCF471M□□300050
		423	136	1.80	35x45	ECS2WCF471M□□350045
	560	355	114	2.00	35x50	ECS2WCF561M□□350050

Customer products are available on request.

