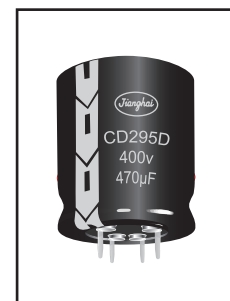
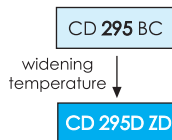


CD 295D ZD SERIES



5000h at 85°C

- Load life 5000 hours at 85°C
- High ripple current
- widening the temperature from CD295
- PCB Mounting
- General industrial electronics

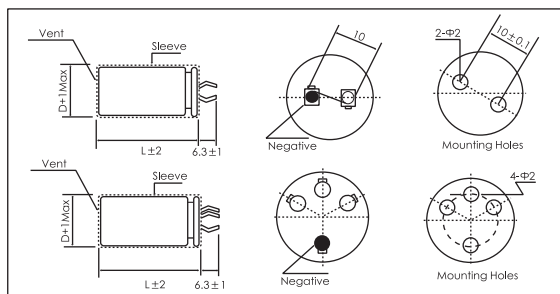


Items	Characteristics								
Operating Temperature Range (°C)	-55 ~ +85								
Voltage Range (V)	250 ~ 450								
Capacitance Range (µF)	56 ~ 1200								
Capacitance Tolerance (20°C, 120Hz)	± 20%								
Leakage Current (µA)	After 5 minutes at 20°C application of rated voltage, leakage current is 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"> <thead> <tr> <th>WV (V)</th> <th>250</th> <th>400</th> <th>450</th> </tr> </thead> <tbody> <tr> <td>Tan δ</td> <td colspan="3">0.20</td> </tr> </tbody> </table>	WV (V)	250	400	450	Tan δ	0.20		
	WV (V)	250	400	450					
Tan δ	0.20								
Stability at Low Temperature (Impedance Ratio at 120Hz)	<table border="1"> <thead> <tr> <th>Rated Voltage (V)</th> <th>250</th> <th>400</th> <th>450</th> </tr> </thead> <tbody> <tr> <td>$Z_{-55°C} / Z_{+20°C}$</td> <td colspan="3">12</td> </tr> </tbody> </table>	Rated Voltage (V)	250	400	450	$Z_{-55°C} / Z_{+20°C}$	12		
	Rated Voltage (V)	250	400	450					
$Z_{-55°C} / Z_{+20°C}$	12								

	Useful Life		Load Life	Endurance Test	Shelf Life
Lifetime	10000h	>200000h	5000h	5000h	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
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



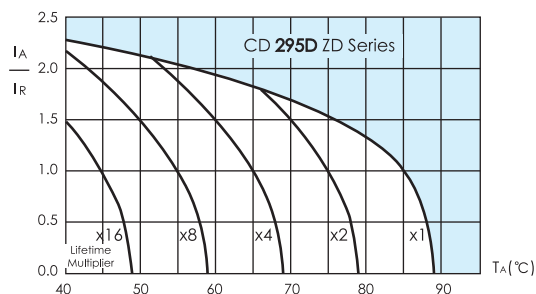
Frequency Coefficient

Frequency	50/60Hz	120Hz	300Hz	1kHz	10kHz	≥50kHz
Factor	0.8	1.0	1.16	1.3	1.41	1.45

Temperature Coefficient

Temperature(°C)	+40	+55	+70	+85
Factor	2.3	2.1	1.75	1.0

Lifetime Diagram



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

Ratings for CD 295D ZD Series

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)	-
250 (300) 2E	120	2212	1327	0.95	22×25	ECS2EZD121M□□220025
	150	1769	1062	1.21	22×30	ECS2EZD151M□□220030
		1769	1062	1.21	25×25	ECS2EZD151M□□250025
	180	1474	885	1.38	22×30	ECS2EZD181M□□220030
		1474	885	1.38	25×25	ECS2EZD181M□□250025
	220	1206	724	1.56	22×35	ECS2EZD221M□□220035
		1206	724	1.56	25×30	ECS2EZD221M□□250030
	270	983	590	1.74	22×40	ECS2EZD271M□□220040
		983	590	1.74	25×35	ECS2EZD271M□□250035
	330	804	483	1.92	22×45	ECS2EZD331M□□220045
		804	483	1.92	25×40	ECS2EZD331M□□250040
		804	483	1.92	30×30	ECS2EZD331M□□300030
	390	680	408	2.13	25×40	ECS2EZD391M□□250040
		680	408	2.13	30×30	ECS2EZD391M□□300030
	470	565	339	2.40	25×45	ECS2EZD471M□□250045
		565	339	2.40	30×35	ECS2EZD471M□□300035
		565	339	2.40	35×30	ECS2EZD471M□□350030
	560	474	284	2.55	30×40	ECS2EZD561M□□300040
680	390	234	2.73	30×45	ECS2EZD681M□□300045	
	390	234	2.73	35×35	ECS2EZD681M□□350035	
820	324	194	2.82	35×40	ECS2EZD821M□□350040	
1000	265	159	2.95	35×45	ECS2EZD102M□□350045	
1200	221	133	3.20	35×50	ECS2EZD122M□□350050	
400 (450) 2G	68	3903	1951	0.54	22×25	ECS2GZD680M□□220025
	82	3236	1618	0.60	22×30	ECS2GZD820M□□220030
		2654	1327	0.71	22×35	ECS2GZD101M□□220035
	100	2654	1327	0.71	25×25	ECS2GZD101M□□250025
		2212	1106	0.80	22×35	ECS2GZD121M□□220035
	120	2212	1106	0.80	25×30	ECS2GZD121M□□250030
		1769	885	0.93	22×40	ECS2GZD151M□□220040
	150	1769	885	0.93	25×35	ECS2GZD151M□□250035
		1769	885	0.93	30×25	ECS2GZD151M□□300025
		1474	737	1.05	22×45	ECS2GZD181M□□220045
	180	1474	737	1.05	25×40	ECS2GZD181M□□250040
		1474	737	1.05	30×30	ECS2GZD181M□□300030
		1474	737	1.05	35×25	ECS2GZD181M□□350025
	220	1206	603	1.21	25×45	ECS2GZD221M□□250045
		1206	603	1.21	30×35	ECS2GZD221M□□300035
		1206	603	1.21	35×30	ECS2GZD221M□□350030
	270	983	491	1.35	25×50	ECS2GZD271M□□250050
		983	491	1.35	30×40	ECS2GZD271M□□300040
		983	491	1.35	35×30	ECS2GZD271M□□350030
	330	804	402	1.65	30×45	ECS2GZD331M□□300045
804		402	1.65	35×35	ECS2GZD331M□□350035	
390	680	340	1.81	30×50	ECS2GZD391M□□300050	
	680	340	1.81	35×40	ECS2GZD391M□□350040	
470	565	282	2.00	35×45	ECS2GZD471M□□350045	
560	474	237	2.20	35×50	ECS2GZD561M□□350050	
450 (500) 2W	56	4739	2370	0.50	22×25	ECS2WZD560M□□220025
	68	3903	1951	0.55	22×30	ECS2WZD680M□□220030
		3903	1951	0.55	25×25	ECS2WZD680M□□250025
	82	3236	1618	0.65	22×35	ECS2WZD820M□□220035
		3236	1618	0.65	25×30	ECS2WZD820M□□250030
	100	2654	1327	0.72	22×40	ECS2WZD101M□□220040
		2654	1327	0.72	25×30	ECS2WZD101M□□250030
	120	2212	1106	0.85	22×40	ECS2WZD121M□□220040
		2212	1106	0.85	25×35	ECS2WZD121M□□250035
	150	1769	885	1.00	30×25	ECS2WZD121M□□300025
		1769	885	1.00	22×50	ECS2WZD151M□□220050
		1769	885	1.00	25×40	ECS2WZD151M□□250040
		1769	885	1.00	30×30	ECS2WZD151M□□300030
	180	1474	737	1.15	35×25	ECS2WZD151M□□350025
		1474	737	1.15	25×45	ECS2WZD181M□□250045
		1474	737	1.15	30×35	ECS2WZD181M□□300035
	220	1206	603	1.25	25×50	ECS2WZD221M□□250050
		1206	603	1.25	30×40	ECS2WZD221M□□300040
		1206	603	1.25	35×30	ECS2WZD221M□□350030
	270	983	491	1.45	30×45	ECS2WZD271M□□300045
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470	565	282	2.00	35×50	ECS2WZD471M□□350050	

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Customer products are available on request.