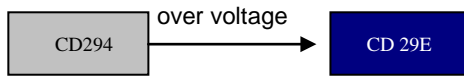


# CD29E Snap In Aluminum Electrolytic Capacitors



2000h at 105 °C

- Withstanding over voltage
- PCB Mounting



Items	Characteristics						
Operating Temperature Range(°C)	-25 ~ +105						
Voltage Range (V)	200~450						
Capacitance Range(μF)	56~1500						
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>200~400</td> <td>450</td> </tr> <tr> <td>Tan δ(max)</td> <td>0.15</td> <td>0.20</td> </tr> </table>	Rated Voltage(V)	200~400	450	Tan δ(max)	0.15	0.20
	Rated Voltage(V)	200~400	450				
Tan δ(max)	0.15	0.20					
Stability at Low Temperature (Impedance Ratio at 120Hz)	<table border="1"> <tr> <td>Rated Voltage(V)</td> <td>200~450</td> </tr> <tr> <td>Impedance Ratio</td> <td>Z<sub>-25°C</sub>/Z<sub>+20°C</sub></td> </tr> </table>	Rated Voltage(V)	200~450	Impedance Ratio	Z <sub>-25°C</sub> /Z <sub>+20°C</sub>		
	Rated Voltage(V)	200~450					
Impedance Ratio	Z <sub>-25°C</sub> /Z <sub>+20°C</sub>						

	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	U <sub>R</sub>	U <sub>R</sub>	U <sub>R</sub>	U <sub>R</sub>	U <sub>R</sub> = 0
Applied Current	I <sub>R</sub>	1.4 × I <sub>R</sub>	I <sub>R</sub>	I <sub>R</sub> = 0	I <sub>R</sub> = 0
Applied Temperature	105°C	40°C	105°C	105°C	105°C

## Frequency coefficient

Frequency Voltage(v)	50/60Hz	120Hz	300Hz	1kHz	10kHz	≥ 50kHz
≤ 250	0.80	1.00	1.17	1.32	1.45	1.50
> 250	0.80	1.00	1.16	1.30	1.41	1.43

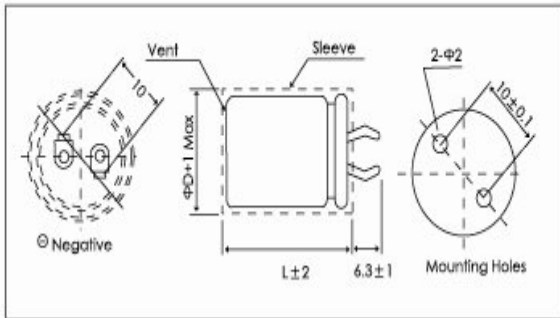
## Temperature Coefficient

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

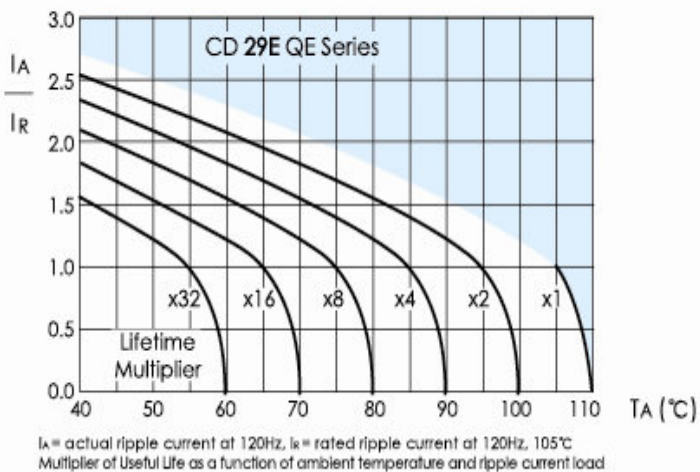
After test:  
U<sub>R</sub> to be applied  
for 30min>24h

## Dimensions

mm



## Lifetime Diagram



## DC Overvoltage Test Conditions

Rated Voltage(Vdc)	Nominal Capacitance(uF)	Current Limit(A)	Test Voltage(Vdc)
200	< 330	4	300 / 375
	330 ≤ C < 470	5	
	≥ 470	7	
250	< 330	4	350 / 450
	330 ≤ C < 470	5	
	≥ 470	7	
400	< 100	2	500 / 600
	100 ≤ C < 220	4	
	≥ 220	7	
450	< 100	2	550 / 675
	100 ≤ C < 220	4	
	≥ 220	7	

The vent will operate and the capacitor shall become an open circuit without burning materials when the following test DC voltage is applied.

## Ratings for CD29E Series

U <sub>R</sub> (Surge Voltage) Code	Rated Capacitance	Max ESR 20°C, 120Hz	Typ ESR 20°C, 120Hz	Rated Ripple Current 105°C, 100kHz	Size Φ D x L
(v)	(μF)	(mΩ)	(mΩ)	(Arms)	(mm)
200 (250) 2D	150	1327	708	0.71	22x25
	180	1106	590	0.78	22x30
	220	905	483	0.98	22x30
		905	483	0.98	25x25
	270	737	393	1.15	22x35
		737	393	1.15	25x30
	330	603	322	1.30	22x40
		603	322	1.30	25x30
	390	510	272	1.40	22x50
		510	272	1.40	25x35
		510	272	1.40	30x25
	470	423	226	1.51	25x40
		423	226	1.51	30x30
	560	355	190	1.70	25x45
		355	190	1.70	30x30
	250 (300) 2E	355	190	1.70	35x25
680		293	137	1.88	30x35
		293	137	1.88	35x30
820		243	113	2.14	30x40
		243	113	2.14	35x30
1000		199	80	2.37	30x50
		199	80	2.37	35x35
1200		166	66	2.61	35x40
1500		133	53	3.17	35x50
250 (300) 2E		120	1659	885	0.68
	180	1106	590	0.88	22x30
		1106	590	0.88	25x25
	220	905	483	1.09	22x35
		905	483	1.09	25x30
	270	737	393	1.21	22x40
		737	393	1.21	25x35
		737	393	1.21	30x25
	330	603	281	1.32	22x45
		603	281	1.32	25x40
		603	281	1.32	30x30
	390	510	238	1.57	22x50
		510	238	1.57	25x45
		510	238	1.57	30x30
	470	423	198	1.70	25x50
		423	198	1.70	30x35
	560	355	166	1.89	30x40
		355	166	1.89	35x30
	680	293	137	2.20	30x45
		293	137	2.20	35x35
	820	243	97	2.45	30x50
		243	97	2.45	35x40
	1000	199	80	2.70	35x45
	1200	166	66	3.29	35x50

U <sub>R</sub> (Surge Voltage) Code	Rated Capacitance	Max ESR 20°C, 120Hz	Typ ESR 20°C, 120Hz	Rated Ripple Current 105°C, 100kHz	Size Φ D x L
(v)	(μF)	(mΩ)	(mΩ)	(Arms)	(mm)
400 (450) 2G	68	2927	1171	0.58	22x25
	82	2427	971	0.68	22x30
		2427	971	0.68	25x25
	100	1990	796	0.79	22x35
		1990	796	0.79	25x30
		1990	553	0.91	22x40
	120	1990	553	0.91	25x35
		1990	553	0.91	30x25
	150	1327	442	0.99	22x45
		1327	442	0.99	25x35
	180	1106	369	1.16	22x50
		1106	369	1.16	25x40
		1106	369	1.16	30x30
	220	905	302	1.28	25x45
		905	302	1.28	30x35
	270	737	246	1.43	25x50
737		246	1.43	30x40	
737		246	1.43	35x35	
330	603	201	1.67	30x45	
	603	201	1.67	35x40	
390	510	136	1.90	30x50	
	510	136	1.90	35x45	
470	423	113	2.16	35x50	
450 (500) 2W	56	4739	1185	0.44	22x25
	68	3903	976	0.53	22x30
	82	3236	809	0.64	22x35
		3236	809	0.64	25x25
	100	2654	663	0.70	22x40
		2654	663	0.70	25x30
	120	2212	442	0.76	22x45
		2212	442	0.76	25x35
		2212	442	0.76	30x30
	150	1769	354	0.90	22x50
		1769	354	0.90	25x40
		1769	354	0.90	30x35
		1769	354	0.90	35x30
	220	1206	241	1.13	25x45
		1206	241	1.13	30x40
		1206	241	1.13	35x35
	270	983	197	1.30	25x50
		983	197	1.30	30x45
		983	197	1.30	35x30
	330	804	161	1.45	30x50
		804	161	1.45	35x45
	390	680	136	1.72	35x50

Customer products are available on request