

CAHC SERIES: Surface Mount | SMD E-CAP Ultra Low ESR (Impedance)



FEATURES

- ◆ 105°C, 2000 ~ 5000 hours assured
- ◆ Ultra Low Impedance Capacitors
- ◆ RoHS Compliant

SPECIFICATIONS

Items	Performance															
	6.3 ~ 63V				80 ~ 100V											
Operating Temperature Range	-55°C ~ +105°C				-40°C ~ +105°C											
Capacitance Tolerance	±20%															
Leakage Current (at 20°C)	$I = 0.01CV$ or $3 (\mu\text{A})$ whichever is greater (after 2 minutes) Where, C = rated capacitance in μF . V = rated DC working voltage in V.															
Dissipation Factor ($\tan\delta$ at 120Hz, 20°C)	Rated Voltage	6.3	10	16	25	35	50	63	80							
	Tanδ (max)	0.30	0.26	0.22	0.16	0.13	0.10	0.08	0.08	0.07						
Low Temperature Characteristics (at 120Hz)	Impedance ratio shall not exceed the values given in the table below.															
	Rated Voltage	6.3	10	16	25	35	50	63	80							
	Impedance Ratio	Z (-25°C)/Z(+20°C)	4	3	2	2	2	2	2							
Load Life Test	Test Time	2,000 Hrs for 4 ~ 6.3Φ				3,000 Hrs for 8 ~ 10Φ			5,000 Hrs for 12.5 ~ 16Φ							
	Capacitance Change	Within ±25% of initial value				Within ±30% of initial value			Within ±30% of initial value							
	Dissipation Factor	Less than 200% of specified value				Less than 300% of specified value			Less than 300% of specified value							
	Leakage Current	Within specified value				Within specified value			Within specified value							
* The above specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage applied for 2,000 ~ 5,000 hrs at 105°C																
Shelf Life Test	Test Time: 1000 hrs; other items are the same as those for the load life test															
Ripple Current & Frequency Multipliers	Freq. (Hz) V.DC (V)	50, 60	120	1k	1k up											
Standards	JIS C 5101-1															

Figure 1

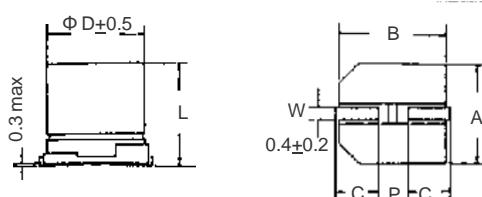
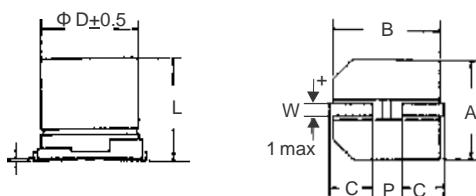


Figure 2



PAD SPACING AND DIAMETER

ΦD	L	A ±0.2	B ±0.2	C ±0.2	W	P±0.2	Fig. No.
4	5.7 ± 0.3	4.3	4.3	2.0	0.5 to 0.8	1.0	1
5	5.7 ± 0.3	5.3	5.3	2.3	0.5 to 0.8	1.5	1
6.3	5.7 ± 3.3	6.3	6.3	2.7	0.5 to 0.8	2.0	1
6.3	7.7 ± 0.3	6.6	6.6	2.7	0.5 to 0.8	2.0	1
8	10 ± 0.5	8.4	8.4	3.0	0.7 to 1.1	3.1	1
10	10 ± 0.5	10.4	10.4	3.3	0.7 to 1.1	4.7	1
12.5	13.5 ± 0.5	12.8	12.8	4.9	1.1 to 1.4	4.2	2
12.5	16 ± 0.5	12.8	12.8	4.9	1.1 to 1.4	4.2	2
16	16.5 ± 0.5	16.3	16.3	5.8	1.8 to 2.2	6.0	2

PART NUMBER EXAMPLE

CAHC 107 M 1V T 080 100

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DIMENSION, IMPEDANCE & PERMISSIBLE RIPPLE CURRENT

Dimension : φD x L(mm)

Ripple Current mA/rms at 100KHz, 105°C

Impedance : at 100KHz, 20°C

μF	V.DC Contents	6.3V (0J)			10V (1A)			16V (1C)			25V (1E)			35V (1V)			
		ΦD x L	mA	Imp.	ΦD x L	mA	Imp.	ΦD x L	mA	Imp.	ΦD x L	mA	Imp.	ΦD x L	mA	Imp.	
4.7	475														4 x 5.7	80	1.35
10	106														5 x 5.7	135	1.35
22	226	4 x 5.7	80	1.35	4 x 5.7	80	1.35	5 x 5.7	150	0.80	5 x 5.7	150	0.80	6.3 x 5.7	230	0.44	
33	336	4 x 5.7	80	1.35	5 x 5.7	150	0.80	6.3 x 5.7	230	0.44	6.3 x 5.7	230	0.44	6.3 x 5.7	230	0.44	
47	476	5 x 5.7	150	0.80	6.3 x 5.7	230	0.44	6.3 x 5.7	230	0.44	6.3 x 5.7	230	0.44	6.3 x 5.7	230	0.44	
100	107	6.3 x 5.7	230	0.44	6.3 x 5.7	230	0.44	6.3 x 5.7	230	0.44	6.3 x 7.7	280	0.36	8 x 10	450	0.17	
150	157	6.3 x 5.7	230	0.44	6.3 x 5.7	230	0.44	6.3 x 7.7	280	0.36	8 x 10	450	0.17	8 x 10	450	0.17	
220	227	6.3 x 7.7	280	0.36	6.3 x 7.7	280	0.36	6.3 x 7.7	280	0.36	8 x 10	450	0.17	10 x 10	670	0.09	
330	337	8 x 10	450	0.17	8 x 10	450	0.17	8 x 10	450	0.17	8 x 10	450	0.17	12.5 x 13.5	820	0.07	
470	477	8 x 10	450	0.17	8 x 10	450	0.17	8 x 10	450	0.17	10 x 10	670	0.09	12.5 x 16	950	0.06	
680	687	8 x 10	450	0.17	10 x 10	670	0.09	10 x 10	670	0.09	12.5 x 13.5	820	0.07	12.5 x 16	950	0.06	
1,000	108	8 x 10	450	0.17	10 x 10	670	0.09	12.5 x 13.5	820	0.07	12.5 x 16	950	0.06	16 x 16.5	1,260	0.054	
1,500	158	10 x 10	670	0.09	13 x 13.5	820	0.07	12.5 x 16	950	0.06	16 x 16.5	1,260	0.054				
2,200	228	12.5 x 14	820	0.07	13 x 16	950	0.06	16 x 16.5	1,260	0.054	16 x 16.5	1,260	0.054				
3,300	338	12.5 x 16	950	0.06	16 x 16.5	1,260	0.054	16 x 16.5	1,260	0.054							
4,700	478	16 x 17	1,260	0.054	16 x 16.5	1,260	0.054										

μF	V.DC Contents	50V (1H)			63V (1L)			80V (1K)			100V (2A)		
		Φ D xL	mA	Imp.	Φ D xL	mA	Imp.	Φ D xL	mA	Imp.	Φ D xL	mA	Imp.
1	105	4 x 5.7	60	2.9									
2.2	225	4 x 5.7	60	2.9									
3.3	335	4 x 5.7	60	2.9									
4.7	475	5 x 5.7	85	1.52	5 x 5.7	85	1.52						
10	106	6.3 x 5.7	165	0.88	6.3 x 5.7	165	0.88						
22	226	6.3 x 5.7	165	0.88	6.3 x 7.7	185	0.68						
33	336	6.3 x 7.7	185	0.68	8 x 10	369	0.34						
47	476	6.3 x 7.7	185	0.68	8 x 10	369	0.34				10 x 10	200	0.7
68	686	8 x 10	369	0.34	10 x 10	553	0.18	10 x 10	200	0.7	12.5 x 13.5	450	0.32
100	107	8 x 10	369	0.34	10 x 10	553	0.18	12.5 x 13.5	450	0.32	12.5 x 16	550	0.26
150	157	10 x 10	553	0.18	12.5 x 13.5	650	0.12	12.5 x 13.5	450	0.32	16 x 16.5	650	0.17
220	227	10 x 10	553	0.18	12.5 x 13.5	650	0.12	12.5 x 16	550	0.26			
330	337	12.5 x 13.5	650	0.12	16 x 16.5	900	0.082	16 x 16.5	650	0.17			
470	477	16 x 16.5	900	0.082	16 x 16.5	900	0.082						
680	687	16 x 16.5	900	0.082									