

CE-AX Series Low Impedance

Feature

This series has low impedance at high frequency.
High capacitance with small package.
Solvent proof (within 2 minutes).

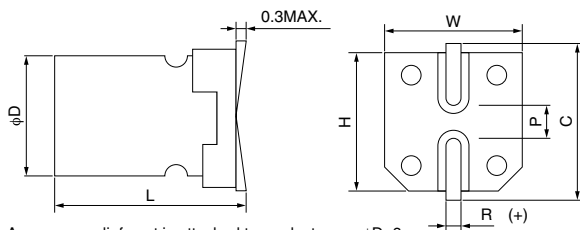


Specifications

Items		Specifications					
Rated voltage (V)		6.3	10	16	25	35	50
Category temperature range (°C)		-55 to +105					
Capacitance tolerance (%)		±20 (120Hz/20°C)					
Tangent of loss angle (tanδ) (MAX.) (120Hz/20°C)	φ4 to φ6.3	0.24	0.20	0.16	0.14	0.12	0.12
	φ8 to φ16	0.28	0.24	0.20	0.16	0.14	0.14
When rated capacitance exceeds 1000μF, add 0.02 to the value above for each 1000μF increase.							
Leakage current (L.C.) (μA/after 2min.) (MAX.)		The greater value of either 0.01CV or 3					
Impedance (120Hz) ratio at low temperature (MAX.)	Z-40°C/Z20°C	3	2	2	2	2	2
	Z-55°C/Z20°C	5	4	4	3	3	3
Endurance 105°C rated voltage applied	Test	2000hrs. (φD ≤ 6.3, φ10 × 7.7 : 1000hrs.)					
	ΔC/C	Within ±25% of the initial value					
	tanδ	≤ Twice the initial specified value					
	L.C.	≤ The initial specified value					

Dimensions

(Unit : mm)



A pressure relief vent is attached to products over φD=8

D+0.5MAX.	L ±0.3	W ±0.2	H ±0.2	C ±0.2	R	P ±0.2
4	6.0	4.3	4.3	5.0	0.5 to 0.8	1.0
5	6.0	5.3	5.3	6.0	0.5 to 0.8	1.4
6.3	6.0	6.6	6.6	7.3	0.5 to 0.8	2.2
6.3	7.7	6.6	6.6	7.3	0.5 to 0.8	2.2
8	10.2	8.3	8.3	9.0	0.7 to 1.0	3.2
10	7.7	10.3	10.3	11.0	1.1 to 1.4	4.6
10	10.2	10.3	10.3	11.0	1.1 to 1.4	4.6
12.5	13.5 ±0.5	12.8	12.8	13.5	1.1 to 1.4	4.6
16	16.5 ±0.5	16.3	16.3	17.3	1.8 to 2.1	7.0

Size List, Impedance, Rated Ripple Current

μF \ V	6.3		10		16		25		35		50							
4.7																		
10							4 x 6.0	1.80	80	4 x 6.0	1.80	80						
15					4 x 6.0	1.80	80	5 x 6.0	0.76	150	5 x 6.0	0.76	150					
22				4 x 6.0	1.80	80	5 x 6.0	0.76	150	5 x 6.0	0.76	150	6.3 x 6.0	0.88	165			
27	4 x 6.0	1.80	80															
33				5 x 6.0	0.76	150				6.3 x 6.0	0.44	230	6.3 x 6.0	0.44	230			
47	5 x 6.0	0.76	150			6.3 x 6.0	0.44	230	6.3 x 6.0	0.44	230	6.3 x 6.0	0.44	230	6.3 x 7.7	0.68	195	
56	5 x 6.0	0.76	150															
68				6.3 x 6.0	0.44	230	6.3 x 6.0	0.44	230	6.3 x 6.0	0.44	230	6.3 x 7.7	0.34	280			
100	6.3 x 6.0	0.44	230			6.3 x 6.0	0.44	230	6.3 x 7.7	0.34	280	6.3 x 7.7	0.34	280	8 x 10.2	0.17	450	
150	6.3 x 6.0	0.44	230	6.3 x 6.0	0.44	230	6.3 x 7.7	0.34	280	8 x 10.2	0.17	450	8 x 10.2	0.17	450	10 x 10.2	0.21	450
220	6.3 x 6.0	0.44	230	6.3 x 7.7	0.34	280	6.3 x 7.7	0.34	280				10 x 7.7	0.17	450			
330	6.3 x 7.7	0.34	280	8 x 10.2	0.17	450	8 x 10.2	0.17	450	8 x 10.2	0.17	450	10 x 10.2	0.09	670	12.5 x 13.5	0.14	620
390																		
470	8 x 10.2	0.17	450	8 x 10.2	0.17	450	8 x 10.2	0.17	450	10 x 10.2	0.09	670	12.5 x 13.5	0.066	900			
680	8 x 10.2	0.17	450	10 x 7.7	0.17	450							12.5 x 13.5	0.066	900			
1000	8 x 10.2	0.17	450			10 x 10.2	0.09	670										
1500	10 x 10.2	0.09	670						12.5 x 13.5	0.066	900							
2200				12.5 x 13.5	0.066	900												
3300	12.5 x 13.5	0.066	900			16 x 16.5	0.052	1250	16 x 16.5	0.052	1250							
4700				16 x 16.5	0.052	1250												
6800	16 x 16.5	0.052	1250															

→ Use next higher voltage product.

Case size : φD x L (mm)
10 x 7.7 ; CE-AXA series
16 x 16.5 ; CE-AXT series

Rated ripple current
mAr.m.s. (100kHz, 105°C)

Model No.

16 CE 470 AX

Series code
Rated capacitance symbol
Type code
Rated voltage

10 CE 470 AXA

Series code
Rated capacitance symbol
Type code
Rated voltage

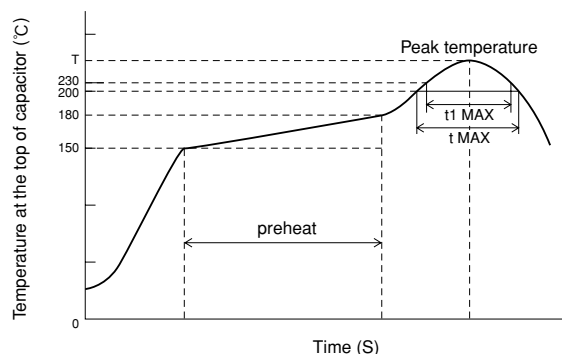
10 CE 4700 AXT

Series code
Rated capacitance symbol
Type code
Rated voltage

Impedance (Ω)
MAX. at 100kHz, 20°C

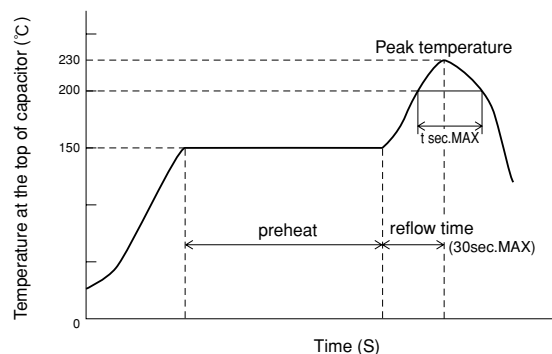
■ Surface Mount Type Permissible Reflow Condition

[Profile 1]
AIR reflow and IR reflow



Preheat ; 150°C to 180°C, Within 120sec.

[Profile 2]
AIR reflow and IR reflow

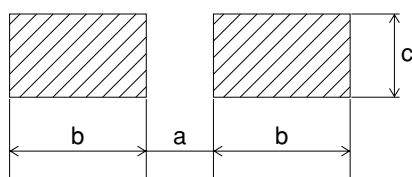


Preheat ; 150°C, Within 120sec.

Series	Voltage	Size	Time for more than 200°C (t)	Time for more than 230°C (t1)	Peak temperature (Within 5sec.)	Profile
CE-EX, CE-BSS, CE-C CE-BS, CE-FS, CE-FH CE-GA, CE-AX, CE-KX CE-PX, CE-NP, CE-FN CE-PC	4 to 63V	φ3 to φ6.3	Within 70sec.	Within 40sec.	250°C	1
		φ8	Within 60sec.	Within 30sec.	245°C	
		φ10, φ12.5	Within 50sec.	Within 20sec.	240°C	
		φ16	Within 50sec.	Within 15sec.	235°C	
	80 to 100V	φ4 to φ6.3	Within 60sec.	Within 40sec.	250°C	
		φ8	Within 60sec.	Within 30sec.	240°C	
		φ10	Within 50sec.	Within 20sec.	240°C	
		φ12.5	Within 50sec.	Within 20sec.	235°C	
	160 to 400V	φ16	Within 45sec.	Within 10sec.	235°C	
		φ8, φ10	Within 50sec.	Within 20sec.	240°C	
φ12.5		Within 45sec.	Within 10sec.	235°C		
φ16		Within 30sec.	—	230°C		
CE-LX, CE-LS	ALL	φ4 to φ8	Within 80sec.	Within 40sec.	260°C	1
		φ10	Within 70sec.	Within 40sec.	250°C	
		φ12.5	Within 50sec.	Within 20sec.	240°C	
		φ16	Within 50sec.	Within 15sec.	235°C	
CE-BD, CE-FC, CE-FD	ALL	ALL	Within 60sec.	Within 30sec.	245°C	2
CE-BE, CE-FE	ALL	ALL	Within 50sec.	Within 20sec.	240°C	
CE-BJ	ALL	ALL	Within 30sec.	—	230°C	

■ Surface Mount Type Recommended Land Pattern

land pattern



(Unit:mm)

Size	a	b	c
φ3	0.8	2.2	1.7
φ4	1.0	2.6	1.8
φ5	1.4	3.0	1.8
φ6.3	2.1	3.5	1.8
φ8	2.8	4.1	2.1
φ10	4.3	4.4	2.5
φ12.5	4.3	5.8	2.5
φ16	6.6	6.5	5.0

When using large surface mount capacitor, please design possibly larger land pattern area than the recommended pattern dimension in order to increase vibration resistance and avoid to falling off a circuit board.