

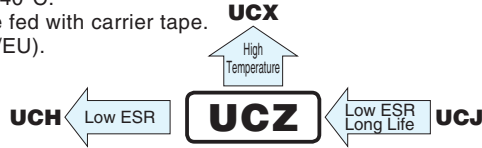
ALUMINUM ELECTROLYTIC CAPACITORS

UCZ

Chip Type, High Reliability.
Low temperature ESR specification.



- Chip type, high temperature range, for +125°C use.
- Added ESR specification after the test at -40°C.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU).

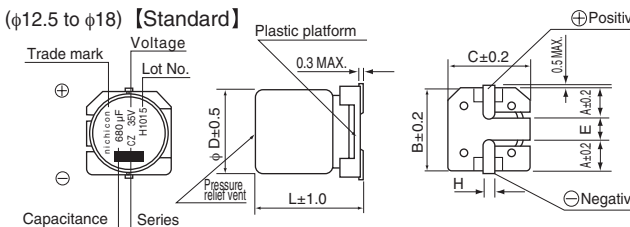
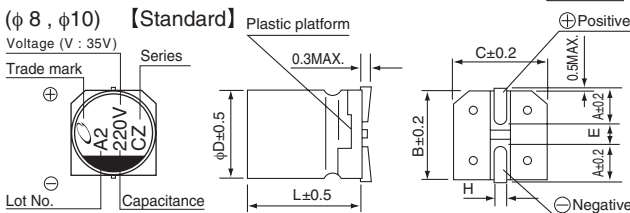
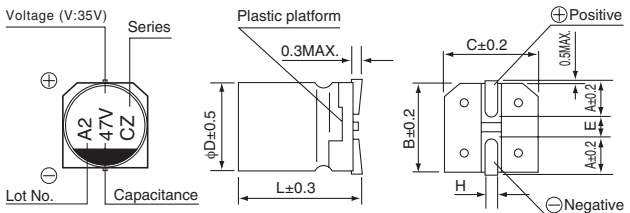


Specifications

Item	Performance Characteristics									
Category Temperature Range	-40 to +125°C									
Rated Voltage Range	10 to 100V									
Rated Capacitance Range	10 to 3300μF									
Capacitance Tolerance	±20% at 120Hz, 20°C									
Leakage Current	After 2 minutes' application of rated voltage at 20°C, leakage current is not more than 0.01CV or 3μA, whichever is greater.									
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C									
	Rated voltage (V)	10	16	25	35	50	63	80	100	
	tan δ (MAX.)	0.30	0.23	0.18	0.16	0.16	0.12	0.12	0.10	
	For capacitance of more than 1000μF, add 0.02 for every increase of 1000μF.									
Stability at Low Temperature	Rated voltage (V)									Measurement frequency : 120Hz
	Impedance ratio ZT / Z20 (MAX.)	Z-40°C / Z+20°C	12	8	6	4	4	3	3	
Endurance	After continuous application of rated voltage at 125°C and then restoring down to 20°C, the readings of measurements shall meet below.									
	Case size	φ6.3 × 5.8L	φ6.3 × 7.7L	φ8 to φ12.5	φ16,18 × 16.5L	φ16,18 × 21.5L				
	Endurance time	1000hrs.	2000hrs.	3000hrs.	3500hrs.	4000hrs.				
	Capacitance change	Within ±30% of the initial capacitance value								
	tan δ	300% or less than the initial specified value								
	Leakage current	Less than or equal to the initial specified value								
Shelf Life	After storing the capacitors under no load at 125°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.									
Resistance to soldering heat	The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C.									
	Capacitance change	Within ±10% of the initial capacitance value								
	tan δ	Less than or equal to the initial specified value								
Marking	Black print on the case top.									
	Leakage current	Less than or equal to the initial specified value								

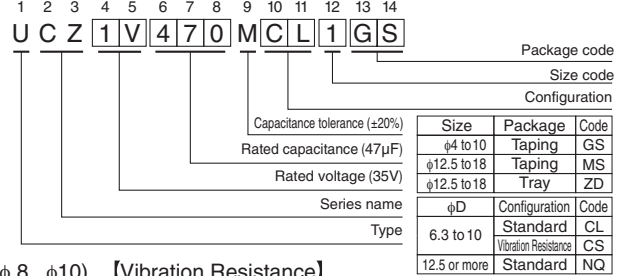
Chip Type

(φ 6.3) 【Standard】 ※φ6.3 × 5.8L : The vibration structure-resistant product can't support.
φ6.3 × 7.7L : The vibration structure-resistant product is available.

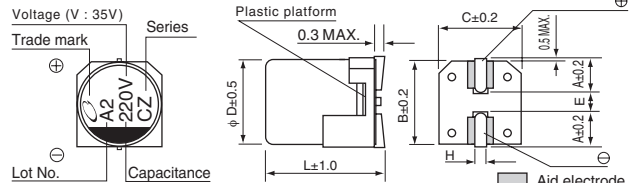


※φ12.5 to φ18 :
The vibration structure-resistant product is also available upon request, please ask for details.

Type numbering system (Example : 35V 47μF)



(φ 8, φ 10) 【Vibration Resistance】



Standard	(mm)										Vibration Resistance (mm)		
φ(D)	6.3×5.8	6.3×7.7	8×10	10×10	12.5×13.5	16×16.5	16×21.5	18×16.5	18×21.5	φ(D)	8×10	10×10	
A	2.4	2.4	2.9	3.2	4.8	5.4	5.4	6.4	6.4	A	2.9	3.2	
B	6.6	6.6	8.3	10.3	13.6	17.1	17.1	19.1	19.1	B	8.3	10.3	
C	6.6	6.6	8.3	10.3	13.6	17.1	17.1	19.1	19.1	C	8.3	10.3	
E	2.2	2.2	3.1	4.5	4	6.3	6.3	6.3	6.3	E	3.1	4.5	
L	5.8	7.7	10	10	13.5	16.5	21.5	16.5	21.5	L	10	10	
H	0.5 to 0.8	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4	H	1.1 to 1.5	1.1 to 1.5	

Voltage		10	16	25	35	50	63	80	100
V									
Code	A	C	E	V	H	J	K	2A	

UCZ

■ Dimensions

Cap. (μF)	V		10				16				25				35				50								
	Code		1A				1C				1E				1V				1H								
10	100														6.3×5.8	1.60	24	-	69	6.3×5.8	2.80	42	-	51			
22	220														6.3×5.8	1.60	24	-	69	6.3×7.7	0.50	5	40	197			
33	330										6.3×5.8	1.60	24	-	69	6.3×7.7	0.45	5	40	197	●6.3×7.7	0.50	5	40	197		
47	470						6.3×5.8	1.60	24	-	69	Recommend 35V →				●6.3×7.7	0.45	5	40	197	●6.3×7.7	0.50	5	40	197		
68	680														8×10	0.20	3	4.5	270	8×10	0.20	3	4.5	270			
100	101		Recommend 16V →				●6.3×7.7	0.45	5	40	197	●6.3×7.7	0.45	5	40	197	8×10	0.20	3	4.5	270	8×10	0.20	3	4.5	270	
220	221		8×10	0.20	3	4.5	270	8×10	0.20	3	4.5	270	●8×10	0.20	3	4.5	270	●8×10	0.15	2	3.5	500	10×10	0.15	2	3.5	500
330	331		●8×10	0.20	3	4.5	270	10×10	0.15	2	3.5	500	10×10	0.15	2	3.5	500										
390	391																										
470	471		10×10	0.15	2	3.5	500	10×10	0.15	2	3.5	500					12.5×13.5	0.060	0.40	3.0	1700	16×16.5	0.080	0.34	2.6	2000	
560	561														12.5×13.5	0.060	0.40	3.0	1700	16×16.5	0.080	0.34	2.6	2000			
680	681														12.5×13.5	0.060	0.40	3.0	1700	18×16.5	0.078	0.32	2.6	2100			
820	821										12.5×13.5	0.060	0.40	3.0	1700	16×16.5	0.047	0.28	1.4	2400	18×16.5	0.078	0.32	2.6	2100		
1000	102										12.5×13.5	0.060	0.40	3.0	1700	16×16.5	0.047	0.28	1.4	2400	16×21.5	0.040	0.22	1.5	2800		
1200	122										16×16.5	0.047	0.28	1.4	1700	18×16.5	0.045	0.28	1.4	2600	18×21.5	0.038	0.20	1.5	2900		
1400	142														18×16.5	0.045	0.28	1.4	2600								
1600	162										16×16.5	0.047	0.28	1.4	2400	16×21.5	0.034	0.20	0.6	3000							
2200	222										18×16.5	0.045	0.23	1.3	2600	18×21.5	0.032	0.16	0.5	3250							
2700	272										16×21.5	0.034	0.20	0.6	3000						Case size φD × L (mm)	Initial 20°C	Initial 40°C	after endurance test	Rated ripple		
3300	332										18×21.5	0.032	0.16	0.5	3250											ESR(100kHz)	

Cap. (μF)	V		63				80				100						
	Code		1J				1K				2A						
10	100		6.3×7.7	2.00	100	-	60	8×10	0.75	50	-	70	8×10	0.75	50	-	70
22	220		8×10	0.70	35	-	100	●8×10	0.75	50	-	70	●8×10	0.75	50	-	70
33	330		●8×10	0.70	35	-	100	10×10	0.55	35	-	115	10×10	0.55	35	-	115
47	470		10×10	0.50	25	-	170	●8×10	0.75	50	-	70	10×10	0.55	35	-	115
82	820		10×10	0.50	25	-	170	10×10	0.55	35	-	115					
150	151		12.5×13.5	0.20	1.3	14	1000	12.5×13.5	0.28	1.9	14	700	16×16.5	0.19	1.4	4.8	1000
180	181		12.5×13.5	0.20	1.3	14	1000					18×16.5	0.17	1.1	3.9	1100	
220	221		12.5×13.5	0.20	1.3	14	1000					16×21.5	0.12	0.8	2.6	1600	
270	271						16×16.5	0.19	1.4	4.8	1000						
300	301										18×21.5	0.11	0.7	2.4	1700		
330	331						18×16.5	0.17	1.1	3.9	1100						
390	391		16×16.5	0.13	0.9	4.8	1900	16×21.5	0.12	0.8	2.6	1600					
470	471		18×16.5	0.11	0.82	3.9	2000										
520	521						18×21.5	0.11	0.7	2.4	1700						
560	561		16×21.5	0.07	0.46	2.0	2500					Case size φD × L (mm)	Initial 20°C	Initial 40°C	after endurance test	Rated ripple	
750	751		18×21.5	0.068	0.44	1.8	2600										ESR(100kHz)

※ Guaranteed time of ESR after endurance test

Size	Guaranteed time
φ6.3 × 5.8L	-
φ6.3 × 7.7L, φ8 × 10L	10 to 50V 2000hrs.
φ10 × 10L	63 to 100V -
φ12.5	2000hrs.
φ16, 18 × 16.5L	2000hrs.
φ16, 18 × 21.5L	3000hrs.

Max. ESR (Ω) at 20°C / -40°C 100kHz, Rated ripple Current (mA rms) at 125°C 100kHz

● : In this case, [] will be put at 12th digit of type numbering system.

● Frequency coefficient of rated ripple current

Frequency	50Hz	120Hz	300Hz	1kHz	10kHz or more
Coefficient	0.35	0.50	0.64	0.83	1.00

- Taping specifications are given in page 23.
- Recommended land size, soldering by reflow are given in page 18, 19.
- Please refer to page 3 for the minimum order quantity.