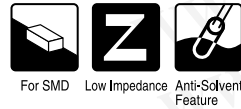


# ALUMINUM ELECTROLYTIC CAPACITORS

**CX** Chip Type, High Reliability  
Low temperature ESR specification  
series



**NEW**

- Chip type, high temperature range, for +135°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 (2002/95/EC).

**CX**

High Temperature  
**CZ**

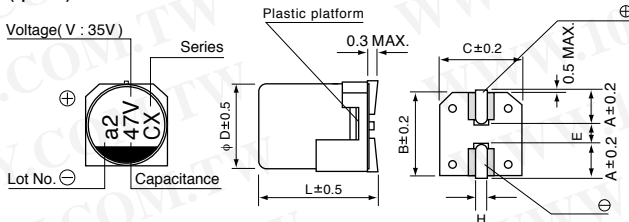


## Specifications

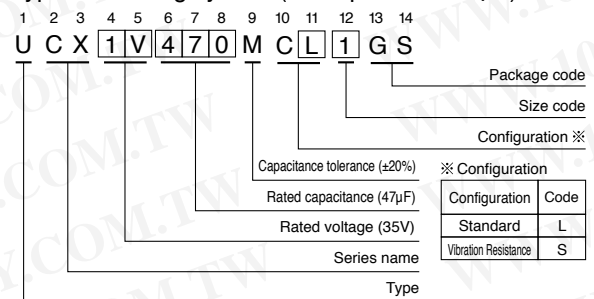
Item	Performance Characteristics					
Category Temperature Range	-40 to +135°C					
Rated Voltage Range	10 to 35V					
Rated Capacitance Range	47 to 470μF					
Capacitance Tolerance	±20% at 120Hz, 20°C					
Leakage Current	After 2 minutes' application of rated voltage, leakage current is not more than 0.01CV or 3 (μA), whichever is greater.					
Tangent of loss angle (tan δ)	Rated voltage (V)	10	16	25	35	Measurement frequency : 120Hz, Temperature : 20°C
	tan δ (MAX.)	0.30	0.23	0.18	0.16	
Stability at Low Temperature	Rated voltage (V)	10	16	25	35	Measurement frequency : 120Hz
	Impedance ratio ZT / Z20 (MAX.)	Z-40°C / Z+20°C	12	8	6	
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 2000 hours at 135°C.					
	Capacitance Change	Within ±30% of the initial capacitance value				
	tan δ	300% or less than the initial specified value				
Shelf Life	After storing the capacitors under no load at 135°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.					
	Capacitance Change	Within ±10% of the initial capacitance value				
	tan δ	Less than or equal to the initial specified value				
Resistance to soldering heat	The capacitors shall be kept on the hot plate for 30 seconds, which is maintained to 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C.					
	Leakage current	Less than or equal to the initial specified value				
	Marking	Black print on the case top.				

## Radial Lead Type

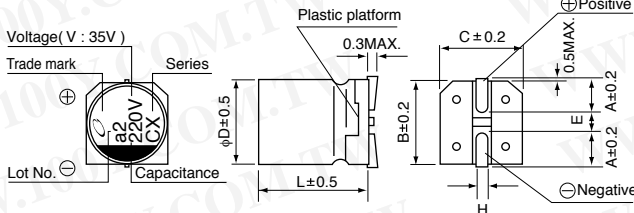
### (φ6.3) [Vibration Resistance]



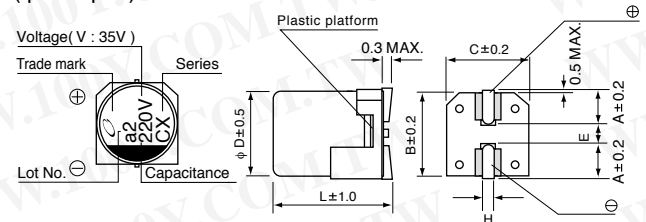
### Type numbering system (Example : 35V 47μF)



### (φ8 to φ10) [Standard]



### (φ8 to φ10) [Vibration Resistance]



### Standard

φDXL	8×10	10×10
A	2.9	3.2
B	8.3	10.3
C	8.3	10.3
E	3.1	4.5
L	10	10
H	0.8 to 1.1	0.8 to 1.1

### Vibration Resistance

φ0XL	6.3×10	8×10	10×10
A	2.4	2.9	3.2
B	6.6	8.3	10.3
C	6.6	8.3	10.3
E	2.2	3.1	4.5
L	10.8	10	10
H	0.5 to 0.8	1.1 to 1.5	1.1 to 1.5

### Rated Voltage

V	10	16	25	35
Code	A	C	E	V

Design, Specifications are subject to change without notice.

NICHICON CORPORATION

勝特力材料 886-3-5753170  
勝特力电子(上海) 86-21-34970699  
勝特力电子(深圳) 86-755-83298787  
[Http://www.100y.com.tw](http://www.100y.com.tw)

# ALUMINUM ELECTROLYTIC CAPACITORS



## ■ Dimensions

(μF) Cap.	V Code	10				16				25				35											
		1A				1C				1E				1V											
47	470													●6.3×10,0.25	4	15	197	8×10,0.20	3	12	270				
68	680													8×10,0.20	3	12	270								
100	101					●6.3×10,0.25	4	15	197					8×10,0.20	3	12	270	●6.3×10,0.25	4	15	197	8×10,0.20	3	12	270
220	221	8×10,0.20	3	12	270	8×10,0.20	3	12	270	10×10,0.15	2	12	500	10×10,0.15	2	10	500								
330	331	●8×10,0.20	3	12	270	10×10,0.15	2	10	500	10×10,0.15	2	10	500					Case size φD×L (mm)	Initial 20°C	Initial -40°C	After endurance test 1000hours -40°C	Rated ripple			
470	471	10×10,0.15	2	10	500	10×10,0.15	2	10	500												ESR				

MAX. ESR (Ω) at 20°C / -40°C 100kHz, Rated ripple current(mArms) at 135°C 100kHz

●In this case, [6] 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

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