

ALUMINUM ELECTROLYTIC CAPACITORS

UCX

Chip Type, High Reliability
Low temperature ESR specification



- 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 (2011/65/EU).

UCX

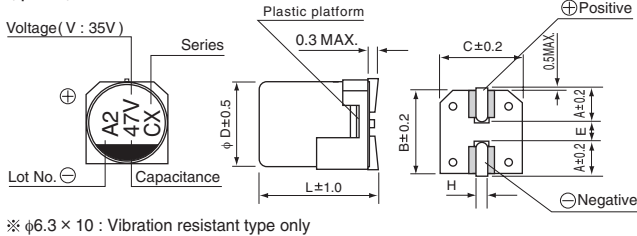


Specifications

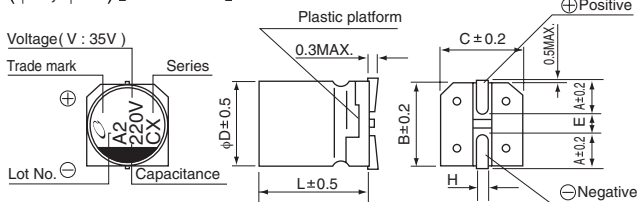
Item	Performance Characteristics						
Category Temperature Range	-40 to +135°C						
Rated Voltage Range	10 to 50V						
Rated Capacitance Range	47 to 3300μF						
Capacitance Tolerance	±20% at 120Hz, 20°C						
Leakage Current	After 2 minutes' application of rated voltage at 20°C, leakage current is not more than 0.01CV or 3(μA), whichever is greater.						
Tangent of loss angle (tan δ)	Rated voltage (V)	10	16	25	35	50	Measurement frequency : 120Hz at 20°C
	tan δ (MAX.)	0.30	0.23	0.18	0.16	0.16	
Stability at Low Temperature	Rated voltage (V)	10	16	25	35	50	Measurement frequency : 120Hz
	Impedance ratio ZT / Z20 (MAX.)	Z-40°C / Z+20°C	12	8	6	4	
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 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					
	Leakage current	Less than or equal to the initial specified value					
Marking	Black print on the case top.						

Radial Lead Type

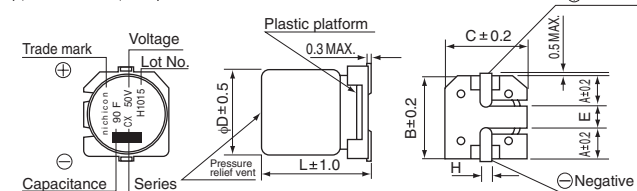
(φ 6.3) [Vibration Resistance]



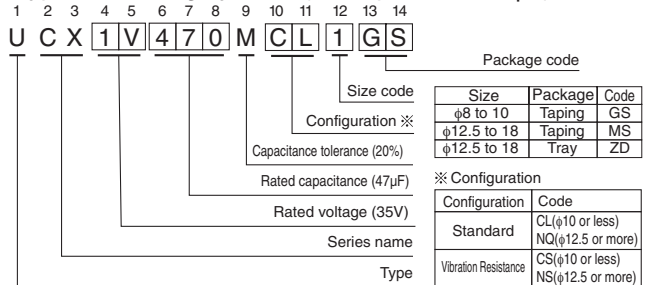
(φ 8, φ 10) [Standard]



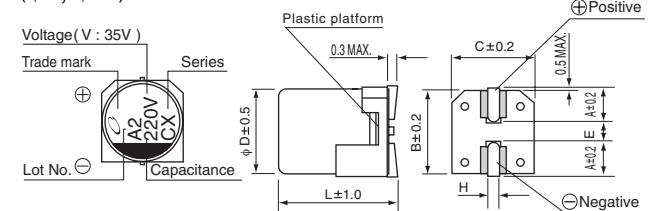
(φ 12.5 to φ 18) [Standard]



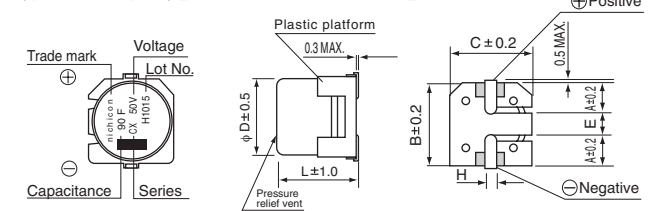
Type numbering system (Example : 35V 47μF)



(φ 8, φ 10) [Vibration Resistance]



(φ 12.5 to φ 18) [Vibration Resistance]



Standard

	(mm)				
φDXL	8×10	10×10	12.5×13.5	16×16.5, 21.5	18×16.5, 21.5
A	2.9	3.2	4.8	5.4	6.4
B	8.3	10.3	13.6	17.1	19.1
C	8.3	10.3	13.6	17.1	19.1
E	3.1	4.5	4	6.3	6.3
L	10	10	13.5	16.5, 21.5	16.5, 21.5
H	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

Vibration Resistance

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

■ Aid electrode

Voltage

V	10	16	25	35	50
Code	A	C	E	V	H

● Dimension table in next page.



■ Dimensions

Cap.(μ F)	V Code	10				16				25				35				50			
		1A				1C				1E				1V				1H			
47	470													6.3 X 10 0.25 4 15 197 8 X 10 0.20 3 12 270	8 X 10 0.25 3.5 15 270						
68	680													8 X 10 0.20 3 12 270							
100	101					6.3 X 10 0.25 4 15 197 8 X 10 0.20 3 12 270					8 X 10 0.20 3 12 270					6.3 X 10 0.25 4 15 197 8 X 10 0.20 3 12 270	10 X 10 0.2 2.5 12 500				
220	221									8 X 10 0.20 3 12 270	8 X 10 0.20 3 12 270	10 X 10 0.15 2 10 500	10 X 10 0.15 2 10 500								
330	331	8 X 10 0.20 3 12 270 10 X 10 0.15 2 10 500				10 X 10 0.15 2 10 500					10 X 10 0.15 2 10 500										
390	391																	12.5 X 13.5 0.09 1.3 6.5 750			
470	471					10 X 10 0.15 2 10 500	10 X 10 0.15 2 10 500									12.5 X 13.5 0.07 1.0 5.0 750	16 X 16.5 0.07 0.70 3.5 1000				
560	561													12.5 X 13.5 0.07 1.0 5.0 750	16 X 16.5 0.07 0.70 3.5 1000						
680	681													12.5 X 13.5 0.07 1.0 5.0 750	18 X 16.5 0.07 0.70 3.5 1200						
820	821									12.5 X 13.5 0.07 1.0 5.0 750	16 X 16.5 0.05 0.50 2.5 1200	18 X 16.5 0.07 0.70 3.5 1200									
1000	102									12.5 X 13.5 0.07 1.0 5.0 750	16 X 16.5 0.05 0.50 2.5 1200	16 X 21.5 0.05 0.40 2.0 1600									
1200	122									16 X 16.5 0.05 0.50 2.5 1200	18 X 16.5 0.05 0.50 2.5 1400	18 X 21.5 0.04 0.32 1.6 1900									
1500	152									16 X 16.5 0.05 0.50 2.5 1200	16 X 21.5 0.04 0.32 1.6 1900 18 X 16.5 0.05 0.50 2.5 1400										
1800	182									16 X 16.5 0.05 0.50 2.5 1200	18 X 21.5 0.035 0.28 1.4 2200										
2200	222									18 X 16.5 0.05 0.50 2.5 1400	18 X 21.5 0.035 0.28 1.4 2200										
2700	272									16 X 21.5 0.04 0.32 1.6 1900					Case size ϕ DXL (mm)	Initial 20°C	Initial -40°C	Alter endurance test -40°C	Rated ripple		
3300	332									18 X 21.5 0.035 0.28 1.4 2200											

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

- 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.