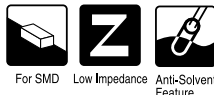


ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

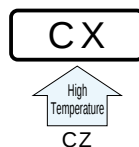
CX

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 (2011/65/EU).

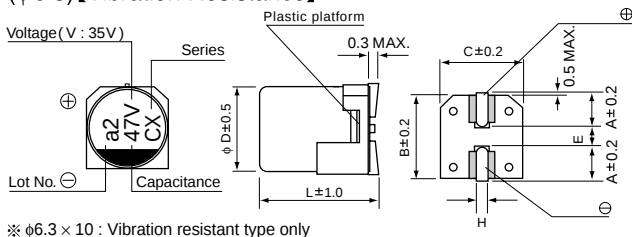


Specifications

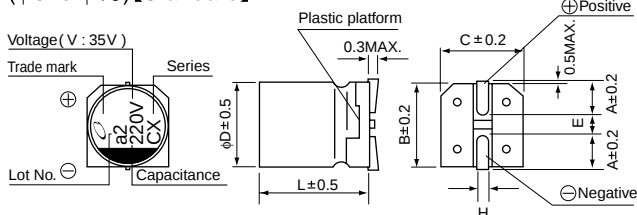
Item	Performance Characteristics					
Category Temperature Range	-40 to +135°C					
Rated Voltage Range	10 to 50V					
Rated Capacitance Range	47 to 3300μF					
Capacitance Tolerance	±20% at 120Hz, 20°C					
Leakage Current	After 2 minutes' application of rated voltage, leakage current is not more than 0.01CV or 3(μA), whichever is greater.					
Tangent of loss angle (tan δ)	Rated voltage (V)	10	16	25	35	50
	tan δ (MAX.)	0.30	0.23	0.18	0.16	0.16
						Measurement frequency : 120Hz at 20°C
Stability at Low Temperature	Rated voltage (V)	10	16	25	35	50
	Impedance ratio ZT / Z20 (MAX.)	Z-40°C / Z+20°C	12	8	6	4
						Measurement frequency : 120Hz
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
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.					300% or less than the initial specified value
						Leakage current
						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
						tan δ
Marking	Black print on the case top.					Less than or equal to the initial specified value
						Leakage current
						Less than or equal to the initial specified value

Radial Lead Type

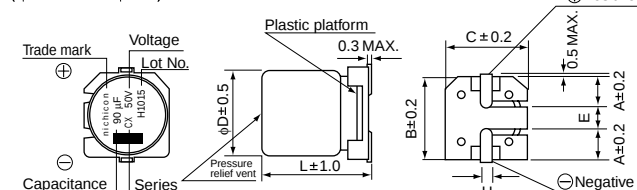
(φ6.3) [Vibration Resistance]



(φ8 to φ10) [Standard]



(φ12.5 to φ18) [Standard]



Standard

φD×L	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

φD×L	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	10.8	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

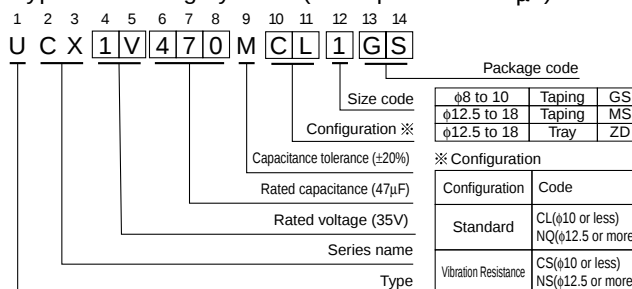
■ Aid electrode

Rated Voltage

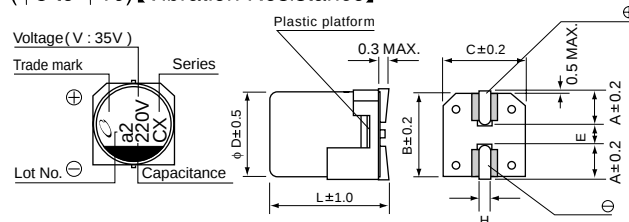
V	10	16	25	35	50
Code	A	C	E	V	H

- Dimension table in next page.

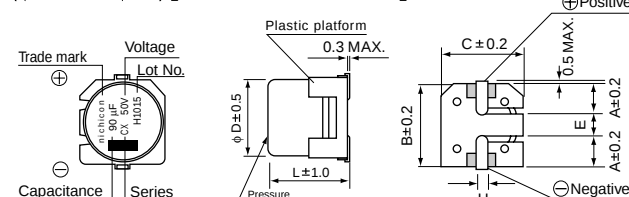
Type numbering system (Example : 35V 47μF)



(φ8 to φ10) [Vibration Resistance]



(φ12.5 to φ18) [Vibration Resistance]



CAT.8100C-1

■ Dimensions

Cap.(μF) \ V		10						16						25						35						50							
Code		1A						1C						1E						1V						1H							
47	470																		• 6.3 × 10	0.25	4	15	197		8 × 10	0.25	3.5	15	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	8 × 10	0.20	3	12	270	• 6.3 × 10	0.25	4	15	197	10 × 10	0.2	2.5	12	500
220	221	8 × 10	0.20	3	12	270		8 × 10	0.20	3	12	270		10 × 10	0.15	2	10	500	10 × 10	0.15	2	10	500	8 × 10	0.20	3	12	270					
330	331	• 8 × 10	0.20	3	12	270		10 × 10	0.15	2	10	500		10 × 10	0.15	2	10	500															
390	391																																
470	471	10 × 10	0.15	2	10	500		10 × 10	0.15	2	10	500																					
560	561																																
680	681																																
820	821													12.5 × 13.5	0.07	1.0	5.0	750															
1000	102													12.5 × 13.5	0.07	1.0	5.0	750															
1200	122													16 × 16.5	0.05	0.50	2.5	1200															
1500	152													16 × 16.5	0.05	0.50	2.5	1200															
1800	182													16 × 16.5	0.05	0.50	2.5	1200															
2200	222													18 × 16.5	0.05	0.50	2.5	1400															
2700	272													16 × 21.5	0.04	0.32	1.6	1900															
3300	332													18 × 21.5	0.035	0.28	1.4	2200															
																										Case size φD×L (mm)							
																										Initial 20							
																										Initial -40							
																										After endurance test 1000hours -40							
																										Rated ripple							
																										ESR							

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