

ALUMINUM ELECTROLYTIC CAPACITORS



Chip Type, High Reliability.
Low temperature ESR specification.
series



For SMD



Long Life



Anti-Solvent
Feature



- 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 (2002/95/EC).

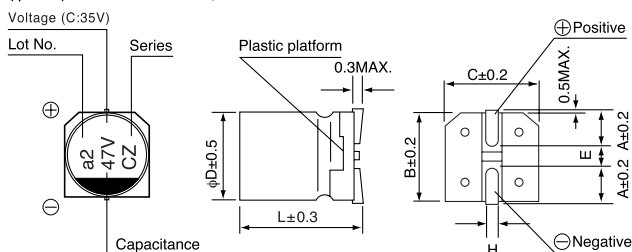


Specifications

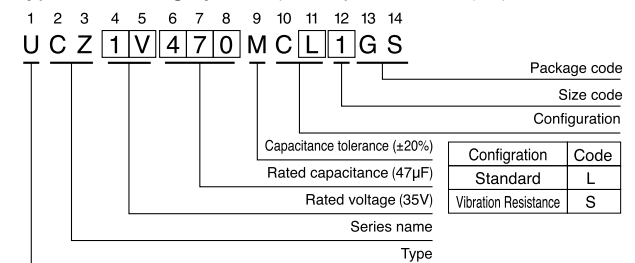
Item	Performance Characteristics										
Category Temperature Range	-40 to +125°C										
Rated Voltage Range	10 to 35V										
Rated Capacitance Range	47 to 470μF										
Capacitance Tolerance	±20% at 120Hz, 20°C										
Leakage Current	After 2 minutes' application of rated voltage, leakage current is not more than 0.01CV or 3(μA), whichever is greater.										
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz, Temperature : 20°C										
	<table border="1"> <tr> <td>Rated voltage (V)</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> </tr> <tr> <td>tan δ (MAX.)</td> <td>0.30</td> <td>0.23</td> <td>0.18</td> <td>0.16</td> </tr> </table>	Rated voltage (V)	10	16	25	35	tan δ (MAX.)	0.30	0.23	0.18	0.16
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Stability at Low Temperature	Measurement frequency : 120Hz										
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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 3000 hours (2000hours for φD=6.3) at 125°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 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.										
	Leakage current	Less than or equal to the initial specified value									
	tan δ	300% or less than the initial specified value									
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									
	Leakage current	Less than or equal to the initial specified value									
Marking	Black print on the case top.										

Chip Type

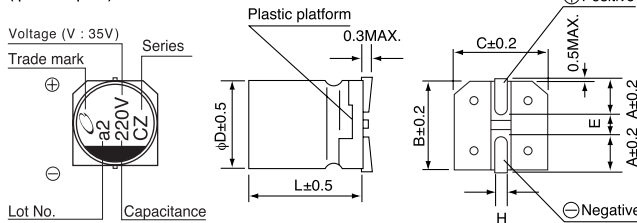
(φ 6.3) 【Standard】 ※ please contact us for vibration resistance.



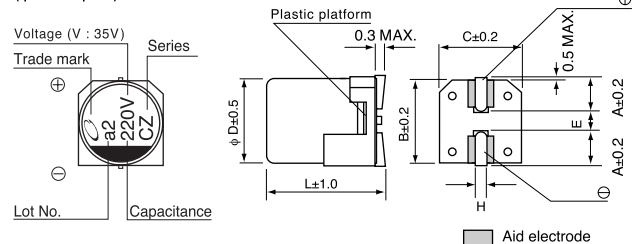
Type numbering system (Example : 35V 47μF)



(φ 8 to φ10) 【Standard】



(φ 8 to φ10) 【Vibration Resistance】



	Standard (mm)			Vibration Resistance (mm)		
	φD×L	6.3 × 7.7	8 × 10	10 × 10	φD×L	8 × 10
A	2.4	2.9	3.2	A	2.9	3.2
B	6.6	8.3	10.3	B	8.3	10.3
C	6.6	8.3	10.3	C	8.3	10.3
E	2.2	3.1	4.5	E	3.1	4.5
L	7.7	10	10	L	10	10
H	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1	H	1.1 to 1.5	1.1 to 1.5

Rated Voltage					
V	10	16	25	35	
Code	A	C	E	V	

NICHICON CORPORATION

ALUMINUM ELECTROLYTIC CAPACITORS



■ Dimensions

Cap. (μF)	V Code	10					16					25					35									
		1A					1C					1E					1V									
47	470																● 6.3 × 7.7	0.45	5	40	197					
																	8 × 10	0.20	3	4.5	270					
68	680																8 × 10	0.20	3	4.5	270					
100	101																● 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	10 × 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																Case size φD × L (mm)	Initial 20°C	Initial -40°C	after endurance test 2000hours -40°C	Rated ripple
		10 × 10	0.15	2	3.5	500	10 × 10	0.15	2	3.5	500	10 × 10	0.15	2	3.5	500										
470	471	10 × 10	0.15	2	3.5	500	10 × 10	0.15	2	3.5	500															

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

Design, Specifications are subject to change without notice.