

# ALUMINUM ELECTROLYTIC CAPACITORS

# UCN

Chip Type, High Reliability.  
Low ESR, Long Life Assurance.



For SMD



Long Life

# NEW

- Chip type, low temperature ESR/Long life products.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.



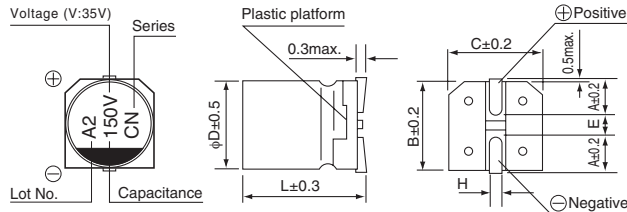
## Specifications

Item	Performance Characteristics								
Category Temperature Range	-40 to +125°C								
Rated Voltage Range	25 to 35V								
Rated Capacitance Range	150 to 820μF								
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 (μA). After 5 minutes' application of 16V at 20°C, leakage current is not more than 0.001CV (μA).								
Tangent of loss angle (tan δ)	<table border="1"> <tr> <td>Rated voltage (V)</td> <td>25</td> <td>35</td> </tr> <tr> <td>tan δ (max.)</td> <td>0.18</td> <td>0.16</td> </tr> </table>	Rated voltage (V)	25	35	tan δ (max.)	0.18	0.16	Measurement frequency : 120Hz at 20°C	
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Stability at Low Temperature	<table border="1"> <tr> <td>Rated voltage (V)</td> <td>25</td> <td>35</td> </tr> <tr> <td>Impedance ratio ZT / Z20 (max.)</td> <td>Z(-40°C) / Z(+20°C)</td> <td>3</td> <td>3</td> </tr> </table>	Rated voltage (V)	25	35	Impedance ratio ZT / Z20 (max.)	Z(-40°C) / Z(+20°C)	3	3	Measurement frequency : 120Hz
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Impedance ratio ZT / Z20 (max.)	Z(-40°C) / Z(+20°C)	3	3						
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 at 125°C.	<table border="1"> <tr> <td>Capacitance change</td> <td>Within ±30% of the initial capacitance value</td> </tr> <tr> <td>tan δ</td> <td>300% or less than the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td>Less than or equal to the initial specified value</td> </tr> </table>	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	
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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.	<table border="1"> <tr> <td>Capacitance change</td> <td>Within ±10% of the initial capacitance value</td> </tr> <tr> <td>tan δ</td> <td>Less than or equal to the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td>Less than or equal to the initial specified value</td> </tr> </table>	Capacitance change	Within ±10% of the initial capacitance value	tan δ	Less than or equal to the initial specified value	Leakage current	Less than or equal to the initial specified value	
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tan δ	Less than or equal to the initial specified value								
Leakage current	Less than or equal to the initial specified value								
Marking	Black print on the case top.								

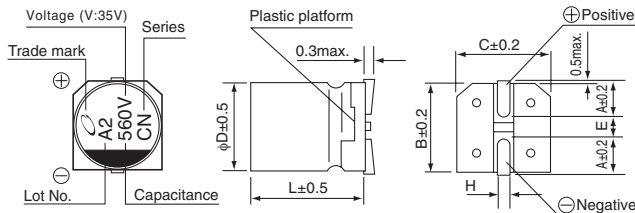
※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

## Chip Type

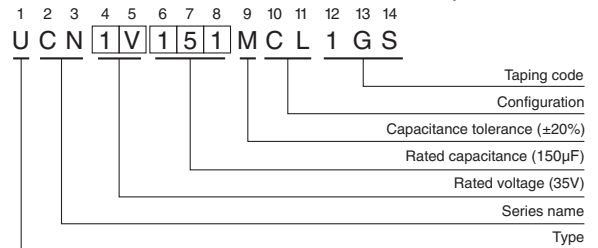
(φ6.3)



(φ8, φ10)



## Type numbering system (Example : 35V 150μF)



Voltage			(mm)		
V	25	35	φ6.3	8×10	10×10
Code	E	V	A	B	C
			2.4	2.9	3.2
			6.6	8.3	10.3
			6.6	8.3	10.3
			2.2	3.1	4.5
			7.7	10	10
			0.5 to 0.8	0.8 to 1.1	0.8 to 1.1

## 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

● Dimension table in next page.

## UCN

## ■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance ( $\mu$ F)	Case Size $\phi$ D $\times$ L (mm)	tan $\delta$	Leakage Current ( $\mu$ A)		ESR ( $\Omega$ ) max.		Rated Ripple (mArms) (125°C/100kHz)	Part Number
				Rated voltage applied at 20°C after 2 minutes	16V applied at 20°C after 5 minutes	Initial 20°C 100kHz	Initial -40°C 100kHz		
25 (1E)	180	6.3 $\times$ 7.7	0.18	45	4.5	0.5	7	197	UCN1E181MCL1GS
	470	8 $\times$ 10	0.18	117.5	11.75	0.3	4	270	UCN1E471MCL1GS
	820	10 $\times$ 10	0.18	205	20.5	0.2	3	500	UCN1E821MCL1GS
35 (1V)	150	6.3 $\times$ 7.7	0.16	52.5	5.25	0.5	7	197	UCN1V151MCL1GS
	330	8 $\times$ 10	0.16	115.5	11.55	0.3	4	270	UCN1V331MCL1GS
	560	10 $\times$ 10	0.16	196	19.6	0.2	3	500	UCN1V561MCL1GS

- For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.