

ALUMINUM ELECTROLYTIC CAPACITORS

UCH

Chip Type, High Reliability.
Low temperature ESR specification.



- 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, (EU)2015/863).
- AEC-Q200 compliant. Please contact us for details.

UCH ← Low ESR **UCZ**

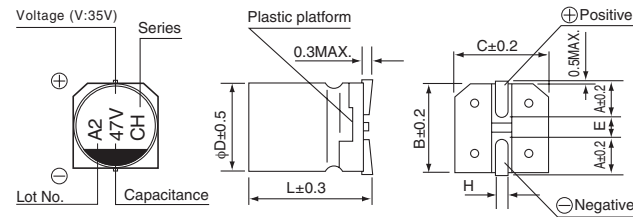


Specifications

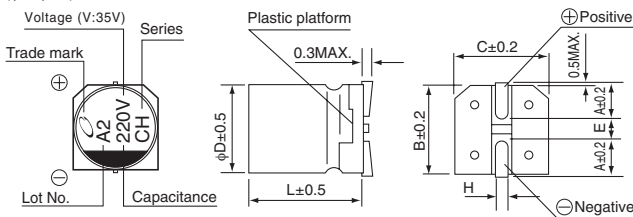
Item	Performance Characteristics												
Category Temperature Range	-40 to +125°C												
Rated Voltage Range	25 to 63V												
Rated Capacitance Range	33 to 560μF												
Capacitance Tolerance	±20% at 120Hz, 20°C												
Leakage Current	After 2 minutes' application of rated voltage at 20°C, leakage current is not more than 0.01CV (μA).												
Tangent of loss angle (tan δ)	<table border="1"> <tr> <td>Rated voltage (V)</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> </tr> <tr> <td>tan δ (MAX.)</td> <td>0.18</td> <td>0.16</td> <td>0.16</td> <td>0.14</td> </tr> </table>	Rated voltage (V)	25	35	50	63	tan δ (MAX.)	0.18	0.16	0.16	0.14	Measurement frequency : 120Hz at 20°C	
Rated voltage (V)	25	35	50	63									
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Stability at Low Temperature	<table border="1"> <tr> <td>Rated voltage (V)</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> </tr> <tr> <td>Impedance ratio ZT / Z20 (MAX.)</td> <td>Z-40°C / Z+20°C</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> </tr> </table>	Rated voltage (V)	25	35	50	63	Impedance ratio ZT / Z20 (MAX.)	Z-40°C / Z+20°C	3	3	3	3	Measurement frequency : 120Hz
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Impedance ratio ZT / Z20 (MAX.)	Z-40°C / Z+20°C	3	3	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 2000 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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tan δ	300% or less than the initial specified value												
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.												

Chip Type

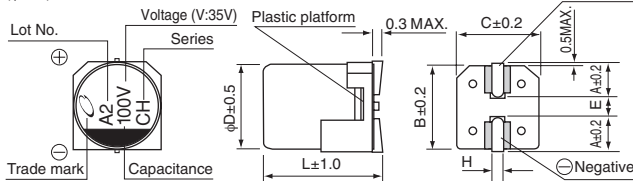
(φ6.3) 【Standard】



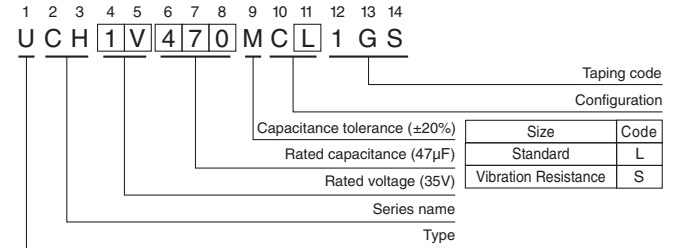
(φ8, φ10) 【Standard】



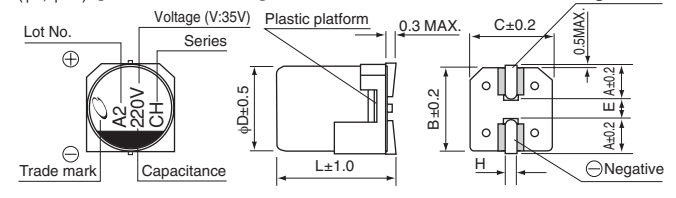
(φ6.3) 【Vibration Resistance】



Type numbering system (Example : 35V 47μF)



(φ8, φ10) 【Vibration Resistance】



Voltage	Standard			Vibration Resistance						
	25	35	50/63	6.3×7.7	8×10	10×10				
Code	E	V	H	J	A	B	C	E	L	H
φ6.3	2.4	2.9	3.2	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1	0.8 to 1.1
φ8	6.6	8.3	10.3	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1	0.8 to 1.1
φ10	6.6	8.3	10.3	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1	0.5 to 0.8	0.8 to 1.1	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.

UCH

■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μ F)	Case Size ϕ D \times L (mm)	tan δ	Leakage Current (μ A) (at 20°C after 2 minutes)	ESR (Ω) MAX.			Rated Ripple (mArms) (125°C/100kHz)	Part Number
					Initial 20°C 100kHz	Initial -40°C 100kHz	after endurance test 2000hours -40°C 400kHz		
25 (1E)	150	6.3 \times 7.7	0.18	37.5	0.30	3.0	6.0	197	UCH1E151MC□1GS
	330	8 \times 10	0.18	82.5	0.20	2.0	4.5	270	UCH1E331MC□1GS
	560	10 \times 10	0.18	140	0.15	1.5	3.5	500	UCH1E561MC□1GS
35 (1V)	47	6.3 \times 7.7	0.16	16.45	0.30	3.0	6.0	197	UCH1V470MC□1GS
	100	6.3 \times 7.7	0.16	35	0.30	3.0	6.0	197	UCH1V101MC□1GS
	220	8 \times 10	0.16	77	0.20	2.0	4.5	270	UCH1V221MC□1GS
	330	10 \times 10	0.16	115.5	0.15	1.5	3.5	500	UCH1V331MC□1GS
50 (1H)	47	6.3 \times 7.7	0.16	23.5	0.80	8.0	—	150	UCH1H470MC□1GS
	100	8 \times 10	0.16	50	0.40	6.0	—	250	UCH1H101MC□1GS
	220	10 \times 10	0.16	110	0.25	3.0	—	400	UCH1H221MC□1GS
63 (1J)	33	6.3 \times 7.7	0.14	20.79	0.80	8.0	—	150	UCH1J330MC□1GS
	68	8 \times 10	0.14	42.84	0.40	6.0	—	250	UCH1J680MC□1GS
	100	10 \times 10	0.14	63	0.25	3.0	—	400	UCH1J101MC□1GS

□ : Enter the appropriate configuration code.

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

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