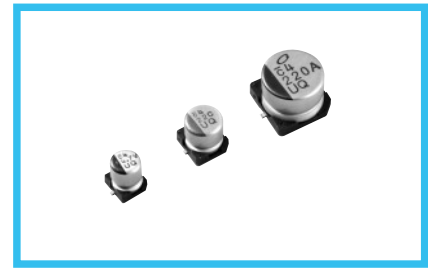


# ALUMINUM ELECTROLYTIC CAPACITORS

**UQ** Chip Type, For Audio Equipment  
Wide Temperature Range  
series



- Chip type acoustic series within the wide temperature range.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2002/95/EC)

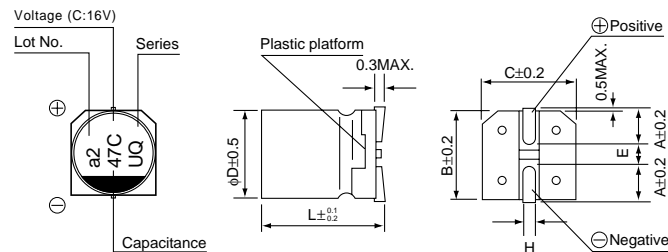


## Specifications

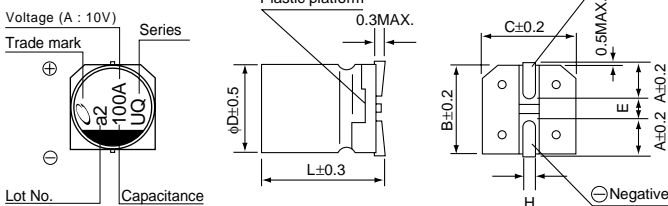
Item	Performance Characteristics																											
Category Temperature Range	-40 to +105°C																											
Rated Voltage Range	6.3 to 50V																											
Rated Capacitance Range	0.1 to 1000μF																											
Capacitance Tolerance	±20% (120Hz, 20°C)																											
Leakage Current	After 1 minute's application of rated voltage, leakage current is not more than 0.03 CV or 4 (μA), whichever is greater.																											
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz, Temperature : 20°C																											
	Rated voltage (V)	6.3	10	16	25	35	50																					
Stability at Low Temperature	Measurement frequency : 120Hz																											
	Impedance ratio ZT / Z20 (MAX.)	Z-25°C / Z+20°C	4	3	2	2	2	2																				
		Z-40°C / Z+20°C	8	5	4	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 1000 hours at 105°C.		<table border="1"> <tr> <td>Capacitance change</td> <td colspan="6">Within ±20% of the initial capacitance value</td> </tr> <tr> <td>tan δ</td> <td colspan="6">200% or less than the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td colspan="6">Less than or equal to the initial specified value</td> </tr> </table>					Capacitance change	Within ±20% of the initial capacitance value						tan δ	200% or less than the initial specified value						Leakage current	Less than or equal to the initial specified value					
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	tan δ	200% 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 105°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 colspan="6">Within ±10% of the initial capacitance value</td> </tr> <tr> <td>tan δ</td> <td colspan="6">Less than or equal to the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td colspan="6">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

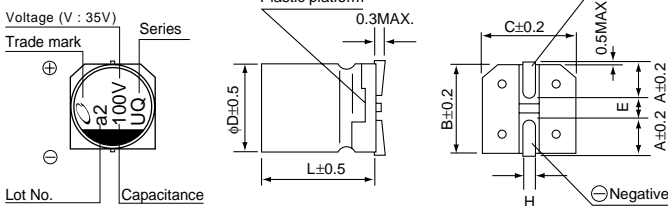
(φ4 to φ6.3)



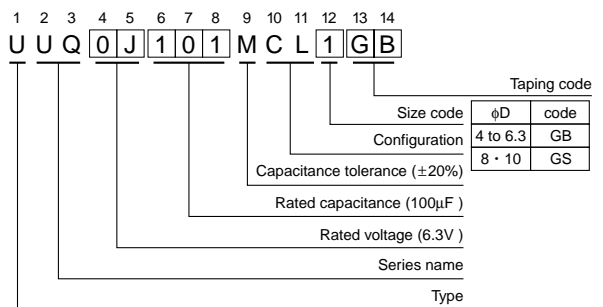
(φ8 × 6.2L)



(φ8 × 10L, φ10 × 10L)



## Type numbering system (Example : 6.3V 100μF)



φD × L	4 × 5.4	5 × 5.4	6.3 × 5.4	8 × 6.2	8 × 10	10 × 10
A	1.8	2.1	2.4	3.3	2.9	3.2
B	4.3	5.3	6.6	8.3	8.3	10.3
C	4.3	5.3	6.6	8.3	8.3	10.3
E	1.0	1.3	2.2	2.3	3.1	4.5
L	5.4	5.4	5.4	6.2	10	10
H	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1

## Rated voltage

V	6.3	10	16	25	35	50
Code	j	A	C	E	V	H

● Dimension table in next page.

## ■ Dimensions

Cap. (μF)	V Code	6.3		10		16		25		35		50	
		0J		1A		1C		1E		1V		1H	
0.1	0R1											4 × 5.4	1.0
0.22	R22											4 × 5.4	2.6
0.33	R33											4 × 5.4	3.2
0.47	R47											4 × 5.4	3.8
1	010											4 × 5.4	6.2
2.2	2R2											4 × 5.4	11
3.3	3R3											4 × 5.4	14
4.7	4R7							4 × 5.4	13	4 × 5.4	15	5 × 5.4	19
10	100			4 × 5.4	22	4 × 5.4	18	5 × 5.4	23	5 × 5.4	25	6.3 × 5.4	30
22	220	4 × 5.4	22	5 × 5.4	27	5 × 5.4	30	6.3 × 5.4	38	6.3 × 5.4	42	8 × 6.2	51
33	330	5 × 5.4	30	5 × 5.4	35	6.3 × 5.4	40	6.3 × 5.4	48	8 × 6.2	59	8 × 10	140
47	470	5 × 5.4	36	6.3 × 5.4	46	6.3 × 5.4	50	8 × 6.2	66	8 × 10	155	8 × 10	180
100	101	6.3 × 5.4	60	○ 6.3 × 5.4	60 (90)	● 8 × 6.2	102 (210)	8 × 10	155	10 × 10	300	10 × 10	220
220	221	● 8 × 6.2	102 (210)	● 8 × 6.2	102 (210)	△ 8 × 10	210 (310)	10 × 10	300	10 × 10	300		
330	331	● 8 × 6.2	102 (210)	△ 8 × 10	210 (310)	△ 8 × 10	210 (310)						
470	471	△ 8 × 10	210 (310)	△ 8 × 10	210 (310)	△ 8 × 10	210 (310)						
1000	102	10 × 10	310									Case size φD × L (mm)	Rated ripple

Size φ8 × 6.2L is available for capacitors marked. "○"

Size φ8 × 10L is available for capacitors marked. "●"

Size φ10 × 10L is available for capacitors marked. "△"

※ In this case, ⑥ will be put at 12th digit of type numbering system.

Rated ripple current (mA rms) at 105°C 120Hz

## ● Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
Coefficient	0.70	1.00	1.17	1.36	1.50

- 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.