



Chip Type, For Audio Equipment
Wide Temperature Range



- Chip type acoustic series within the wide temperature range.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU)
- AEC-Q200 compliant. Please contact us for details.



Chip type UMW



Specifications

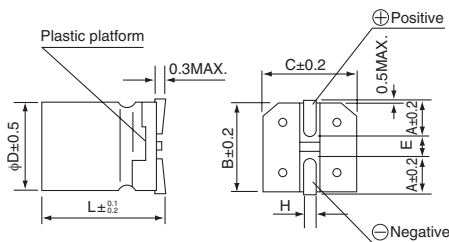
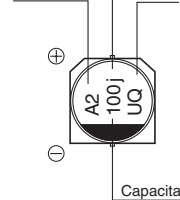
Item	Performance Characteristics							
Category Temperature Range	-40 to +105°C							
Rated Voltage Range	6.3 to 50V							
Rated Capacitance Range	1 to 1000μF							
Capacitance Tolerance	±20% (120Hz, 20°C)							
Leakage Current	After 1 minute's application of rated voltage at 20°C, leakage current is not more than 0.03 CV or 4 (μA) , whichever is greater.							
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C							
	Rated voltage (V)	6.3	10	16	25	35	50	
	tan δ (MAX.)	0.30	0.26	0.22	0.16	0.13	0.12	
Stability at Low Temperature	Measurement frequency : 120Hz							
	Rated voltage (V)		6.3	10	16	25	35	50
	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.				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	
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.				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	
Marking	Black print on the case top.							

Chip Type

(φ4 to φ6.3)

Voltage (j:6.3V)

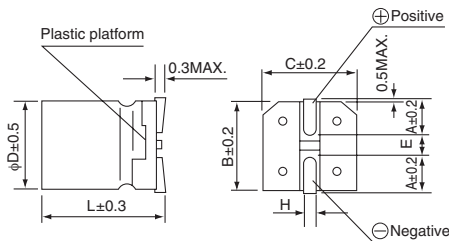
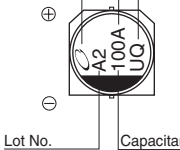
Lot No.



(φ8 × 6.2L)

Voltage (A : 10V)

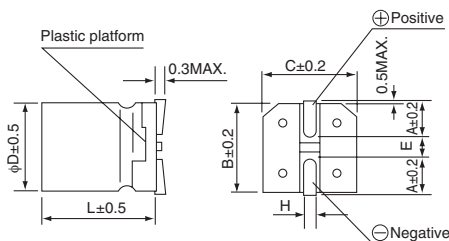
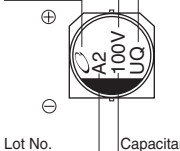
Trade mark



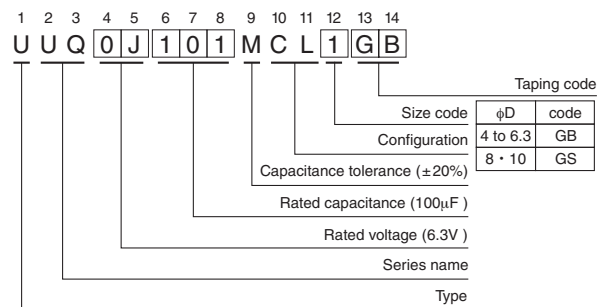
(φ8 × 10L, φ10)

Voltage (V : 35V)

Trade mark



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

Voltage

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

● Dimension table in next page.



■ Dimensions

Cap.(μF)	Code	V		6.3		10		16		25		35		50	
				0J		1A		1C		1E		1V		1H	
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	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	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	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	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	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 (mArms) 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.