nichicon

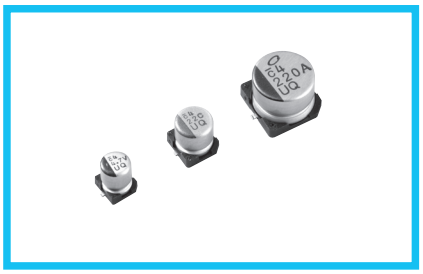
# UUQ

Chip Type, For Audio Equipment
Wide Temperature Range

For SMD | For Audio Use | Anti-Solvent Feature

- 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.

UUQ ← 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.

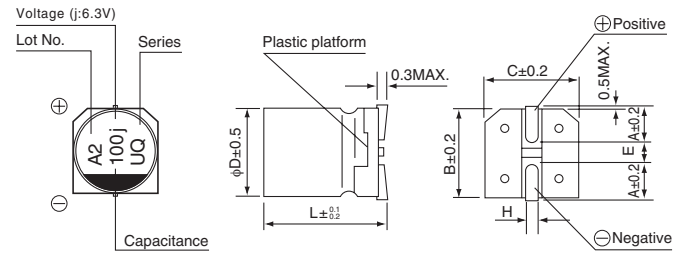
Resistance to soldering heat — The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C.

| | |
|---|---|
| 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 |

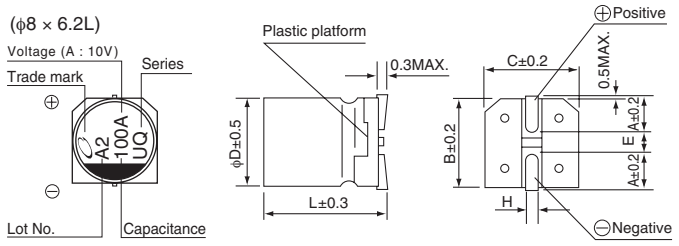
Marking — Black print on the case top.

## ■Chip Type

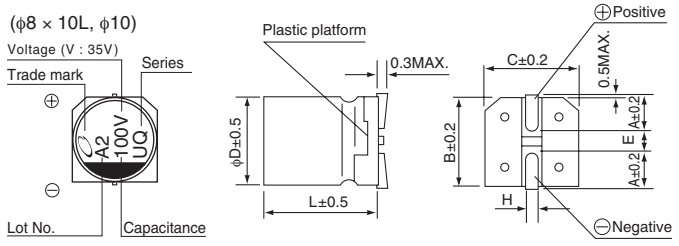
(φ4 to φ6.3)




(φ8 × 6.2L)




(φ8 × 10L, φ10)




● Dimension table in next page.

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

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| U | U | Q | 0 | J | 1 | 0 | 1 | M | C | L | 1 | G | B |

Taping code
Size code
Configuration
Capacitance tolerance (±20%)
Rated capacitance (100μF )
Rated voltage (6.3V )
Series name
Type

| φD | code |
|---|---|
| 4 to 6.3 | GB |
| 8・10 | GS |

(mm)

| 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 |

# UUQ

## ■Dimensions

| Cap.(μF) \ V | Code | 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 |
| **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) | | | | | Case size φD × L (mm) | Rated ripple |
| **1000** | 102 | 10 × 10 | 310 | | | | | | | | | | |

Rated ripple current (mArms) at 105°C 120Hz

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.

## ● 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.