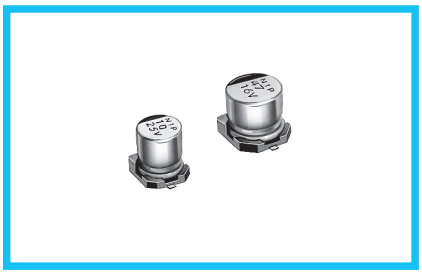
# ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

# UUT

6mmL Chip Type, Wide Temperature Range

For SMD | Anti-Solvent Feature



- Chip type with load life 2000 hours at +105°C.
- Designed for surface mounting on high density PC board.
- 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.

Products which are scheduled to be discontinued.
Not recommended for new designs.

UUA Long Life
UUX Higher C/V
**UUT**
Long Life UWT

## ■Specifications

| Item | Performance Characteristics |
|---|---|
| Category Temperature Range | −55 to +105°C |
| Rated Voltage Range | 4 to 50V |
| Rated Capacitance Range | 1 to 100μF |
| 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 0.01 CV or 3 (μA) , whichever is greater. |
| Tangent of loss angle (tan δ) | Measurement frequency :120Hz at 20°C |

| Rated voltage (V) | 4 | 6.3 | 10 | 16 | 25 | 35 | 50 |
|---|---|---|---|---|---|---|---|
| tan δ (max.) | 0.37 | 0.28 | 0.24 | 0.20 | 0.16 | 0.13 | 0.12 |

Stability at Low Temperature — Measurement frequency :120Hz

| Rated voltage (V) | | 4 | 6.3 | 10 | 16 | 25 | 35 | 50 |
|---|---|---|---|---|---|---|---|---|
| Impedance ratio ZT / Z20 (max.) | Z(−25°C) / Z(+20°C) | 6 | 3 | 3 | 2 | 2 | 2 | 2 |
| | Z(−40°C) / Z(+20°C) | 12 | 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 2000 hours at 105°C.

| | |
|---|---|
| Capacitance change | Within ±25% of the initial capacitance value (16V or less)<br>Within ±20% of the initial capacitance value (25V or more) |
| 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**

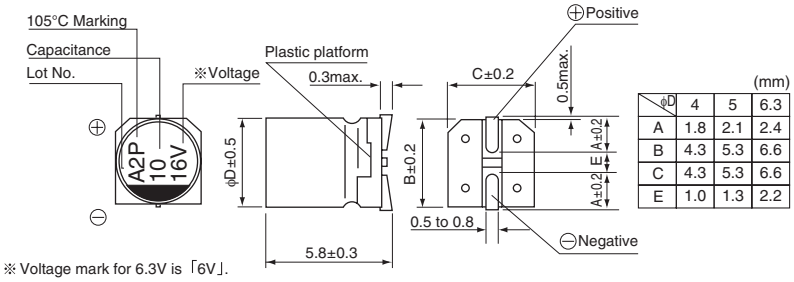
The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C.

| | |
|---|---|
| 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.

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

## ■Chip Type

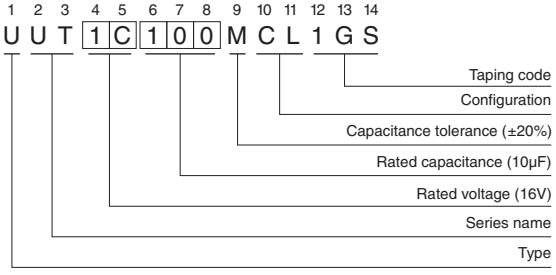



(mm)

| φD | 4 | 5 | 6.3 |
|---|---|---|---|
| A | 1.8 | 2.1 | 2.4 |
| B | 4.3 | 5.3 | 6.6 |
| C | 4.3 | 5.3 | 6.6 |
| E | 1.0 | 1.3 | 2.2 |

※Voltage mark for 6.3V is 「6V」.

## Type numbering system (Example : 16V 10μF)




## ● 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 |

● Dimension table in next page.

# UUT

■Dimensions

| Rated Voltage (V) (code) | Rated Capacitance (μF) | Case Size φD×L(mm) | tan δ | Leakage Current (μA) (at 20℃ after 2 minutes) | Rated Ripple (mArms) (105℃/120Hz) | Part Number |
|---|---|---|---|---|---|---|
| 4 (0G) | 22 | 4×5.8 | 0.37 | 3 | 22 | UUT0G220MCL1GS |
| | 33 | 5×5.8 | 0.37 | 3 | 30 | UUT0G330MCL1GS |
| | 47 | 5×5.8 | 0.37 | 3 | 36 | UUT0G470MCL1GS |
| | 100 | 6.3×5.8 | 0.37 | 4 | 60 | UUT0G101MCL1GS |
| 6.3 (0J) | 22 | 4×5.8 | 0.28 | 3 | 22 | UUT0J220MCL1GS |
| | 33 | 5×5.8 | 0.28 | 3 | 30 | UUT0J330MCL1GS |
| | 47 | 5×5.8 | 0.28 | 3 | 36 | UUT0J470MCL1GS |
| | 100 | 6.3×5.8 | 0.28 | 6.3 | 60 | UUT0J101MCL1GS |
| 10 (1A) | 22 | 5×5.8 | 0.24 | 3 | 27 | UUT1A220MCL1GS |
| | 33 | 5×5.8 | 0.24 | 3.3 | 35 | UUT1A330MCL1GS |
| | 47 | 6.3×5.8 | 0.24 | 4.7 | 46 | UUT1A470MCL1GS |
| | 100 | 6.3×5.8 | 0.24 | 10 | 60 | UUT1A101MCL1GS |
| 16 (1C) | 10 | 4×5.8 | 0.20 | 3 | 18 | UUT1C100MCL1GS |
| | 22 | 5×5.8 | 0.20 | 3.52 | 30 | UUT1C220MCL1GS |
| | 33 | 6.3×5.8 | 0.20 | 5.28 | 40 | UUT1C330MCL1GS |
| | 47 | 6.3×5.8 | 0.20 | 7.52 | 50 | UUT1C470MCL1GS |
| 25 (1E) | 4.7 | 4×5.8 | 0.16 | 3 | 13 | UUT1E4R7MCL1GS |
| | 10 | 5×5.8 | 0.16 | 3 | 23 | UUT1E100MCL1GS |
| | 22 | 6.3×5.8 | 0.16 | 5.5 | 38 | UUT1E220MCL1GS |
| | 33 | 6.3×5.8 | 0.16 | 8.25 | 48 | UUT1E330MCL1GS |
| 35 (1V) | 4.7 | 4×5.8 | 0.13 | 3 | 15 | UUT1V4R7MCL1GS |
| | 10 | 5×5.8 | 0.13 | 3.5 | 25 | UUT1V100MCL1GS |
| | 22 | 6.3×5.8 | 0.13 | 7.7 | 42 | UUT1V220MCL1GS |
| 50 (1H) | 1 | 4×5.8 | 0.12 | 3 | 6.2 | UUT1H010MCL1GS |
| | 2.2 | 4×5.8 | 0.12 | 3 | 11 | UUT1H2R2MCL1GS |
| | 3.3 | 4×5.8 | 0.12 | 3 | 14 | UUT1H3R3MCL1GS |
| | 4.7 | 5×5.8 | 0.12 | 3 | 19 | UUT1H4R7MCL1GS |
| | 10 | 6.3×5.8 | 0.12 | 5 | 30 | UUT1H100MCL1GS |

- For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.
- Please select UUX, UUJ if high C/V products are required.