# THE DATASHEET OF

# UUR1V101MCL6GS

# ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

# UUR

Chip Type, High CV

For SMD | Smaller | Anti-Solvent Feature

- Chip type, higher capacitance.
- Designed for surface mounting on high density PC board.
- Applicable to automatic mounting machine fed with carrier tape.
- 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.**

UUG ← Extended range — UUR — Higher C/V → UWX

## ■Specifications

| Item | Performance Characteristics |
|---|---|
| Category Temperature Range | −40 to +85°C |
| Rated Voltage Range | 4 to 100V |
| Rated Capacitance Range | 3.3 to 1500μF |
| Capacitance Tolerance | ±20% at 120Hz, 20°C |
| Leakage Current ※ | After 1 minute's application of rated voltage at 20°C, leakage current is not more than 0.03CV (μA) . |

Tangent of loss angle (tan δ) — Measurement frequency : 120Hz at 20°C

| Rated voltage (V) | 4 | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 |
|---|---|---|---|---|---|---|---|---|---|
| tan δ (max.) | 0.35 | 0.28 | 0.24 | 0.20 | 0.16 | 0.14 | 0.12 | 0.12 | 0.12 |

Stability at Low Temperature — Measurement frequency: 120Hz

| Rated voltage (V) | | 4 | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|
| Impedance ratio ZT / Z20 (max.) | Z(−25°C) / Z(+20°C) | 7 | 5 | 4 | 3 | 2 | 2 | 2 | 2 | 2 |
| | Z(−40°C) / Z(+20°C) | 15 | 10 | 8 | 6 | 4 | 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 85°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 85°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.

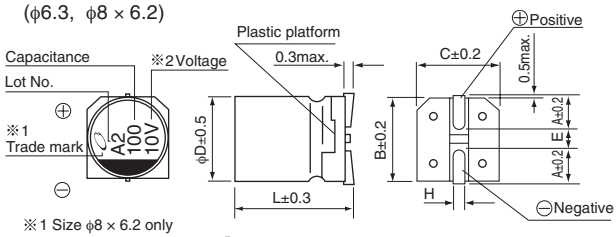
| | |
|---|---|
| Capacitance change | Within ±10% of the initial capacitance value |
| tan δ | Less than or equal to the initial specified value |
| Leakage current | Less than or equal to the initial specified value |

Marking — Black print on the case top.

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

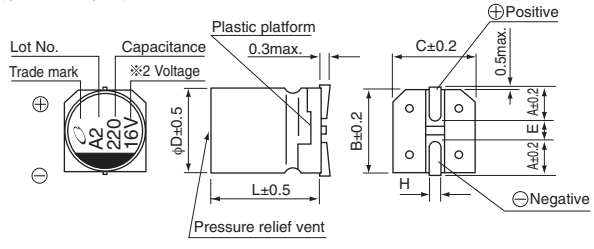
## ■Chip Type

(φ6.3, φ8 × 6.2)




※1 Size φ8 × 6.2 only
※2 Voltage mark for 6.3V is 「6V」.

(φ8 × 10, φ10)




## Type numbering system (Example : 10V 100μF)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| U | U | R | 1 | A | 1 | 0 | 1 | M | C | L | 1 | G | S |

- 14: Taping code
- 13: Size code
- 12: Configuration
- 11–10: Capacitance tolerance (±20%)
- 9–5: Rated capacitance (100μF)
- 8–7: Rated voltage (10V)
- 4–3: Series name
- 2–1: Type

| φD × L | Code |
|---|---|
| 6.3 × 5.8 | CL |
| 6.3 × 7.7 | CL |
| 8 × 6.2 | CL |
| 8 × 10 | NL |
| 10 × 10 | NL |

(mm)

| φD × L | 6.3 × 5.8 | 6.3 × 7.7 | 8 × 6.2 | 8 × 10 | 10 × 10 |
|---|---|---|---|---|---|
| A | 2.4 | 2.4 | 3.3 | 2.9 | 3.2 |
| B | 6.6 | 6.6 | 8.3 | 8.3 | 10.3 |
| C | 6.6 | 6.6 | 8.3 | 8.3 | 10.3 |
| E | 2.2 | 2.2 | 2.3 | 3.1 | 4.5 |
| L | 5.8 | 7.7 | 6.2 | 10 | 10 |
| H | 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 |

## ● Frequency coefficient of rated ripple current

| Cap.(μF) \ Frequency | 50 Hz | 120 Hz | 300 Hz | 1 kHz | 10 kHz or more |
|---|---|---|---|---|---|
| Less than 47 | 0.80 | 1.00 | 1.15 | 1.40 | 1.67 |
| 100 to 1500 | 0.85 | 1.00 | 1.08 | 1.20 | 1.30 |

● Dimension table in next page.

# UUR

■ Dimensions

| Rated Voltage (V) (code) | Rated Capacitance (μF) | Case Size φD×L (mm) | tan δ | Leakage Current (μA) (at 20℃ after 1 minute) | Rated Ripple (mArms) (85℃/120Hz) | Part Number |
|---|---|---|---|---|---|---|
| 4 (0G) | 330 | 6.3×5.8 | 0.35 | 39.6 | 152 | UUR0G331MCL1GS |
| | 470 | 6.3×7.7 | 0.35 | 56.4 | 200 | UUR0G471MCL1GS |
| | 680 | 8×10 | 0.35 | 81.6 | 284 | UUR0G681MNL1GS |
| | 1000 | 8×10 | 0.35 | 120 | 344 | UUR0G102MNL1GS |
| | 1500 | 10×10 | 0.35 | 180 | 347 | UUR0G152MNL1GS |
| 6.3 (0J) | 220 | 8×6.2 | 0.28 | 41.58 | 160 | UUR0J221MCL1GS |
| | 220 | 6.3×5.8 | 0.28 | 41.58 | 143 | UUR0J221MCL6GS |
| | 330 | 8×6.2 | 0.28 | 62.37 | 190 | UUR0J331MCL1GS |
| | 330 | 6.3×7.7 | 0.28 | 62.37 | 188 | UUR0J331MCL6GS |
| | 470 | 8×10 | 0.28 | 88.83 | 265 | UUR0J471MNL1GS |
| | 680 | 8×10 | 0.28 | 128.52 | 318 | UUR0J681MNL1GS |
| | 1000 | 10×10 | 0.28 | 189 | 400 | UUR0J102MNL1GS |
| | 1000 | 8×10 | 0.28 | 189 | 372 | UUR0J102MNL6GS |
| | 1500 | 10×10 | 0.28 | 283.5 | 489 | UUR0J152MNL1GS |
| 10 (1A) | 100 | 6.3×5.8 | 0.24 | 30 | 70 | UUR1A101MCL1GS |
| | 150 | 6.3×5.8 | 0.24 | 45 | 85 | UUR1A151MCL1GS |
| | 220 | 8×6.2 | 0.24 | 66 | 175 | UUR1A221MCL1GS |
| | 220 | 6.3×7.7 | 0.24 | 66 | 173 | UUR1A221MCL6GS |
| | 330 | 8×10 | 0.24 | 99 | 240 | UUR1A331MNL1GS |
| | 470 | 8×10 | 0.24 | 141 | 290 | UUR1A471MNL1GS |
| | 680 | 10×10 | 0.24 | 204 | 374 | UUR1A681MNL1GS |
| | 1000 | 10×10 | 0.24 | 300 | 454 | UUR1A102MNL1GS |
| 16 (1C) | 100 | 8×6.2 | 0.20 | 48 | 125 | UUR1C101MCL1GS |
| | 150 | 6.3×7.7 | 0.20 | 72 | 151 | UUR1C151MCL1GS |
| | 220 | 8×10 | 0.20 | 105.6 | 215 | UUR1C221MNL1GS |
| | 220 | 6.3×7.7 | 0.20 | 105.6 | 162 | UUR1C221MCL6GS |
| | 330 | 8×10 | 0.20 | 158.4 | 270 | UUR1C331MNL1GS |
| | 470 | 10×10 | 0.20 | 225.6 | 330 | UUR1C471MNL1GS |
| | 470 | 8×10 | 0.20 | 225.6 | 307 | UUR1C471MNL6GS |
| | 680 | 10×10 | 0.20 | 326.4 | 396 | UUR1C681MNL1GS |
| 25 (1E) | 47 | 6.3×5.8 | 0.16 | 35.25 | 65 | UUR1E470MCL1GS |
| | 100 | 8×6.2 | 0.16 | 75 | 145 | UUR1E101MCL1GS |
| | 100 | 6.3×7.7 | 0.16 | 75 | 143 | UUR1E101MCL6GS |
| | 150 | 8×10 | 0.16 | 112.5 | 192 | UUR1E151MNL1GS |
| | 220 | 10×10 | 0.16 | 165 | 250 | UUR1E221MNL1GS |
| | 220 | 8×10 | 0.16 | 165 | 232 | UUR1E221MNL6GS |
| | 330 | 10×10 | 0.16 | 247.5 | 305 | UUR1E331MNL1GS |
| | 330 | 8×10 | 0.16 | 247.5 | 284 | UUR1E331MNL6GS |
| | 470 | 10×10 | 0.16 | 352.5 | 393 | UUR1E471MNL1GS |
| 35 (1V) | 33 | 6.3×5.8 | 0.14 | 34.65 | 55 | UUR1V330MCL1GS |
| | 47 | 8×6.2 | 0.14 | 49.35 | 105 | UUR1V470MCL1GS |
| | 47 | 6.3×5.8 | 0.14 | 49.35 | 94 | UUR1V470MCL6GS |
| | 100 | 8×10 | 0.14 | 105 | 175 | UUR1V101MNL1GS |
| | 100 | 6.3×7.7 | 0.14 | 105 | 132 | UUR1V101MCL6GS |
| | 150 | 8×10 | 0.14 | 157.5 | 214 | UUR1V151MNL1GS |
| | 220 | 10×10 | 0.14 | 231 | 265 | UUR1V221MNL1GS |
| | 220 | 8×10 | 0.14 | 231 | 246 | UUR1V221MNL6GS |
| | 330 | 10×10 | 0.14 | 346.5 | 324 | UUR1V331MNL1GS |

# UUR

■ Dimensions

| Rated Voltage (V) (code) | Rated Capacitance (μF) | Case Size φD×L (mm) | tan δ | Leakage Current (μA) (at 20℃ after 1 minute) | Rated Ripple (mArms) (85℃/120Hz) | Part Number |
|---|---|---|---|---|---|---|
| 50 (1H) | 22 | 6.3×5.8 | 0.12 | 33 | 45 | UUR1H220MCL1GS |
| | 33 | 8×6.2 | 0.12 | 49.5 | 95 | UUR1H330MCL1GS |
| | 33 | 6.3×7.7 | 0.12 | 49.5 | 94 | UUR1H330MCL6GS |
| | 47 | 8×10 | 0.12 | 70.5 | 140 | UUR1H470MNL1GS |
| | 47 | 6.3×7.7 | 0.12 | 70.5 | 105 | UUR1H470MCL6GS |
| | 100 | 10×10 | 0.12 | 150 | 195 | UUR1H101MNL1GS |
| | 100 | 8×10 | 0.12 | 150 | 181 | UUR1H101MNL6GS |
| | 150 | 10×10 | 0.12 | 225 | 238 | UUR1H151MNL1GS |
| | 220 | 10×10 | 0.12 | 330 | 289 | UUR1H221MNL1GS |
| 63 (1J) | 4.7 | 6.3×5.8 | 0.12 | 8.883 | 31 | UUR1J4R7MCL1GS |
| | 10 | 8×6.2 | 0.12 | 18.9 | 46 | UUR1J100MCL1GS |
| | 22 | 8×10 | 0.12 | 41.58 | 96 | UUR1J220MNL1GS |
| | 33 | 8×10 | 0.12 | 62.37 | 117 | UUR1J330MNL1GS |
| | 47 | 8×10 | 0.12 | 88.83 | 140 | UUR1J470MNL1GS |
| | 100 | 10×10 | 0.12 | 189 | 232 | UUR1J101MNL1GS |
| 100 (2A) | 3.3 | 6.3×5.8 | 0.12 | 9.9 | 29 | UUR2A3R3MCL1GS |
| | 4.7 | 8×6.2 | 0.12 | 14.1 | 40 | UUR2A4R7MCL1GS |
| | 4.7 | 6.3×5.8 | 0.12 | 14.1 | 35 | UUR2A4R7MCL6GS |
| | 10 | 8×10 | 0.12 | 30 | 77 | UUR2A100MNL1GS |
| | 22 | 8×10 | 0.12 | 66 | 100 | UUR2A220MNL1GS |
| | 33 | 10×10 | 0.12 | 99 | 130 | UUR2A330MNL1GS |
| | 47 | 10×10 | 0.12 | 141 | 155 | UUR2A470MNL1GS |

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

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