

ALUMINUM ELECTROLYTIC CAPACITORS

UCW

Chip Type, Low Impedance,
Long Life Assurance



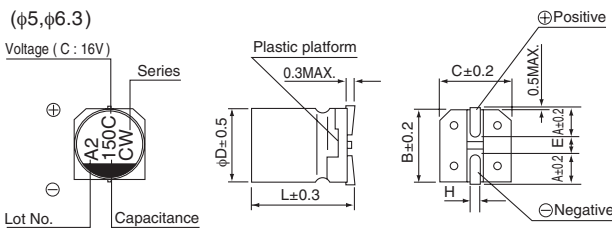
- Chip type with load life of 7000 hours at +105°C.
Low impedance temperature range up to +105°C.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 compliant. Please contact us for details.



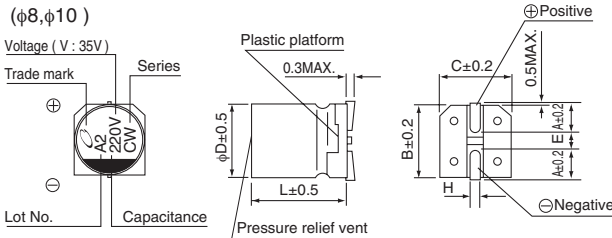
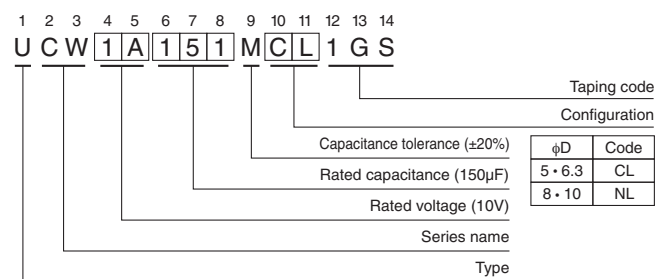
Specifications

| Item | Performance Characteristics | | | | | | | |
|-------------------------------|---|-----------------|--------------------|----|----|----|----|---|
| Category Temperature Range | -25 to +105°C | | | | | | | |
| Rated Voltage Range | 6.3 to 50V | | | | | | | |
| Rated Capacitance Range | 10 to 470μF | | | | | | | |
| 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) | 6.3 | 10 | 16 | 25 | 35 | 50 | |
| Stability at Low Temperature | Measurement frequency : 120Hz | | | | | | | |
| | Rated voltage (V) | 6.3 | 10 | 16 | 25 | 35 | 50 | |
| Endurance | Impedance ratio ZT / Z20 (MAX.) | Z-25°C / Z+20°C | 4 | 3 | 2 | 2 | 2 | |
| | The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 7000 hours at 105°C. | | Capacitance change | | | | | Within ±30% of the initial capacitance 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. | | tan δ | | | | | 300% or less than the initial specified value |
| | | | Leakage current | | | | | Less than or equal to the initial specified value |
| 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 |
| Marking | | | Leakage current | | | | | Less than or equal to the initial specified value |
| | Black print on the case top. | | | | | | | |

Chip Type



Type numbering system (Example : 10V 150μF)



(mm)

| φD × L | 5 × 7 | 6.3 × 7 | 6.3 × 8.7 | 8 × 10 | 10 × 10 |
|--------|------------|------------|------------|------------|------------|
| A | 2.1 | 2.4 | 2.4 | 2.9 | 3.2 |
| B | 5.3 | 6.6 | 6.6 | 8.3 | 10.3 |
| C | 5.3 | 6.6 | 6.6 | 8.3 | 10.3 |
| E | 1.3 | 2.2 | 2.2 | 3.1 | 4.5 |
| L | 7.0 | 7.0 | 8.7 | 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 |

Voltage

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

Frequency coefficient of rated ripple current

| | | | | | |
|-------------|-------|--------|--------|-------|----------------|
| Frequency | 50 Hz | 120 Hz | 300 Hz | 1 kHz | 10 kHz or more |
| Coefficient | 0.35 | 0.50 | 0.64 | 0.83 | 1.00 |

● Dimension table in next page.



■ Dimensions

| Rated Voltage (V) (code) | Rated Capacitance (μF) | Case Size φD×L (mm) | tan δ | Leakage Current (μA) (at 20°C after 2 minutes) | Impedance (Ω) MAX. (20°C/100kHz) | Rated Ripple (mArms) (105°C/100kHz) | Part Number |
|--------------------------|------------------------|---------------------|-------|--|----------------------------------|-------------------------------------|----------------|
| 6.3 (0J) | 47 | 5×7 | 0.32 | 3 | 2.20 | 95 | UCW0J470MCL1GS |
| | 100 | 6.3×7 | 0.32 | 6.3 | 1.10 | 140 | UCW0J101MCL1GS |
| | 220 | 6.3×8.7 | 0.32 | 13.86 | 1.00 | 230 | UCW0J221MCL1GS |
| | 330 | 6.3×8.7 | 0.32 | 20.79 | 1.00 | 230 | UCW0J331MCL1GS |
| | 470 | 8×10 | 0.32 | 29.61 | 0.22 | 600 | UCW0J471MNL1GS |
| 10 (1A) | 33 | 5×7 | 0.28 | 3.3 | 2.20 | 95 | UCW1A330MCL1GS |
| | 150 | 6.3×7 | 0.28 | 15 | 1.10 | 140 | UCW1A151MCL1GS |
| 16 (1C) | 22 | 5×7 | 0.26 | 3.52 | 2.20 | 95 | UCW1C220MCL1GS |
| | 47 | 6.3×7 | 0.26 | 7.52 | 1.10 | 140 | UCW1C470MCL1GS |
| | 100 | 6.3×7 | 0.26 | 16 | 1.10 | 140 | UCW1C101MCL1GS |
| | 150 | 6.3×8.7 | 0.26 | 24 | 1.00 | 230 | UCW1C151MCL1GS |
| | 220 | 6.3×8.7 | 0.26 | 35.2 | 1.00 | 230 | UCW1C221MCL1GS |
| | 330 | 8×10 | 0.26 | 52.8 | 0.22 | 600 | UCW1C331MNL1GS |
| | 470 | 8×10 | 0.26 | 75.2 | 0.22 | 600 | UCW1C471MNL1GS |
| 25 (1E) | 22 | 5×7 | 0.16 | 5.5 | 2.20 | 95 | UCW1E220MCL1GS |
| | 33 | 6.3×7 | 0.16 | 8.25 | 1.10 | 140 | UCW1E330MCL1GS |
| | 47 | 6.3×7 | 0.16 | 11.75 | 1.10 | 140 | UCW1E470MCL1GS |
| | 100 | 6.3×8.7 | 0.16 | 25 | 1.00 | 230 | UCW1E101MCL1GS |
| | 220 | 8×10 | 0.16 | 55 | 0.22 | 600 | UCW1E221MNL1GS |
| | 330 | 8×10 | 0.16 | 82.5 | 0.22 | 600 | UCW1E331MNL1GS |
| | 470 | 10×10 | 0.16 | 117.5 | 0.16 | 850 | UCW1E471MNL1GS |
| 35 (1V) | 10 | 5×7 | 0.14 | 3.5 | 2.20 | 95 | UCW1V100MCL1GS |
| | 22 | 5×7 | 0.14 | 7.7 | 2.20 | 95 | UCW1V220MCL1GS |
| | 33 | 6.3×8.7 | 0.14 | 11.55 | 1.00 | 230 | UCW1V330MCL1GS |
| | 47 | 6.3×8.7 | 0.14 | 16.45 | 1.00 | 230 | UCW1V470MCL1GS |
| | 220 | 8×10 | 0.14 | 77 | 0.22 | 600 | UCW1V221MNL1GS |
| | 330 | 10×10 | 0.14 | 115.5 | 0.16 | 850 | UCW1V331MNL1GS |
| 50 (1H) | 47 | 8×10 | 0.14 | 23.5 | 0.53 | 350 | UCW1H470MNL1GS |
| | 100 | 8×10 | 0.14 | 50 | 0.53 | 350 | UCW1H101MNL1GS |
| | 220 | 10×10 | 0.14 | 110 | 0.35 | 670 | UCW1H221MNL1GS |

- Taping specifications are given in page 20.
- Recommended land size, soldering by reflow are given in page 16, 17.
- Please refer to page 3 for the minimum order quantity.