

# UCW

Chip Type, Low Impedance,  
Long Life Assurance



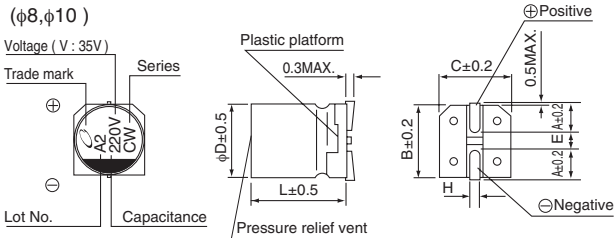
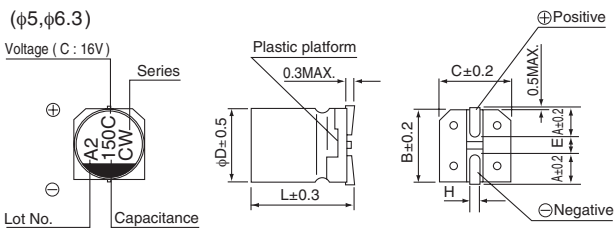
- Chip type with load life of 7000 hours at +105°C.  
Low impedance temperature range up to +105°C.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU).
- AEC-Q200 compliant. Please contact us for details.



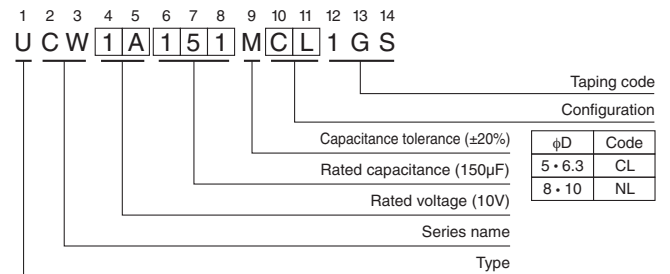
## Specifications

| 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                     | 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     |    |    |    |    |    |
| 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.               |   |    |    |    |    |    |
|                               | Leakage current   | Less than or equal to the initial specified value |    |    |    |    |    |
| Marking                       | 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  |

● Dimension table in next page.

## UCW

### ■ Dimensions

| Cap.<br>( $\mu$ F) | V<br>Code | 6.3       |      |     | 10      |     |     | 16        |      |     | 25        |      |     | 35        |      |     | 50                             |           |                 |
|--------------------|-----------|-----------|------|-----|---------|-----|-----|-----------|------|-----|-----------|------|-----|-----------|------|-----|--------------------------------|-----------|-----------------|
|                    |           | 0J        |      |     | 1A      |     |     | 1C        |      |     | 1E        |      |     | 1V        |      |     | 1H                             |           |                 |
| 10                 | 100       |           |      |     |         |     |     |           |      |     |           |      |     | 5 × 7     | 2.2  | 95  |                                |           |                 |
| 22                 | 220       |           |      |     |         |     |     | 5 × 7     | 2.2  | 95  | 5 × 7     | 2.2  | 95  | 5 × 7     | 2.2  | 95  |                                |           |                 |
| 33                 | 330       |           |      |     | 5 × 7   | 2.2 | 95  |           |      |     | 6.3 × 7   | 1.1  | 140 | 6.3 × 8.7 | 1.0  | 230 |                                |           |                 |
| 47                 | 470       | 5 × 7     | 2.2  | 95  |         |     |     | 6.3 × 7   | 1.1  | 140 | 6.3 × 7   | 1.1  | 140 | 6.3 × 8.7 | 1.0  | 230 | 8 × 10                         | 0.53      | 350             |
| 100                | 101       | 6.3 × 7   | 1.1  | 140 |         |     |     | 6.3 × 7   | 1.1  | 140 | 6.3 × 8.7 | 1.0  | 230 |           |      |     | 8 × 10                         | 0.53      | 350             |
| 150                | 151       |           |      |     | 6.3 × 7 | 1.1 | 140 | 6.3 × 8.7 | 1.0  | 230 |           |      |     |           |      |     |                                |           |                 |
| 220                | 221       | 6.3 × 8.7 | 1.0  | 230 |         |     |     | 6.3 × 8.7 | 1.0  | 230 | 8 × 10    | 0.22 | 600 | 8 × 10    | 0.22 | 600 | 10 × 10                        | 0.35      | 670             |
| 330                | 331       | 6.3 × 8.7 | 1.0  | 230 |         |     |     | 8 × 10    | 0.22 | 600 | 8 × 10    | 0.22 | 600 | 10 × 10   | 0.16 | 850 | Case size<br>$\phi$ D × L (mm) | Impedance | Rated<br>ripple |
| 470                | 471       | 8 × 10    | 0.22 | 600 |         |     |     | 8 × 10    | 0.22 | 600 | 10 × 10   | 0.16 | 850 |           |      |     |                                |           |                 |

Max. impedance ( $\Omega$ ) at 20°C 100kHz,  
Rated ripple current (mA rms) at 105°C 100kHz

### ● 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           |

- 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.