

# ALUMINUM ELECTROLYTIC CAPACITORS

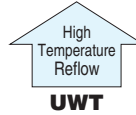
# UWZ

Chip Type, Wide Temperature Range  
High Temperature (260°C) Reflow



- Corresponding with 260°C peak reflow soldering  
Recommended reflow condition : 260°C peak 5 sec 230°C over 60 sec 2 times  
(φ8 × 6.2, φ10 × 10 : 1 time)
- Chip type operating over wide temperature range of to -55 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.

**UWZ**

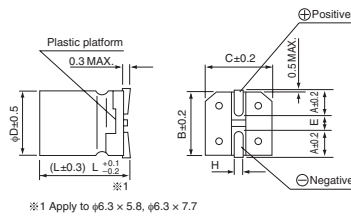
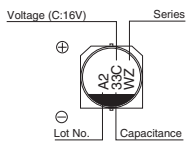


## Specifications

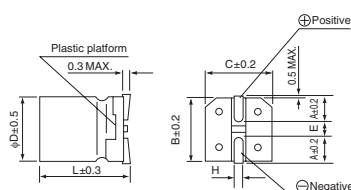
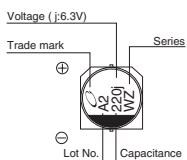
| Item                          | Performance Characteristics   |                 |                    |  |      |      |      |
|-------------------------------|---|-----------------|--------------------|--|------|------|------|
| Category Temperature Range    | -55 to +105°C   |                 |                    |  |      |      |      |
| Rated Voltage Range           | 6.3 to 50V  |                 |                    |  |      |      |      |
| Rated Capacitance Range       | 1 to 1500μF   |                 |                    |  |      |      |      |
| 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 0.01CV 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   |
|                               | tan δ (MAX.)  | 0.30            | 0.24               | 0.20   | 0.16 | 0.14 | 0.14 |
| Stability at Low Temperature  | Measurement frequency : 120Hz   |                 |                    |  |      |      |      |
|                               | Rated voltage (V)   | 6.3             | 10                 | 16   | 25   | 35   | 50   |
|                               | Impedance ratio   | Z-25°C / Z+20°C | 4                  | 3  | 2    | 2    | 2    |
|                               | ZT / Z20 (MAX.)   | Z-40°C / Z+20°C | 8                  | 8  | 4    | 4    | 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 ±25% of the initial capacitance value for capacitors of 16V or less.<br>Within ±20% of the initial capacitance value for capacitors of 25V or more. |      |      |      |
|                               |   |                 | tan δ              | 200% or less than 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. |                 | 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                       | Black print on the case top.  |                 | Leakage current    | Less than or equal to the initial specified value  |      |      |      |
|                               |   |                 |                    |  |      |      |      |

## Chip Type

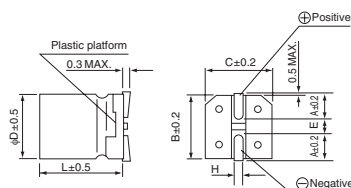
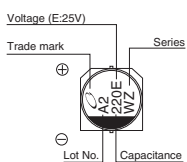
(φ4 to φ6.3)



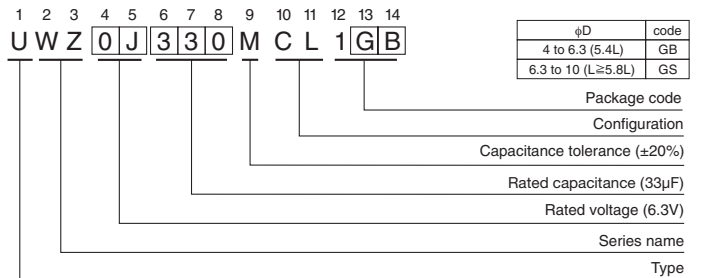
(φ8 × 6.2)



(φ8 × 10, φ10 × 10)



## Type numbering system (Example : 6.3V 33μF)



|        | (mm)       |            |            |            |            |            |            |            |
|--------|------------|------------|------------|------------|------------|------------|------------|------------|
| φD × L | 4 × 5.4    | 5 × 5.4    | 6.3 × 5.4  | 6.3 × 5.8  | 6.3 × 7.7  | 8 × 6.2    | 8 × 10     | 10 × 10    |
| A      | 1.8        | 2.1        | 2.4        | 2.4        | 2.4        | 3.3        | 2.9        | 3.2        |
| B      | 4.3        | 5.3        | 6.6        | 6.6        | 6.6        | 8.3        | 8.3        | 10.3       |
| C      | 4.3        | 5.3        | 6.6        | 6.6        | 6.6        | 8.3        | 8.3        | 10.3       |
| E      | 1.0        | 1.3        | 2.2        | 2.2        | 2.2        | 2.3        | 3.1        | 4.5        |
| L      | 5.4        | 5.4        | 5.4        | 5.8        | 7.7        | 6.2        | 10         | 10         |
| H      | 0.5 to 0.8 | 0.5 to 0.8 | 0.5 to 0.8 | 0.5 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       | Code |
| 6.3     | j    |
| 10      | A    |
| 16      | C    |
| 25      | E    |
| 35      | V    |
| 50      | H    |

● Dimension table in next page.



## ■ Dimensions

| Cap. (μF) | Code | V         |     | 6.3       |     | 10        |     | 16        |     | 25        |     | 35        |     | 50                        |                 |
|-----------|------|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|---------------------------|-----------------|
|           |      | 0J        |     | 1A        |     | 1C        |     | 1E        |     | 1V        |     | 1H        |     |                           |                 |
| 1         | 010  |           |     |           |     |           |     |           |     |           |     |           |     | 4 × 5.4                   | 6.3             |
| 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   | 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  | 6.3 × 7.7 | 60  |                           |                 |
| 47        | 470  | 5 × 5.4   | 36  | 6.3 × 5.4 | 46  | 6.3 × 5.4 | 50  | 8 × 6.2   | 66  | 6.3 × 5.8 | 63  | 6.3 × 7.7 | 63  |                           |                 |
| 100       | 101  | 6.3 × 5.4 | 60  | 6.3 × 5.4 | 60  | 6.3 × 5.4 | 60  | 6.3 × 7.7 | 91  | 6.3 × 7.7 | 84  | 8 × 10    | 140 |                           |                 |
| 150       | 151  | 6.3 × 5.8 | 86  | 6.3 × 5.8 | 86  | 6.3 × 7.7 | 95  | 8 × 10    | 140 | 8 × 10    | 155 | 10 × 10   | 180 |                           |                 |
| 220       | 221  | 8 × 6.2   | 102 | 6.3 × 7.7 | 105 | 6.3 × 7.7 | 105 | 8 × 10    | 155 | 10 × 10   | 190 | 10 × 10   | 220 |                           |                 |
| 330       | 331  | 6.3 × 7.7 | 105 | 8 × 10    | 195 | 8 × 10    | 195 | 10 × 10   | 190 | 10 × 10   | 300 |           |     |                           |                 |
| 470       | 471  | 8 × 10    | 210 | 8 × 10    | 210 | 8 × 10    | 210 | 10 × 10   | 300 |           |     |           |     |                           |                 |
| 680       | 681  | 8 × 10    | 210 | 10 × 10   | 310 | 10 × 10   | 310 |           |     |           |     |           |     |                           |                 |
| 1000      | 102  | 10 × 10   | 230 | 10 × 10   | 310 |           |     |           |     |           |     |           |     |                           |                 |
| 1500      | 152  | 10 × 10   | 310 |           |     |           |     |           |     |           |     |           |     | Case size<br>φ D × L (mm) | Rated<br>ripple |

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

## ● 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.