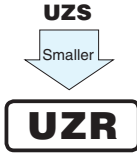


# ALUMINUM ELECTROLYTIC CAPACITORS

## UZR 3.95mmL MAX. Chip Type

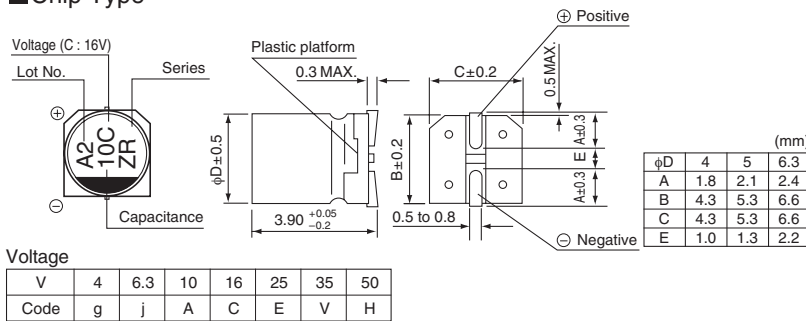


- Chip type with 3.95mmLMAX height.
- Designed for surface mounting on high density PC board.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU).

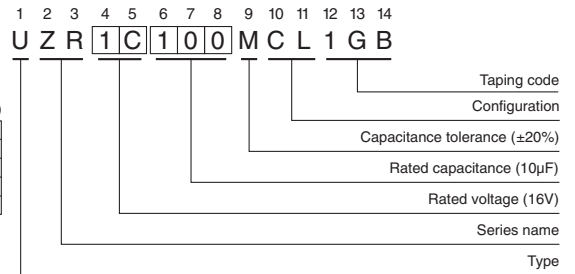
### Specifications

| Item                          | Performance Characteristics  |   |      |      |      |      |      |      |            |  |  |
|-------------------------------|--|---|------|------|------|------|------|------|------------|--|--|
| Category Temperature Range    | -40 to +85°C   |   |      |      |      |      |      |      |            |  |  |
| Rated Voltage Range           | 4 to 50V   |   |      |      |      |      |      |      |            |  |  |
| Rated Capacitance Range       | 1 to 220μF   |   |      |      |      |      |      |      |            |  |  |
| 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) | Rated voltage (V)  | 4   | 6.3  | 10   | 16   | 25   | 35   | 50   | 120Hz 20°C |  |  |
|                               | tan δ (MAX.)   | 0.50  | 0.30 | 0.24 | 0.19 | 0.16 | 0.14 | 0.14 |            |  |  |
| Stability at Low Temperature  | Rated voltage (V)  | 4   | 6.3  | 10   | 16   | 25   | 35   | 50   | 120Hz      |  |  |
|                               | Impedance ratio<br>ZT / Z20 (MAX.)   | Z-25°C / Z+20°C                                   | 7    | 4    | 3    | 2    | 2    | 2    | 2          |  |  |
|                               |  | Z-40°C / Z+20°C                                   | 15   | 8    | 8    | 4    | 4    | 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 1000 hours at 85°C.  |   |      |      |      |      |      |      |            |  |  |
|                               | Capacitance change   | Within ±30% of the initial capacitance value      |      |      |      |      |      |      |            |  |  |
|                               | tan δ  | 300% or less than 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. |   |      |      |      |      |      |      |            |  |  |
|                               | Capacitance change   | Within ±10% of the initial capacitance value      |      |      |      |      |      |      |            |  |  |
|                               | tan δ  | 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.              |   |      |      |      |      |      |      |            |  |  |
|                               | Leakage current  | Less than or equal to the initial specified value |      |      |      |      |      |      |            |  |  |
|                               | Marking  | Black print on the case top.                      |      |      |      |      |      |      |            |  |  |

### Chip Type



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



### Dimensions

| Cap. (μF) | Code | V    |    | 4   |    | 6.3 |    | 10  |    | 16  |    | 25  |    | 35 |   | 50 |     |
|-----------|------|------|----|-----|----|-----|----|-----|----|-----|----|-----|----|----|---|----|-----|
|           |      | Code | OG | OJ  | 1A | 1C  | 1E | 1V  | 1H |     |    |     |    |    |   |    |     |
| 1         | 010  |      |    |     |    |     |    |     |    |     |    |     |    |    |   | 4  | 8.4 |
| 2.2       | 2R2  |      |    |     |    |     |    |     |    |     |    |     |    |    |   | 4  | 13  |
| 3.3       | 3R3  |      |    |     |    |     |    |     |    |     |    |     |    |    |   | 4  | 17  |
| 4.7       | 4R7  |      |    |     |    |     |    |     |    |     |    |     |    |    |   | 5  | 20  |
| 10        | 100  |      |    |     |    |     |    |     | 4  | 23  | 4  | 16  | 4  | 18 | 5 | 20 |     |
| 22        | 220  |      |    | 4   | 28 | 5   | 33 | 5   | 37 | 6.3 | 42 | 6.3 | 46 |    |   |    |     |
| 33        | 330  | 4    | 28 | 5   | 37 | 5   | 41 | 6.3 | 49 | 6.3 | 52 |     |    |    |   |    |     |
| 47        | 470  | 4    | 33 | 5   | 45 | 6.3 | 52 | 6.3 | 58 |     |    |     |    |    |   |    |     |
| 100       | 101  | 5    | 56 | 6.3 | 70 |     |    |     |    |     |    |     |    |    |   |    |     |
| 220       | 221  | 6.3  | 96 |     |    |     |    |     |    |     |    |     |    |    |   |    |     |

Rated ripple current (mArms) at 85°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.