

UUP

6mmL Chip Type, Bi-Polarized



For SMD

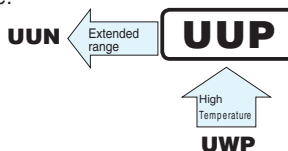


Bi-polarized



Anti-Solvent Feature

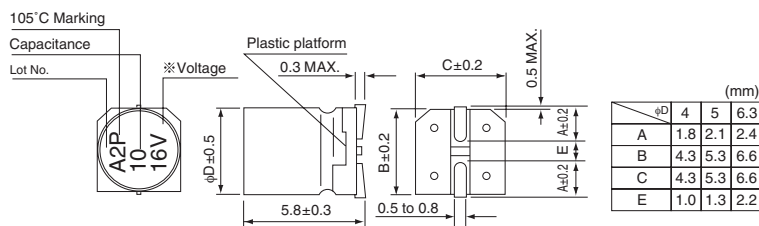
- Chip type, bi-polarized withstanding high temperature range up to +105°C.
- Designed for surface mounting on high density PC board.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU, (EU)2015/863).
- AEC-Q200 compliant. Please contact us for details.



## Specifications

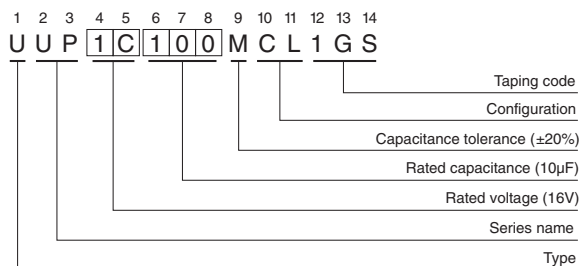
| Item                          | Performance Characteristics                                                                                                                                                                                                             |                 |      |      |                    |      |                                                   |    |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|------|------|--------------------|------|---------------------------------------------------|----|
| Category Temperature Range    | -55 to +105°C                                                                                                                                                                                                                           |                 |      |      |                    |      |                                                   |    |
| Rated Voltage Range           | 6.3 to 50V                                                                                                                                                                                                                              |                 |      |      |                    |      |                                                   |    |
| Rated Capacitance Range       | 0.1 to 47μF                                                                                                                                                                                                                             |                 |      |      |                    |      |                                                   |    |
| 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 0.05 CV or 10 (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.)                                                                                                                                                                                                                            | 0.24            | 0.20 | 0.17 | 0.17               | 0.15 | 0.15                                              |    |
| Stability at Low Temperature  | Measurement frequency : 120Hz                                                                                                                                                                                                           |                 |      |      |                    |      |                                                   |    |
|                               | Rated voltage (V)                                                                                                                                                                                                                       |                 | 6.3  | 10   | 16                 | 25   | 35                                                | 50 |
|                               | Impedance ratio<br>ZT / Z20 (MAX.)                                                                                                                                                                                                      | Z-25°C / Z+20°C | 4    | 3    | 2                  | 2    | 2                                                 | 2  |
|                               |                                                                                                                                                                                                                                         | Z-40°C / Z+20°C | 8    | 6    | 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 105°C with the polarity every 250 hours.                                                  |                 |      |      | 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 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. |                 |      |      |                    |      |                                                   |    |
| 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.                                                                                                                                                                                                            |                 |      |      |                    |      |                                                   |    |

## Chip Type



※ Voltage mark for 6.3V is 「6V」

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



## Dimensions

| V         |      | 6.3    | 10     | 16     | 25     | 35     | 50     |
|-----------|------|--------|--------|--------|--------|--------|--------|
| Cap. (μF) | Code | 0J     | 1A     | 1C     | 1E     | 1V     | 1H     |
| 0.1       | 0R1  |        |        |        |        |        | 4 1.0  |
| 0.22      | R22  |        |        |        |        |        | 4 2.0  |
| 0.33      | R33  |        |        |        |        |        | 4 2.8  |
| 0.47      | R47  |        |        |        |        |        | 4 4.0  |
| 1         | 010  |        |        |        |        |        | 4 8.4  |
| 2.2       | 2R2  |        |        |        |        | 4 8.4  | 5 13   |
| 3.3       | 3R3  |        |        |        | 5 12   | 5 16   | 5 17   |
| 4.7       | 4R7  |        |        | 4 12   | 5 16   | 5 18   | 6.3 20 |
| 10        | 100  |        | 4 17   | 5 23   | 6.3 27 | 6.3 29 |        |
| 22        | 220  | 5 28   | 6.3 33 | 6.3 37 |        |        |        |
| 33        | 330  | 6.3 37 | 6.3 41 | 6.3 49 |        |        |        |
| 47        | 470  | 6.3 45 |        |        |        |        |        |

Rated ripple current (mA rms) 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 select UUN(p.178) if high CV products are required.
- Please refer to page 3 for the minimum order quantity.