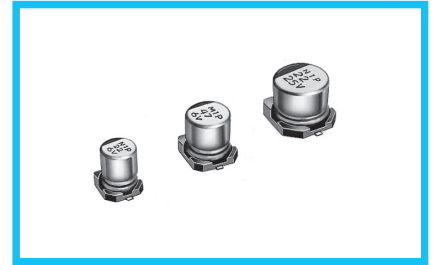
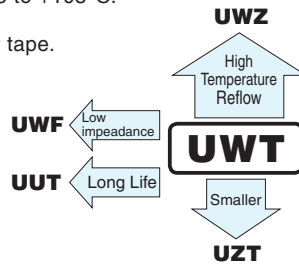


## UWT Chip Type, Wide Temperature Range



- Chip type operating over wide temperature range of to  $-55$  to  $+105^{\circ}\text{C}$ .
- 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).

Values marked with an ※ in the dimension table are scheduled to be discontinued and are not recommended for new designs.

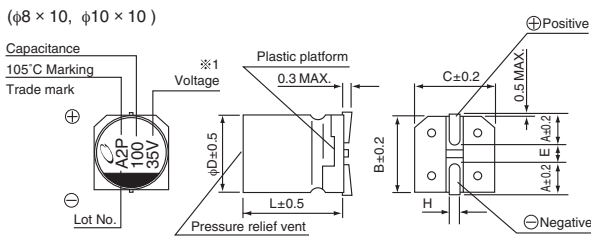
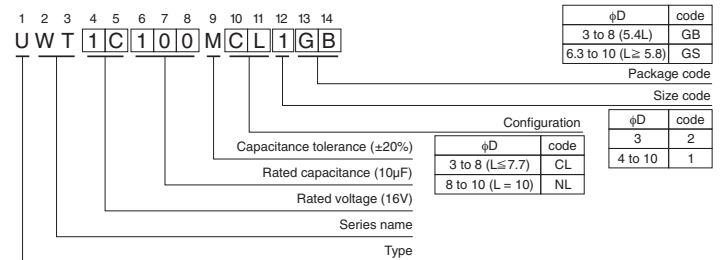
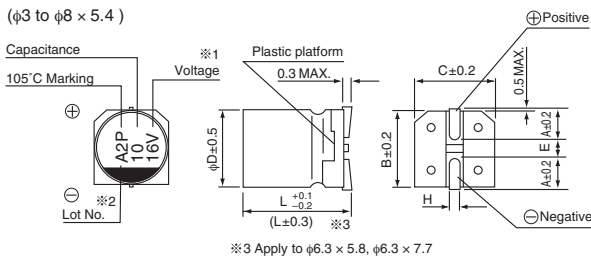


### Specifications

| Item                                  | Performance Characteristics  |   |
|---------------------------------------|--|---|
| Category Temperature Range            | $-55$ to $+105^{\circ}\text{C}$  |   |
| Rated Voltage Range                   | 4 to 50V   |   |
| Rated Capacitance Range               | 0.1 to 1500 $\mu\text{F}$  |   |
| Capacitance Tolerance                 | $\pm 20\%$ at 120Hz, $20^{\circ}\text{C}$  |   |
| Leakage Current                       | After 2 minutes' application of rated voltage, leakage current is not more than 0.01CV or 3 ( $\mu\text{A}$ ), whichever is greater.   |   |
| Tangent of loss angle (tan $\delta$ ) | Measurement frequency : 120Hz at $20^{\circ}\text{C}$  |   |
|                                       | Rated voltage (V)  | 4    6.3    10    16    25    35    50  |
| Stability at Low Temperature          | Measurement frequency : 120Hz  |   |
|                                       | Impedance ratio  | Z $-25^{\circ}\text{C}$ / Z $+20^{\circ}\text{C}$ 7    4    3    2    2    2    2   |
|                                       | ZT / Z20 (MAX.)  | Z $-40^{\circ}\text{C}$ / Z $+20^{\circ}\text{C}$ 15    8    8    4    4    3    3  |
| Endurance                             | The specifications listed at right shall be met when the capacitors are restored to $20^{\circ}\text{C}$ after the rated voltage is applied for 1000 hours at $105^{\circ}\text{C}$ .  |   |
|                                       | Capacitance change   | Within $\pm 25\%$ of the initial capacitance value for capacitors of $\phi 3\text{mm}$ unit, and 16V or less. Within $\pm 20\%$ of the initial capacitance value for capacitors of 25V or more. |
|                                       | tan $\delta$   | 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 $105^{\circ}\text{C}$ for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at $20^{\circ}\text{C}$ , 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 $250^{\circ}\text{C}$ . The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to $20^{\circ}\text{C}$ .              |   |
|                                       | Capacitance change   | Within $\pm 10\%$ of the initial capacitance value  |
|                                       | 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 10 $\mu\text{F}$ )



| $\phi D \times L$ | (mm)       |            |            |            |            |            |            |            |            |
|-------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|                   | 3 × 5.4    | 4 × 5.4    | 5 × 5.4    | 6.3 × 5.4  | 6.3 × 5.8  | 6.3 × 7.7  | 8 × 5.4    | 8 × 10     | 10 × 10    |
| A                 | 1.5        | 1.8        | 2.1        | 2.4        | 2.4        | 2.4        | 3.3        | 2.9        | 3.2        |
| B                 | 3.3        | 4.3        | 5.3        | 6.6        | 6.6        | 6.6        | 8.3        | 8.3        | 10.3       |
| C                 | 3.3        | 4.3        | 5.3        | 6.6        | 6.6        | 6.6        | 8.3        | 8.3        | 10.3       |
| E                 | 0.8        | 1.0        | 1.3        | 2.2        | 2.2        | 2.2        | 2.3        | 3.1        | 4.5        |
| L                 | 5.4        | 5.4        | 5.4        | 5.4        | 5.8        | 7.7        | 5.4        | 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 | 0.5 to 0.8 | 0.8 to 1.1 | 0.8 to 1.1 |

● Dimension table in next page.

