

ALUMINUM ELECTROLYTIC CAPACITORS

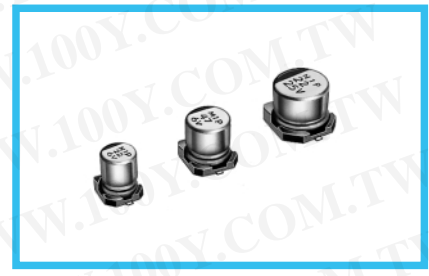
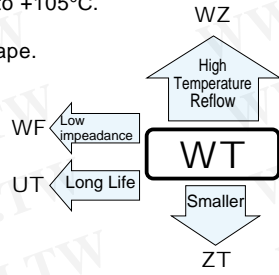


WT series Chip Type, Wide Temperature Range



- Chip type operating over wide temperature range of to -55 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 (2002/95/EC).

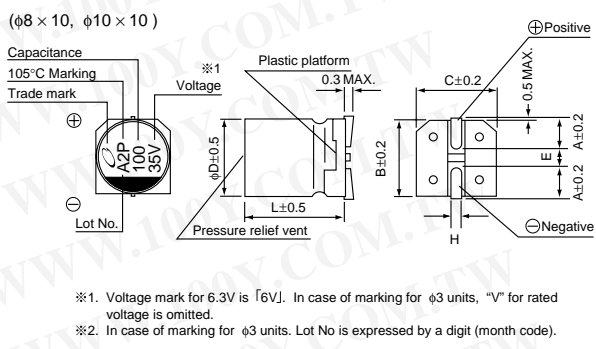
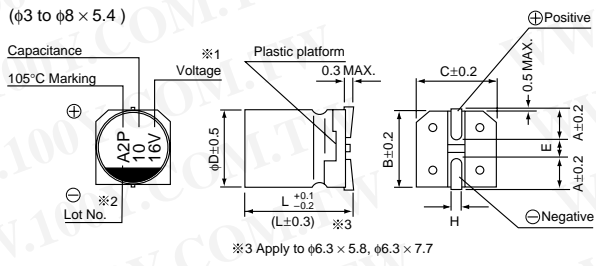
勝特力材料 886-3-5753170
 胜特力电子(上海) 86-21-34970699
 胜特力电子(深圳) 86-755-83298787
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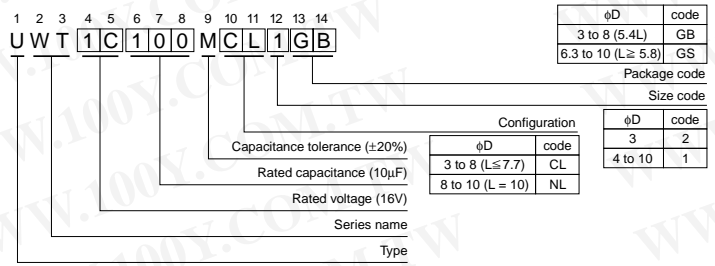
Specifications

| Item | Performance Characteristics | | | | | | | | |
|-------------------------------|---|-----------------|--------------------|----|--|----|----|----|---|
| Category Temperature Range | -55 to +105°C | | | | | | | | |
| Rated Voltage Range | 4 to 50V | | | | | | | | |
| Rated Capacitance Range | 0.1 to 1500μF | | | | | | | | |
| Capacitance Tolerance | ±20% at 120Hz, 20°C | | | | | | | | |
| Leakage Current | After 2 minutes' application of rated voltage, leakage current is not more than 0.01CV or 3 (μA), whichever is greater. | | | | | | | | |
| Tangent of loss angle (tan δ) | Measurement frequency : 120Hz, Temperature : 20°C | | | | | | | | |
| | Rated voltage (V) | 4 | 6.3 | 10 | 16 | 25 | 35 | 50 | |
| Stability at Low Temperature | Measurement frequency : 120Hz | | | | | | | | |
| | Impedance ratio | Z-25°C / Z+20°C | 7 | 4 | 3 | 2 | 2 | 2 | 2 |
| | | ZT / Z20 (MAX.) | Z-40°C / Z+20°C | 15 | 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 φ3mm unit, and 16V or less. Within ±20% of the initial capacitance value for capacitors of 25V or more. | | | | |
| | | | 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



Type numbering system (Example : 16V 10μF)



| φD × L | 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.

■ Dimensions

| Cap. (μF) | V | 4 | | 6.3 | | 10 | | 16 | | 25 | | 35 | | 50 | |
|-----------|-----|-----------|----------|-----------|----------|-----------|-----|-------------|---------|-----------|---------|-----------|---------|---------------------------|-----------------|
| | | Code | OG | OJ | 1A | 1C | 1E | 1V | 1H | | | | | | |
| 0.1 | OR1 | | | | | | | | | | | | | 4 × 5.4 (3) | 1.0 |
| 0.22 | R22 | | | | | | | | | | | | | 4 × 5.4 (3) | 2.6 |
| 0.33 | R33 | | | | | | | | | | | | | 4 × 5.4 (3) | 3.2 |
| 0.47 | R47 | | | | | | | | | | | | | 4 × 5.4 (3) | 3.8 |
| 1 | 010 | | | | | | | | | | | | | 4 × 5.4 (3) | 6.3 (5.9) |
| 2.2 | 2R2 | | | | | | | | | | | 3 × 5.4 | 7.5 | 4 × 5.4 (3) | 11 (9) |
| 3.3 | 3R3 | | | | | | | | | | | 3 × 5.4 | 9 | 4 × 5.4 | 14 |
| 4.7 | 4R7 | | | | | | | | | | | 4 × 5.4 | 15 | 5 × 5.4 | 19 |
| 10 | 100 | | | | | | | 4 × 5.4 (3) | 18 (14) | 5 × 5.4 | 23 | 5 × 5.4 | 25 | 6.3 × 5.4 | 30 |
| 22 | 220 | 4 × 5.4 | 22 | 4 × 5.4 | 22 | 5 × 5.4 | 27 | 5 × 5.4 | 30 | 6.3 × 5.4 | 38 | 6.3 × 5.4 | 42 | • 8 × 5.4 | 51 (45) |
| 33 | 330 | 5 × 5.4 | 30 | 5 × 5.4 | 30 | 5 × 5.4 | 35 | 6.3 × 5.4 | 40 | 6.3 × 5.4 | 48 | • 8 × 5.4 | 59 (52) | 6.3 × 7.7 | 60 |
| 47 | 470 | 5 × 5.4 | 36 | 5 × 5.4 | 36 | 6.3 × 5.4 | 46 | 6.3 × 5.4 | 50 | • 8 × 5.4 | 66 (59) | 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 × 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 × 5.8 | 86 | 6.3 × 7.7 | 95 | 8 × 10 | 140 | 8 × 10 | 155 | 10 × 10 | 180 |
| 220 | 221 | • 8 × 5.4 | 102 (91) | • 8 × 5.4 | 102 (91) | 6.3 × 7.7 | 105 | 6.3 × 7.7 | 105 | 8 × 10 | 155 | 8 × 10 | 190 | 10 × 10 | 220 |
| 330 | 331 | 6.3 × 7.7 | 105 | 6.3 × 7.7 | 105 | 8 × 10 | 195 | 8 × 10 | 195 | 8 × 10 | 190 | 10 × 10 | 300 | | |
| 470 | 471 | 8 × 10 | 210 | 8 × 10 | 210 | 8 × 10 | 210 | 8 × 10 | 230 | 10 × 10 | 300 | | | | |
| 680 | 681 | 8 × 10 | 210 | 8 × 10 | 210 | 10 × 10 | 310 | 10 × 10 | 310 | | | | | | |
| 1000 | 102 | 8 × 10 | 230 | 8 × 10 | 230 | 10 × 10 | 310 | | | | | | | | |
| 1500 | 152 | 10 × 10 | 310 | 10 × 10 | 310 | | | | | | | | | Case size φ D × L (mm) | Rated ripple |

Rated ripple current (mA_{rms}) at 105°C 120Hz

() is also available with φ3mm upon request. In such a case, [2] will be put at 12th digit of type numbering system.

Size φ6.3 × 5.8 is available for capacitors marked. " • " In such a case, [6] will be put at 12th digit of type numbering system.

● 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 UX(p.108), UJ(p.112) series if high C/V products are required.
- Please refer to page 3 for the minimum order quantity.

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