nichicon

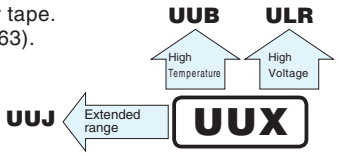
# UUX

Chip Type, Wide Temperature Range

For SMD

Anti-Solvent Feature (Through 100V only)

- 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 (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 (6.3 to 100V), −40 to +105°C (160 to 400V) |
| Rated Voltage Range | 6.3 to 400V |
| Rated Capacitance Range | 1 to 1000μF |
| Capacitance Tolerance | ±20% at 120Hz, 20°C |
| Leakage Current | Rated voltage (V): 6.3 to 100 / 160 to 400<br>Leakage Current: After 1 minute's application of rated voltage at 20°C, leakage current is not more than 0.03CV (μA). / I = 0.04CV+100 (μA) max.(1 minute's at 20°C) |
| Tangent of loss angle (tan δ) | Measurement frequency : 120Hz at 20°C |

| Rated voltage (V) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | 160 | 200 | 250 | 400 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| tan δ (MAX.) | 0.22 | 0.19 | 0.16 | 0.14 | 0.12 | 0.10 | 0.10 | 0.08 | 0.20 | 0.20 | 0.20 | 0.25 |

Stability at Low Temperature — Measurement frequency: 120Hz

| Rated voltage (V) | | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | 160 | 200 | 250 | 400 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Impedance ratio ZT / Z20 (MAX.) | Z−55°C / Z+20°C | 4 | 4 | 3 | 3 | 3 | 2 | 3 | 4 | — | — | — | — |
| | Z−40°C / Z+20°C | — | — | — | — | — | — | — | — | 6 | 6 | 6 | 10 |

Endurance — The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 2000 hours (160 to 400V : 3000hours) at 105°C.

| | |
|---|---|
| Capacitance change | Within ±20% of the initial capacitance value |
| tan δ | 200% or less than the intial 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.

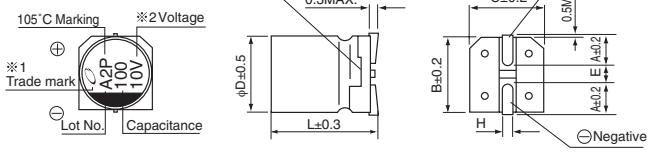
Resistance to soldering heat — The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C.

| | |
|---|---|
| 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

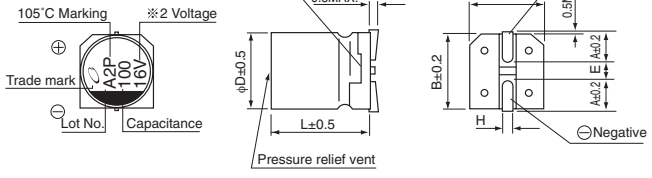
(φ6.3, φ8 × 6.2)




※1 Size φ8×6.2 only

※2 Voltage mark for 6.3V is「6V」.

(φ8 × 10, φ10)




● Dimension table in next page.

## Type numbering system (Example : 10V 100μF)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| U | U | X | 1 | A | 1 | 0 | 1 | M | C | L | 1 | G | S |

- 1 2 3: Type
- 4 5: Rated voltage (10V)
- 6 7 8: Rated capacitance (100μF)
- 9: Capacitance tolerance (±20%)
- 10 11: Configuration
- 12: Size code
- 13 14: Package code

| D × L | Code |
|---|---|
| 6.3 × 7.7 | CL |
| 8 × 6.2 | CL |
| 8 × 10 | NL |
| 10 × 10 | NL |

(mm)

| φD × L | 6.3 × 7.7 | 8 × 6.2 | 8 × 10 | 10 × 10 |
|---|---|---|---|---|
| A | 2.4 | 3.3 | 2.9 | 3.2 |
| B | 6.6 | 8.3 | 8.3 | 10.3 |
| C | 6.6 | 8.3 | 8.3 | 10.3 |
| E | 2.2 | 2.3 | 3.1 | 4.5 |
| L | 7.7 | 6.2 | 10 | 10 |
| H | 0.5 to 0.8 | 0.5 to 0.8 | 0.8 to 1.1 | 0.8 to 1.1 |

# UUX

## ■Dimensions

| Cap. (μF) \ V | 6.3 | | 10 | | 16 | | 25 | | 35 | | 50 | | 63 | | 100 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Code | 0J | | 1A | | 1C | | 1E | | 1V | | 1H | | 1J | | 2A | |
| **4.7** | 4R7 | | | | | | | | | | | | | | 8×6.2 | 42 |
| **10** | 100 | | | | | | | | | | | | 8×6.2 | 51 | 8×10 | 75 |
| **22** | 220 | | | | | | | | | | ○ 8×6.2 | 67(64) | 8×10 | 108 | ■10×10 | 150(121) |
| **33** | 330 | | | | | | | | ○ 8×6.2 | 76(75) | 8×10 | 133 | ■10×10 | 185(179) | 10×10 | 180 |
| **47** | 470 | | | | | | ○ 8×6.2 | 79(78) | 8×10 | 124 | ■10×10 | 180(167) | 10×10 | 220 | 10×10 | 230 |
| **100** | 101 | | | 8×6.2 | 90 | ○ 8×10 | 148(111) | 8×10 | 181 | ■ 10×10 | 304(283) | 10×10 | 310 | 10×10 | 320 | | |
| **220** | 221 | ○ 8×10 | 161(121) | 8×10 | 173 | ■ 10×10 | 330(307) | ■10×10 | 351(283) | 10×10 | 450 | | | | | | |
| **330** | 331 | 8×10 | 288 | ■10×10 | 318(296) | ■ 10×10 | 441(410) | 10×10 | 372 | | | | | | | | |
| **470** | 471 | ■ 10×10 | 340(316) | ■10×10 | 351(326) | 10×10 | 489 | | | | | | | | | | |
| **680** | 681 | 10×10 | 408 | 10×10 | 392 | | | | | | | | | | Case size φD × L (mm) | Rated ripple |
| **1000** | 102 | 10×10 | 495 | | | | | | | | | | | | | |

| Cap. (μF) \ V | 160 | | 200 | | 250 | | 400 | |
|---|---|---|---|---|---|---|---|---|
| Code | 2C | | 2D | | 2E | | 2G | |
| **1** | 010 | | | | | | 8×10 | 25 |
| **1.8** | 1R8 | | | | | | 8×10 | 26 |
| **2.2** | 2R2 | | | | | | 8×10 | 27 |
| **3.3** | 3R3 | | 8×10 | 31 | 8×10 | 31 | 10×10 | 38 |
| **3.9** | 3R9 | | 8×10 | 34 | 8×10 | 34 | 10×10 | 39 |
| **4.7** | 4R7 | | 8×10 | 37 | 8×10 | 37 | 10×10 | 40 |
| **6.8** | 6R8 | | 8×10 | 44 | 8×10 | 44 | | |
| **10** | 100 | 8×10 | 57 | 10×10 | 64 | 10×10 | 64 | | |
| **18** | 180 | 10×10 | 64 | | | | | | |

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

Size φ6.3 × 7.7 is available for capacitors marked. "○" / Size φ8 × 10 is available for capacitors marked. "■"
※ In this case, 6 will be put at 12th digit of type numbering system.

## ● Frequency coefficient of rated ripple current

| Cap.(μF) \ Frequency | 50 Hz | 120 Hz | 300 Hz | 1 kHz | 10 kHz or more |
|---|---|---|---|---|---|
| 1 to 47 | 0.80 | 1.00 | 1.15 | 1.40 | 1.67 |
| 100 to 1000 | 0.85 | 1.00 | 1.08 | 1.20 | 1.30 |

- Taping specifications are given in page 23.
- Recommended land size, soldering by reflow are given in page 18, 19.
- Please select UUJ(p.176) if high C/V products are reqired.
- Please refer to page 3 for the minimum order quantity.

Стандарт Электрон Связь

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