

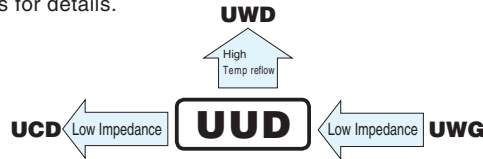
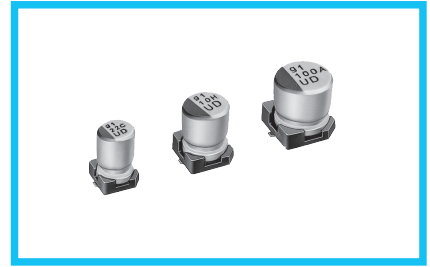
ALUMINUM ELECTROLYTIC CAPACITORS

UUD

Chip Type, Low Impedance



- Chip type, low impedance 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 Qualified. Please contact us for details.



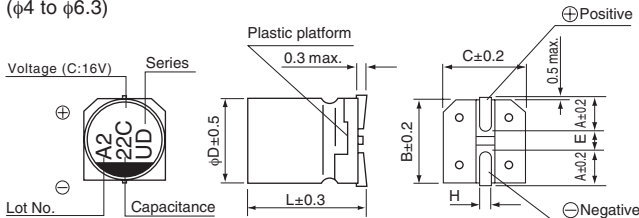
Specifications

| Item | Performance Characteristics | | | | | | |
|-------------------------------|---|---|----|----|----|----|----|
| Category Temperature Range | -55 to +105°C | | | | | | |
| Rated Voltage Range | 6.3 to 50V | | | | | | |
| Rated Capacitance Range | 1 to 1500μF | | | | | | |
| 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) | Measurement frequency : 120Hz at 20°C | | | | | | |
| | Rated voltage (V) | 6.3 | 10 | 16 | 25 | 35 | 50 |
| Stability at Low Temperature | Measurement frequency : 120Hz | | | | | | |
| | Impedance ratio | Z(-25°C) / Z(+20°C) | 3 | 2 | 2 | 2 | 2 |
| Endurance | The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 5000 hours (2000 hours for φD = 4, 5 and 6.3) at 105°C. | | | | | | |
| | Capacitance change | Within ±30% of the initial capacitance 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. | | | | | | |
| | tan δ | 200% or less than 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. | | | | | | |

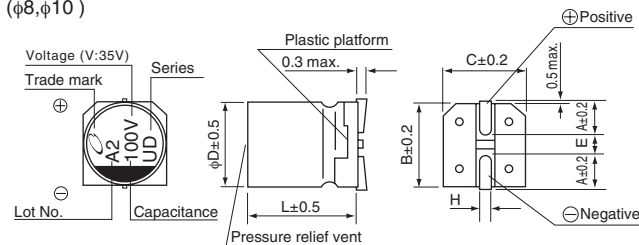
※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

Chip Type

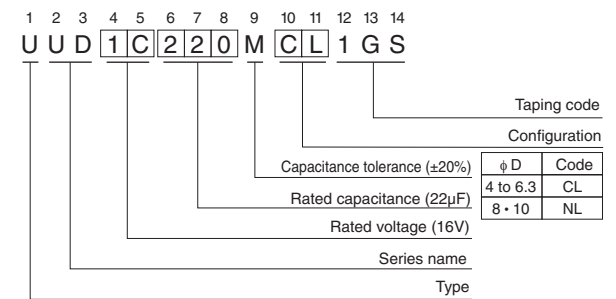
(φ4 to φ6.3)



(φ8, φ10)



Type numbering system (Example : 16V 22μF)



| φD × L | 4 × 5.8 | 5 × 5.8 | 6.3 × 5.8 | 6.3 × 7.7 | 8 × 10 | 10 × 10 |
|--------|------------|------------|------------|------------|------------|------------|
| A | 1.8 | 2.1 | 2.4 | 2.4 | 2.9 | 3.2 |
| B | 4.3 | 5.3 | 6.6 | 6.6 | 8.3 | 10.3 |
| C | 4.3 | 5.3 | 6.6 | 6.6 | 8.3 | 10.3 |
| E | 1.0 | 1.3 | 2.2 | 2.2 | 3.1 | 4.5 |
| L | 5.8 | 5.8 | 5.8 | 7.7 | 10 | 10 |
| H | 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 |

Voltage

| | | | | | | |
|------|-----|----|----|----|----|----|
| V | 6.3 | 10 | 16 | 25 | 35 | 50 |
| Code | j | A | C | E | V | H |

● Dimension table in next page.

Frequency coefficient of rated ripple current

| Frequency | 50 Hz | 120 Hz | 300 Hz | 1 kHz | 10 kHz or more |
|-------------|-------|--------|--------|-------|----------------|
| Coefficient | 0.35 | 0.50 | 0.64 | 0.83 | 1.00 |

UUD

■ Dimensions

| Rated Voltage (V) (code) | Rated Capacitance (μF) | Case Size φD×L (mm) | tan δ | Leakage Current (μA) (at 20°C after 2 minutes) | Impedance (Ω) max. (20°C/100kHz) | Rated Ripple (mArms) (105°C/100kHz) | Part Number |
|--------------------------|------------------------|---------------------|-------|--|----------------------------------|-------------------------------------|----------------|
| 6.3 (0J) | 27 | 4×5.8 | 0.26 | 3 | 1.80 | 80 | UUD0J270MCL1GS |
| | 33 | 5×5.8 | 0.26 | 3 | 0.76 | 150 | UUD0J330MCL1GS |
| | 47 | 5×5.8 | 0.26 | 3 | 0.76 | 150 | UUD0J470MCL1GS |
| | 56 | 5×5.8 | 0.26 | 3.528 | 0.76 | 150 | UUD0J560MCL1GS |
| | 68 | 6.3×5.8 | 0.26 | 4.284 | 0.44 | 230 | UUD0J680MCL1GS |
| | 100 | 6.3×5.8 | 0.26 | 6.3 | 0.44 | 230 | UUD0J101MCL1GS |
| | 150 | 6.3×5.8 | 0.26 | 9.45 | 0.44 | 230 | UUD0J151MCL1GS |
| | 220 | 6.3×5.8 | 0.26 | 13.86 | 0.44 | 230 | UUD0J221MCL1GS |
| | 330 | 6.3×7.7 | 0.26 | 20.79 | 0.34 | 280 | UUD0J331MCL1GS |
| | 470 | 8×10 | 0.28 | 29.61 | 0.17 | 450 | UUD0J471MNL1GS |
| | 680 | 8×10 | 0.28 | 42.84 | 0.17 | 450 | UUD0J681MNL1GS |
| | 1000 | 8×10 | 0.28 | 63 | 0.17 | 450 | UUD0J102MNL1GS |
| | 1500 | 10×10 | 0.28 | 94.5 | 0.09 | 670 | UUD0J152MNL1GS |
| 10 (1A) | 22 | 4×5.8 | 0.20 | 3 | 1.80 | 80 | UUD1A220MCL1GS |
| | 27 | 5×5.8 | 0.20 | 3 | 0.76 | 150 | UUD1A270MCL1GS |
| | 33 | 5×5.8 | 0.20 | 3.3 | 0.76 | 150 | UUD1A330MCL1GS |
| | 47 | 6.3×5.8 | 0.20 | 4.7 | 0.44 | 230 | UUD1A470MCL1GS |
| | 56 | 6.3×5.8 | 0.20 | 5.6 | 0.44 | 230 | UUD1A560MCL1GS |
| | 68 | 6.3×5.8 | 0.20 | 6.8 | 0.44 | 230 | UUD1A680MCL1GS |
| | 100 | 6.3×5.8 | 0.20 | 10 | 0.44 | 230 | UUD1A101MCL1GS |
| | 150 | 6.3×5.8 | 0.20 | 15 | 0.44 | 230 | UUD1A151MCL1GS |
| | 220 | 6.3×7.7 | 0.20 | 22 | 0.34 | 280 | UUD1A221MCL1GS |
| | 330 | 8×10 | 0.24 | 33 | 0.17 | 450 | UUD1A331MNL1GS |
| | 470 | 8×10 | 0.24 | 47 | 0.17 | 450 | UUD1A471MNL1GS |
| | 680 | 10×10 | 0.24 | 68 | 0.09 | 670 | UUD1A681MNL1GS |
| | 1000 | 10×10 | 0.24 | 100 | 0.09 | 670 | UUD1A102MNL1GS |
| 16 (1C) | 15 | 4×5.8 | 0.16 | 3 | 1.80 | 80 | UUD1C150MCL1GS |
| | 22 | 5×5.8 | 0.16 | 3.52 | 0.76 | 150 | UUD1C220MCL1GS |
| | 27 | 5×5.8 | 0.16 | 4.32 | 0.76 | 150 | UUD1C270MCL1GS |
| | 33 | 6.3×5.8 | 0.16 | 5.28 | 0.44 | 230 | UUD1C330MCL1GS |
| | 47 | 6.3×5.8 | 0.16 | 7.52 | 0.44 | 230 | UUD1C470MCL1GS |
| | 56 | 6.3×5.8 | 0.16 | 8.96 | 0.44 | 230 | UUD1C560MCL1GS |
| | 68 | 6.3×5.8 | 0.16 | 10.88 | 0.44 | 230 | UUD1C680MCL1GS |
| | 100 | 6.3×5.8 | 0.16 | 16 | 0.44 | 230 | UUD1C101MCL1GS |
| | 150 | 6.3×7.7 | 0.16 | 24 | 0.34 | 280 | UUD1C151MCL1GS |
| | 220 | 6.3×7.7 | 0.16 | 35.2 | 0.34 | 280 | UUD1C221MCL1GS |
| | 330 | 8×10 | 0.20 | 52.8 | 0.17 | 450 | UUD1C331MNL1GS |
| | 470 | 8×10 | 0.20 | 75.2 | 0.17 | 450 | UUD1C471MNL1GS |
| | 680 | 10×10 | 0.20 | 108.8 | 0.09 | 670 | UUD1C681MNL1GS |

UUD

■ Dimensions

| Rated Voltage (V) (code) | Rated Capacitance (μF) | Case Size φD×L (mm) | tan δ | Leakage Current (μA) (at 20°C after 2 minutes) | Impedance (Ω) max. (20°C/100kHz) | Rated Ripple (mArms) (105°C/100kHz) | Part Number |
|--------------------------|------------------------|---------------------|-------|--|----------------------------------|-------------------------------------|----------------|
| 25 (1E) | 10 | 4×5.8 | 0.14 | 3 | 1.80 | 80 | UUD1E100MCL1GS |
| | 15 | 5×5.8 | 0.14 | 3.75 | 0.76 | 150 | UUD1E150MCL1GS |
| | 22 | 5×5.8 | 0.14 | 5.5 | 0.76 | 150 | UUD1E220MCL1GS |
| | 27 | 6.3×5.8 | 0.14 | 6.75 | 0.44 | 230 | UUD1E270MCL1GS |
| | 33 | 6.3×5.8 | 0.14 | 8.25 | 0.44 | 230 | UUD1E330MCL1GS |
| | 47 | 6.3×5.8 | 0.14 | 11.75 | 0.44 | 230 | UUD1E470MCL1GS |
| | 56 | 6.3×5.8 | 0.14 | 14 | 0.44 | 230 | UUD1E560MCL1GS |
| | 68 | 6.3×5.8 | 0.14 | 17 | 0.44 | 230 | UUD1E680MCL1GS |
| | 100 | 6.3×7.7 | 0.14 | 25 | 0.34 | 280 | UUD1E101MCL1GS |
| | 150 | 8×10 | 0.16 | 37.5 | 0.17 | 450 | UUD1E151MNL1GS |
| | 220 | 8×10 | 0.16 | 55 | 0.17 | 450 | UUD1E221MNL1GS |
| | 330 | 8×10 | 0.16 | 82.5 | 0.17 | 450 | UUD1E331MNL1GS |
| | 470 | 10×10 | 0.16 | 117.5 | 0.09 | 670 | UUD1E471MNL1GS |
| 35 (1V) | 4.7 | 4×5.8 | 0.12 | 3 | 1.80 | 80 | UUD1V47MCL1GS |
| | 10 | 5×5.8 | 0.12 | 3.5 | 0.76 | 150 | UUD1V100MCL1GS |
| | 15 | 5×5.8 | 0.12 | 5.25 | 0.76 | 150 | UUD1V150MCL1GS |
| | 22 | 5×5.8 | 0.12 | 7.7 | 0.76 | 150 | UUD1V220MCL1GS |
| | 27 | 6.3×5.8 | 0.12 | 9.45 | 0.44 | 230 | UUD1V270MCL1GS |
| | 33 | 6.3×5.8 | 0.12 | 11.55 | 0.44 | 230 | UUD1V330MCL1GS |
| | 47 | 6.3×5.8 | 0.12 | 16.45 | 0.44 | 230 | UUD1V470MCL1GS |
| | 56 | 6.3×7.7 | 0.12 | 19.6 | 0.34 | 280 | UUD1V560MCL1GS |
| | 68 | 6.3×7.7 | 0.12 | 23.8 | 0.34 | 280 | UUD1V680MCL1GS |
| | 100 | 8×10 | 0.14 | 35 | 0.17 | 450 | UUD1V101MNL1GS |
| | 150 | 8×10 | 0.14 | 52.5 | 0.17 | 450 | UUD1V151MNL1GS |
| | 220 | 8×10 | 0.14 | 77 | 0.17 | 450 | UUD1V221MNL1GS |
| | 330 | 10×10 | 0.14 | 115.5 | 0.09 | 670 | UUD1V331MNL1GS |
| 50 (1H) | 1 | 4×5.8 | 0.12 | 3 | 5.00 | 30 | UUD1H010MCL1GS |
| | 2.2 | 4×5.8 | 0.12 | 3 | 5.00 | 30 | UUD1H2R2MCL1GS |
| | 3.3 | 4×5.8 | 0.12 | 3 | 5.00 | 30 | UUD1H3R3MCL1GS |
| | 4.7 | 5×5.8 | 0.12 | 3 | 1.52 | 85 | UUD1H47MCL1GS |
| | 10 | 6.3×5.8 | 0.12 | 5 | 0.88 | 165 | UUD1H100MCL1GS |
| | 15 | 6.3×5.8 | 0.12 | 7.5 | 0.88 | 165 | UUD1H150MCL1GS |
| | 22 | 6.3×5.8 | 0.12 | 11 | 0.88 | 165 | UUD1H220MCL1GS |
| | 27 | 6.3×7.7 | 0.12 | 13.5 | 0.68 | 185 | UUD1H270MCL1GS |
| | 33 | 6.3×7.7 | 0.12 | 16.5 | 0.68 | 185 | UUD1H330MCL1GS |
| | 47 | 6.3×7.7 | 0.12 | 23.5 | 0.68 | 185 | UUD1H470MCL1GS |
| | 56 | 8×10 | 0.14 | 28 | 0.34 | 300 | UUD1H560MNL1GS |
| | 68 | 8×10 | 0.14 | 34 | 0.34 | 300 | UUD1H680MNL1GS |
| | 100 | 8×10 | 0.14 | 50 | 0.34 | 300 | UUD1H101MNL1GS |
| | 150 | 10×10 | 0.14 | 75 | 0.18 | 670 | UUD1H151MNL1GS |
| 220 | 10×10 | 0.14 | 110 | 0.18 | 670 | UUD1H221MNL1GS | |

• For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.