

# ALUMINUM ELECTROLYTIC CAPACITORS

宝创UHH402MNL供应商

捷多邦, 专业PCB打样工厂, 24小时加急出货

nichicon

UH

Chip Type, High Reliability, Higher Capacitance Range

series



For SMD



Long Life



Anti-Solvent Feature

- Chip Type, higher capacitance in larger case sizes (φ12.5, φ16, φ18, φ20)
- Designed for surface mounting on high density PC board.
- Applicable to automatic mounting machine using carrier tape and tray.
- Adapted to the RoHS directive (2002/95/EC).

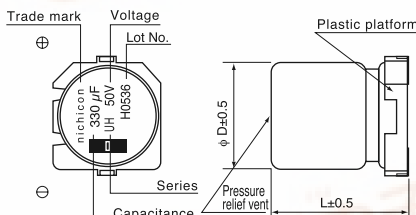
UH



## Specifications

| Item                         | Performance Characteristics   |                 |      |      |      |                    |            |   |
|------------------------------|---|-----------------|------|------|------|--------------------|------------|---|
| Category Temperature Range   | -55 ~ +125°C  |                 |      |      |      |                    |            |   |
| Rated Voltage Range          | 10 ~ 50V  |                 |      |      |      |                    |            |   |
| Rated Capacitance Range      | 100 ~ 3300μF  |                 |      |      |      |                    |            |   |
| Capacitance Tolerance        | ±20% at 120Hz, 20°C   |                 |      |      |      |                    |            |   |
| Leakage Current              | After 1 minutes' application of rated voltage, leakage current is not more than 0.03CV or 4 (μA), whichever is greater.   |                 |      |      |      |                    |            |   |
| tan δ                        | Rated voltage (V)   | 10              | 16   | 25   | 35   | 50                 | 120Hz 20°C |   |
|                              | tan δ (MAX)   | 0.22            | 0.18 | 0.16 | 0.14 | 0.12               |            |   |
|                              | For capacitance of more than 1000μF, add 0.02 for every increase of 1000μF.   |                 |      |      |      |                    |            |   |
| Stability at Low Temperature | Rated voltage (V)   | 10              | 16   | 25   | 35   | 50                 | 120Hz      |   |
|                              | Impedance ratio ZT / Z20 (MAX)  | Z-25°C / Z+20°C | 4    | 3    | 2    | 2                  |            | 2                                       |
|                              | Z-40°C / Z+20°C   | 8               | 6    | 4    | 3    | 3                  |            |   |
| Endurance                    | After 5000 hours' application of rated voltage at 125°C, capacitors meet the characteristic requirements listed at right.   |                 |      |      |      | Capacitance change |            | Within ±30% of initial value            |
|                              |   |                 |      |      |      | tan δ              |            | 300% or less of initial specified value |
|                              |   |                 |      |      |      | Leakage current    |            | Initial specified value or less         |
| Shelf Life                   | After storing the capacitors under no load at 125°C for 1000 hours, and after performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they will meet the specified value for endurance characteristics listed above. |                 |      |      |      |                    |            |   |
| Marking                      | Black print on the case top.  |                 |      |      |      |                    |            |   |

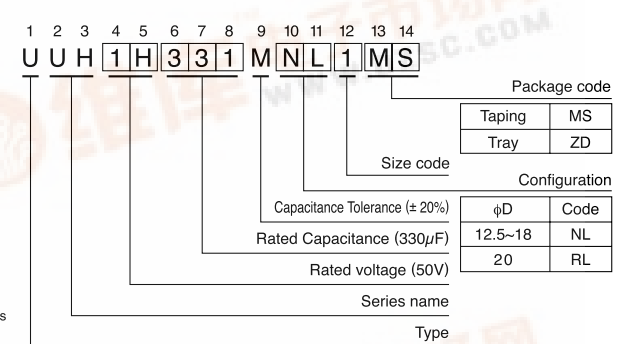
## Chip Type



| φD | 12.5 | 16   | 18   | 20   |
|----|------|------|------|------|
| A  | 4.0  | 4.5  | 5.0  | 5.0  |
| B  | 13.6 | 17.1 | 19.1 | 21.1 |
| C  | 16.0 | 19.5 | 21.5 | 23.5 |
| E  | 8.0  | 10.5 | 11.5 | 13.5 |
| H  | 2.5  | 3.75 | 3.75 | 3.75 |

The lead terminal structure : The same bent lead type (refer to p.60) that is currently used on 10mm diameter and smaller parts, is also available upon request.  
In this case of the bent lead type, ⑥ will be put at the 11th digit of type numbering system. Please ask for details.

## Type numbering system (Example : 50V 330μF)



## Dimensions

| V<br>(μF)<br>Cap. | Code | 10          |     | 16          |     | 25          |     | 35          |     | 50                       |                 |
|-------------------|------|-------------|-----|-------------|-----|-------------|-----|-------------|-----|--------------------------|-----------------|
|                   |      | 1A          |     | 1C          |     | 1E          |     | 1V          |     | 1H                       |                 |
| 100               | 101  |             |     |             |     |             |     |             |     | 12.5 × 13.5              | 170             |
| 220               | 221  |             |     |             |     |             |     | 12.5 × 13.5 | 200 | 16 × 16.5                | 250             |
| 330               | 331  |             |     | 12.5 × 13.5 | 210 | 12.5 × 13.5 | 230 | 16 × 16.5   | 280 | 16 × 21.5                | 340             |
| 470               | 471  | 12.5 × 13.5 | 230 | 12.5 × 13.5 | 250 | 16 × 16.5   | 310 | 18 × 16.5   | 380 | ▲ 18 × 16.5              | 340             |
|                   |      |             |     |             |     |             |     | ▲ 16 × 21.5 | 380 | 18 × 21.5                | 430             |
| 1000              | 102  | 12.5 × 16   | 350 | 16 × 16.5   | 440 | 18 × 21.5   | 540 | 20 × 21.5   | 610 |                          |                 |
|                   |      |             |     |             |     | ▲ 20 × 16.5 | 540 |             |     |                          |                 |
| 2200              | 222  | 18 × 16.5   | 620 | 18 × 21.5   | 710 |             |     |             |     |                          |                 |
|                   |      | ▲ 16 × 21.5 | 620 |             |     |             |     |             |     |                          |                 |
| 3300              | 332  | 18 × 21.5   | 770 |             |     |             |     |             |     |                          |                 |
|                   |      |             |     |             |     |             |     |             |     | Case size<br>φD × L (mm) | Rated<br>Ripple |

\* In this case, ⑥ will be put at 12th digit of type numbering system, "▲"

Rated Ripple (mArms) at 125°C 120Hz

## Frequency coefficient of rated ripple current

| Frequency | 50 Hz | 120 Hz | 300 Hz | 1 kHz | 10 kHz~ |
|-----------|-------|--------|--------|-------|---------|
| Cap. (μF) |       |        |        |       |         |
| 100 ~ 470 | 0.80  | 1.00   | 1.23   | 1.34  | 1.50    |

- Taping specifications are given in page 24.
- Recommended land size, soldering by reflow are given in page 25, 26.