

# ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

NEW

BC

Chip Type, High Temperature Range,  
Vibration Resistance  
series



For SMD



Long Life



Anti-Solvent  
Feature

- Highly dependable reliability withstanding load life of 1000 hours at +150°C.
- Suited for automobile electronics where heavy duty services are indispensable.
- Adapted to the RoHS directive (2002/95/EC).

BC

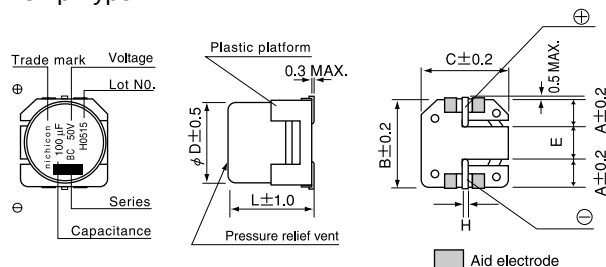
High  
Temperature  
UE



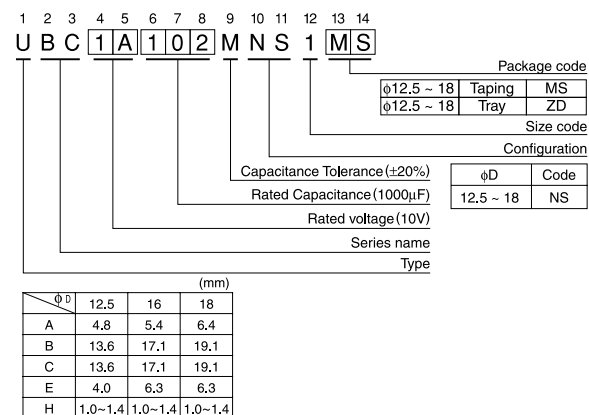
## Specifications

| Item                         | Performance Characteristics                                                                                                                                                                                                         |      |      |                    |      |                                         |            |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|--------------------|------|-----------------------------------------|------------|
| Category Temperature Range   | −55 ~ +150°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 (MAX.)<br>Z−40°C / Z+20°C                                                                                                                                                                                           | 8    | 6    | 4                  | 4    | 4                                       |            |
| Endurance                    | After 1000 hours' application of rated voltage at 150°C, capacitors meet the characteristics 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 150°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



## Type numbering system (Example : 10V 1000μF)



## Dimensions

| V         |      | 10        |      | 16        |      | 25        |      | 35        |      | 50                       |                 |
|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|--------------------------|-----------------|
| Cap. (μF) | Code | 1A        |      | 1C        |      | 1E        |      | 1V        |      | 1H                       |                 |
| 100       | 101  |           |      |           |      |           |      |           |      | 12.5×13.5                | 420             |
| 220       | 221  |           |      |           |      |           |      | 12.5×13.5 | 550  | 16×16.5                  | 550             |
| 330       | 331  |           |      |           |      | 12.5×13.5 | 650  | 12.5×13.5 | 650  | 16×21.5                  | 650             |
| 470       | 471  |           |      | 12.5×13.5 | 750  | 12.5×13.5 | 700  | 16×16.5   | 750  | 16×21.5                  | 850             |
| 680       | 681  | 12.5×13.5 | 800  | 12.5×13.5 | 800  | 16×16.5   | 800  | 16×21.5   | 950  | 18×21.5                  | 1100            |
| 1000      | 102  | 12.5×13.5 | 900  | 16×16.5   | 850  | 16×21.5   | 1000 | 18×21.5   | 1150 |                          |                 |
| 2200      | 222  | 18×21.5   | 1350 | 18×21.5   | 1350 |           |      |           |      |                          |                 |
| 3300      | 332  | 18×21.5   | 1400 |           |      |           |      |           |      |                          |                 |
|           |      |           |      |           |      |           |      |           |      | Case size<br>φD × L (mm) | Rated<br>ripple |

Rated Ripple (mArms) at 150°C 100kHz

## Frequency coefficient of rated ripple current

| Frequency   | 120 Hz | 300 Hz | 1 kHz | 10 kHz~ |
|-------------|--------|--------|-------|---------|
| Coefficient | 0.67   | 0.79   | 0.91  | 1.00    |

- Taping specifications are given in page 22.
- Recommended land size, soldering by reflow are given in page 25, 26.
- Please refer to page 3 for the minimum order quantity.

CAT.8100V-1