

# ALUMINUM ELECTROLYTIC CAPACITORS

# UBC

Chip Type, High Temperature Range,  
Vibration Resistance



- Highly dependable reliability withstanding load life of 1000 hours at +150°C.
- Suited for automobile electronics where heavy duty services are indispensable.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 compliant. Please contact us for details.

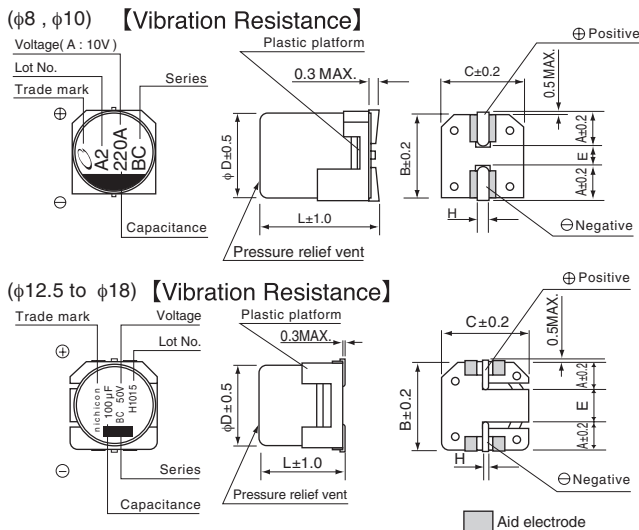
## UBC



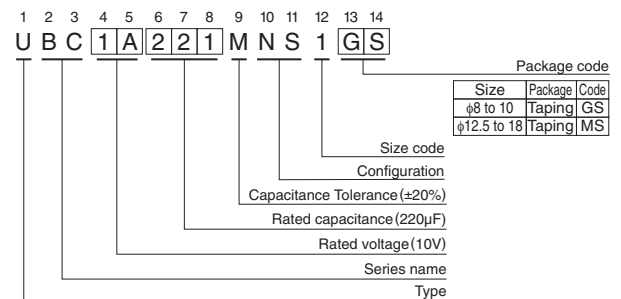
### Specifications

| Item   | Performance Characteristics   |              |      |      |      |      |  |                    |  |       |   |                 |   |
|--|---|--------------|------|------|------|------|--|--------------------|--|-------|---|-----------------|---|
| Category Temperature Range   | -40 to +150°C (φ8 to 10), -55 to +150°C (φ12.5 to 18)   |              |      |      |      |      |  |                    |  |       |   |                 |   |
| Rated Voltage Range  | 10 to 50V   |              |      |      |      |      |  |                    |  |       |   |                 |   |
| Rated Capacitance Range  | 33 to 3300μF  |              |      |      |      |      |  |                    |  |       |   |                 |   |
| Capacitance Tolerance  | ±20% at 120Hz, 20°C   |              |      |      |      |      |  |                    |  |       |   |                 |   |
| Leakage Current  | After 1 minute's application of rated voltage at 20°C, leakage current is not more than 0.03CV or 4 (μA), whichever is greater.   |              |      |      |      |      |  |                    |  |       |   |                 |   |
| Tangent of loss angle (tan δ)  | Rated voltage (V)   | 10           | 16   | 25   | 35   | 50   | 120Hz 20°C   |                    |  |       |   |                 |   |
|  | tan δ (MAX.)  | φ8, φ10      | 0.26 | 0.20 | 0.16 | 0.14 |  | 0.14               |  |       |   |                 |   |
|  |   | φ12.5 to φ18 | 0.22 | 0.18 | 0.16 | 0.14 |  | 0.12               |  |       |   |                 |   |
| For capacitance of more than 1000μF, add 0.02 for every increase of 1000μF. (φ12.5 to φ18) |   |              |      |      |      |      |  |                    |  |       |   |                 |   |
| Stability at Low Temperature   | Rated voltage (V)   | 10           | 16   | 25   | 35   | 50   | 120Hz  |                    |  |       |   |                 |   |
|  | Impedance ratio Z-40°C / Z+20°C (MAX.)  | φ8, φ10      | 10   | 8    | 6    | 4    |  | 4                  |  |       |   |                 |   |
|  |   | φ12.5 to φ18 | 8    | 6    | 4    | 4    |  | 4                  |  |       |   |                 |   |
| 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 150°C.  |              |      |      |      |      | <table border="1"> <tr> <td>Capacitance change</td> <td>Within ±30% of the initial capacitance value</td> </tr> <tr> <td>tan δ</td> <td>300% or less than the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td>Less than or equal to the initial specified value</td> </tr> </table> | Capacitance change | Within ±30% of the initial capacitance value | tan δ | 300% or less than the initial specified value | Leakage current | Less than or equal to the initial specified value |
| Capacitance change   | Within ±30% of the initial capacitance value  |              |      |      |      |      |  |                    |  |       |   |                 |   |
| tan δ  | 300% 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 150°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. |              |      |      |      |      |  |                    |  |       |   |                 |   |
| Marking  | Black print on the case top.  |              |      |      |      |      |  |                    |  |       |   |                 |   |

### Chip Type



### Type numbering system (Example : 10V 220μF)



|    | (mm)       |            |            |            |            |
|----|------------|------------|------------|------------|------------|
| φD | 8          | 10         | 12.5       | 16         | 18         |
| A  | 2.9        | 3.2        | 4.8        | 5.4        | 6.4        |
| B  | 8.3        | 10.3       | 13.6       | 17.1       | 19.1       |
| C  | 8.3        | 10.3       | 13.6       | 17.1       | 19.1       |
| E  | 3.1        | 4.5        | 4.0        | 6.3        | 6.3        |
| L  | 10         | 10         | 13.5       | 16.5, 21.5 | 21.5       |
| H  | 1.1 to 1.5 | 1.1 to 1.5 | 1.0 to 1.4 | 1.0 to 1.4 | 1.0 to 1.4 |

### Dimensions

| Cap. (μF) | V   | 10          |      | 16          |      | 25          |      | 35                    |              | 50          |      |
|-----------|-----|-------------|------|-------------|------|-------------|------|-----------------------|--------------|-------------|------|
|           |     | Code        | 1A   | 1C          | 1E   | 1V          | 1H   | Case size φD × L (mm) | Rated ripple |             |      |
| 33        | 330 |             |      |             |      |             |      |                       |              | 8 × 10      | 70   |
| 47        | 470 |             |      |             |      |             |      |                       |              | 10 × 10     | 100  |
| 100       | 101 |             |      | 8 × 10      | 110  | 8 × 10      | 110  | 8 × 10                | 80           | 12.5 × 13.5 | 420  |
| 220       | 221 | 8 × 10      | 110  | 10 × 10     | 150  | 10 × 10     | 150  | 12.5 × 13.5           | 550          | 16 × 16.5   | 550  |
| 330       | 331 | 10 × 10     | 150  |             |      | 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 |             |      |             |      |                       |              |             |      |

Rated ripple current (mArms) at 150°C 100kHz

### Frequency coefficient of rated ripple current

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

- Taping specifications are given in page 23.
- Recommended land size, soldering by reflow are given in page 18, 19.
- Please refer to page 3 for the minimum order quantity.

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

## Nichicon:

[UBC1A332MNS1MS](#) [UBC1A222MNS1MS](#) [UBC1A681MNS1MS](#) [UBC1C102MNS1MS](#) [UBC1C222MNS1MS](#)  
[UBC1C471MNS1MS](#) [UBC1C681MNS1MS](#) [UBC1E102MNS1MS](#) [UBC1E331MNS1MS](#) [UBC1A102MNS1MS](#)  
[UBC1H101MNS1MS](#) [UBC1E471MNS1MS](#) [UBC1V681MNS1MS](#) [UBC1H221MNS1MS](#) [UBC1H331MNS1MS](#)  
[UBC1H471MNS1MS](#) [UBC1H681MNS1MS](#) [UBC1V102MNS1MS](#) [UBC1V221MNS1MS](#) [UBC1V471MNS1MS](#)  
[UBC1E681MNS1MS](#) [UBC1V331MNS1MS](#) [UBC1A221MNS1GS](#) [UBC1A331MNS1GS](#) [UBC1C101MNS1GS](#)  
[UBC1C221MNS1GS](#) [UBC1E101MNS1GS](#) [UBC1V470MNS1GS](#) [UBC1V101MNS1GS](#) [UBC1H330MNS1GS](#)  
[UBC1H470MNS1GS](#) [UBC1A102MNS1ZD](#) [UBC1A222MNS1ZD](#) [UBC1A332MNS1ZD](#) [UBC1A681MNS1ZD](#)  
[UBC1C102MNS1ZD](#) [UBC1C222MNS1ZD](#) [UBC1C471MNS1ZD](#) [UBC1C681MNS1ZD](#) [UBC1E102MNS1ZD](#)  
[UBC1E331MNS1ZD](#) [UBC1E471MNS1ZD](#) [UBC1E681MNS1ZD](#) [UBC1H101MNS1ZD](#) [UBC1H221MNS1ZD](#)  
[UBC1H331MNS1ZD](#) [UBC1H471MNS1ZD](#) [UBC1H681MNS1ZD](#) [UBC1V102MNS1ZD](#) [UBC1V221MNS1ZD](#)  
[UBC1V331MNS1ZD](#) [UBC1V471MNS1ZD](#) [UBC1V681MNS1ZD](#) [UBC1E221MNS1GS](#)