

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).
- AEC-Q200 compliant. Please contact us for details.

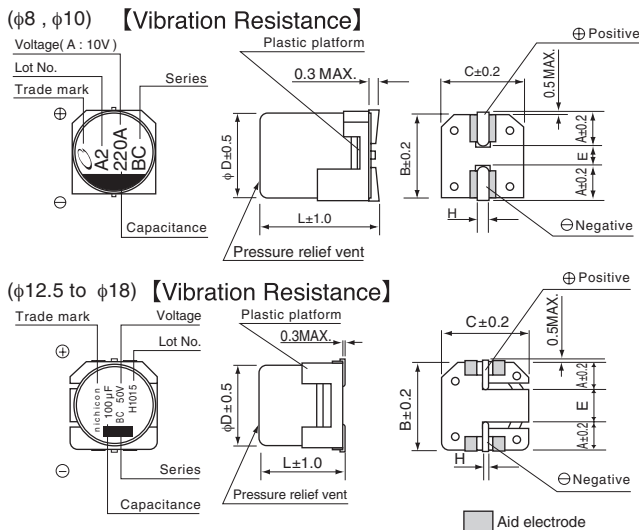
UBC



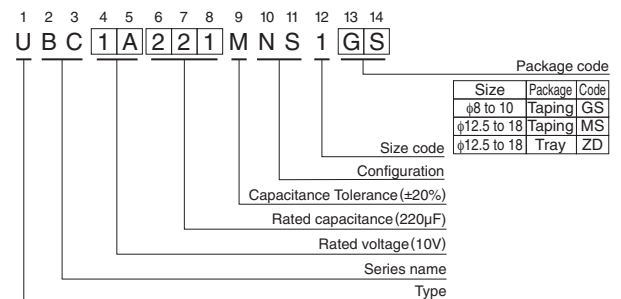
Specifications

| 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. | | | | | | | | | | | | | |
| 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 |
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| 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

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