

ALUMINUM ELECTROLYTIC CAPACITORS

UKA

For High Grade Audio Equipment,
Wide Temperature Range.



UKA



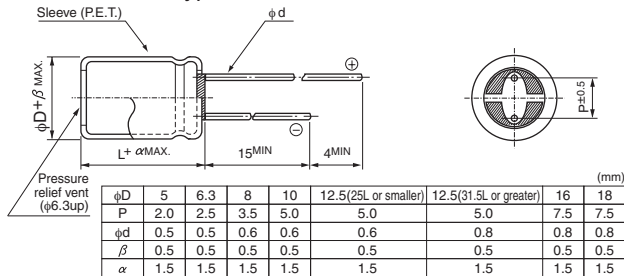
- 105°C high quality capacitors for audio equipment.
- Selected materials to create superior acoustic sound.
- Compliant to the RoHS directive (2011/65/EU).



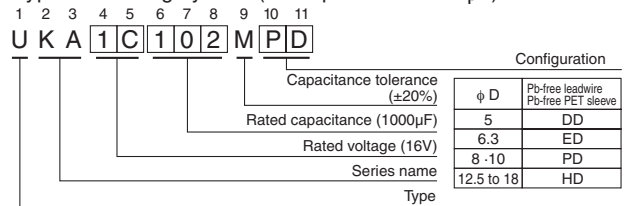
Specifications

| Item | Performance Characteristics | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------|---|---|--------------------|---|-------|---|-----------------|---|--------------|-----------------|------|------|------|------|------|---------------------------------------|-----------------|----|---|---|---|---|-------------------------------|--|
| Category Temperature Range | -55 to +105°C | | | | | | | | | | | | | | | | | | | | | | | |
| Rated Voltage Range | 6.3 to 50V | | | | | | | | | | | | | | | | | | | | | | | |
| Rated Capacitance Range | 22 to 22000 µF | | | | | | | | | | | | | | | | | | | | | | | |
| 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. After 2 minutes' application of rated voltage at 20°C, leakage current is not more than 0.01CV or 3 (µA), whichever is greater. | | | | | | | | | | | | | | | | | | | | | | | |
| Tangent of loss angle (tan δ) | <table border="1"> <tr> <th>Rated voltage (V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> </tr> <tr> <td>tan δ (MAX.)</td> <td>0.30</td> <td>0.26</td> <td>0.22</td> <td>0.18</td> <td>0.16</td> <td>0.14</td> </tr> </table> <p>For capacitors with more than 1000µF, add 0.02 for every increase of 1000µF.</p> | Rated voltage (V) | 6.3 | 10 | 16 | 25 | 35 | 50 | tan δ (MAX.) | 0.30 | 0.26 | 0.22 | 0.18 | 0.16 | 0.14 | Measurement frequency : 120Hz at 20°C | | | | | | | | |
| Rated voltage (V) | 6.3 | 10 | 16 | 25 | 35 | 50 | | | | | | | | | | | | | | | | | | |
| tan δ (MAX.) | 0.30 | 0.26 | 0.22 | 0.18 | 0.16 | 0.14 | | | | | | | | | | | | | | | | | | |
| Stability at Low Temperature | <table border="1"> <tr> <th>Rated voltage (V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> </tr> <tr> <td>tan δ (MAX.)</td> <td>Z-25°C / Z+20°C</td> <td>5</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> </tr> <tr> <td></td> <td>Z-40°C / Z+20°C</td> <td>10</td> <td>8</td> <td>6</td> <td>4</td> <td>3</td> </tr> </table> | Rated voltage (V) | 6.3 | 10 | 16 | 25 | 35 | 50 | tan δ (MAX.) | Z-25°C / Z+20°C | 5 | 4 | 3 | 2 | 2 | | Z-40°C / Z+20°C | 10 | 8 | 6 | 4 | 3 | Measurement frequency : 120Hz | |
| Rated voltage (V) | 6.3 | 10 | 16 | 25 | 35 | 50 | | | | | | | | | | | | | | | | | | |
| tan δ (MAX.) | Z-25°C / Z+20°C | 5 | 4 | 3 | 2 | 2 | | | | | | | | | | | | | | | | | | |
| | Z-40°C / Z+20°C | 10 | 8 | 6 | 4 | 3 | | | | | | | | | | | | | | | | | | |
| Endurance | The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 2000 hours at 105°C. | <table border="1"> <tr> <td>Capacitance Change</td> <td>Within 20% of the initial capacitance value</td> </tr> <tr> <td>tan δ</td> <td>200% 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 20% of the initial capacitance value | tan δ | 200% or less than the initial specified value | Leakage current | Less than or equal to the initial specified value | | | | | | | | | | | | | | | | |
| Capacitance Change | Within 20% of the initial capacitance value | | | | | | | | | | | | | | | | | | | | | | | |
| tan δ | 200% 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 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. | | | | | | | | | | | | | | | | | | | | | | | |
| Marking | Printed with black color letter on pearl blue sleeve. | | | | | | | | | | | | | | | | | | | | | | | |

Radial Lead Type



Type numbering system (Example : 16V 1000µF)



• Please refer to page 20 about the end seal configuration.

Dimensions

| Cap (µF) | V | 6.3 | | 10 | | 16 | | 25 | | 35 | | 50 | | |
|----------|-----|------|-------------|------|-------------|------|-------------|------|-------------|------|-----------|------|-----------------------|--------------|
| | | Code | 0J | 45 | 1A | 45 | 1C | 54 | 1E | 58 | 1V | 61 | 1H | 68 |
| 22 | 220 | | 5 × 11 | 45 | 5 × 11 | 45 | 5 × 11 | 54 | 5 × 11 | 58 | 5 × 11 | 61 | 5 × 11 | 68 |
| 33 | 330 | | 5 × 11 | 55 | 5 × 11 | 58 | 5 × 11 | 65 | 5 × 11 | 68 | 5 × 11 | 75 | 5 × 11 | 90 |
| 47 | 470 | | 5 × 11 | 65 | 5 × 11 | 68 | 5 × 11 | 79 | 5 × 11 | 83 | 5 × 11 | 93 | 6.3 × 11 | 115 |
| 100 | 101 | | 5 × 11 | 95 | 5 × 11 | 105 | 5 × 11 | 115 | 6.3 × 11 | 140 | 6.3 × 11 | 150 | 8 × 11.5 | 190 |
| 220 | 221 | | 6.3 × 11 | 160 | 6.3 × 11 | 175 | 6.3 × 11 | 190 | 8 × 11.5 | 240 | 8 × 11.5 | 260 | 10 × 12.5 | 300 |
| 330 | 331 | | 6.3 × 11 | 195 | 8 × 11.5 | 240 | 8 × 11.5 | 265 | 8 × 11.5 | 290 | 10 × 12.5 | 350 | 10 × 16 | 410 |
| 470 | 471 | | 8 × 11.5 | 270 | 8 × 11.5 | 280 | 8 × 11.5 | 315 | 10 × 12.5 | 380 | 10 × 16 | 460 | 12.5 × 20 | 530 |
| 1000 | 102 | | 10 × 12.5 | 420 | 10 × 16 | 500 | 10 × 16 | 560 | 10 × 20 | 680 | 12.5 × 25 | 860 | 12.5 × 31.5 | 1040 |
| 2200 | 222 | | 10 × 20 | 710 | 12.5 × 20 | 810 | 12.5 × 20 | 920 | 12.5 × 31.5 | 1200 | 12.5 × 40 | 1260 | 16 × 35.5 | 1470 |
| 3300 | 332 | | 12.5 × 20 | 910 | 12.5 × 25 | 1050 | 12.5 × 31.5 | 1270 | 12.5 × 35.5 | 1400 | 16 × 35.5 | 1610 | 18 × 35.5 | 1770 |
| 4700 | 472 | | 12.5 × 25 | 1120 | 12.5 × 35.5 | 1300 | 12.5 × 35.5 | 1480 | 16 × 31.5 | 1710 | 18 × 35.5 | 1910 | | |
| 6800 | 682 | | 12.5 × 35.5 | 1360 | 12.5 × 40 | 1570 | 16 × 31.5 | 1780 | 18 × 35.5 | 2040 | | | | |
| 10000 | 103 | | 12.5 × 40 | 1650 | 16 × 35.5 | 1890 | 18 × 35.5 | 2060 | | | | | | |
| 15000 | 153 | | 16 × 35.5 | 2010 | 18 × 40 | 2400 | | | | | | | | |
| 22000 | 223 | | 18 × 40 | 2350 | | | | | | | | | | |
| | | | | | | | | | | | | | Case size φD × L (mm) | Rated ripple |

Rated ripple current (mArms) at 105°C 120Hz

Frequency coefficient of rated ripple current

| Cap. (µF) | Frequency | 50Hz | 120Hz | 300Hz | 1kHz | 10kHz or more |
|---------------|-----------|------|-------|-------|------|---------------|
| 22 to 47 | | 0.75 | 1.00 | 1.35 | 1.57 | 2.00 |
| 100 to 470 | | 0.80 | 1.00 | 1.23 | 1.34 | 1.50 |
| 1000 to 22000 | | 0.85 | 1.00 | 1.10 | 1.13 | 1.15 |

Please refer to page 20, 21, 22 about the formed or taped product spec.
Please refer to page 4 for the minimum order quantity.