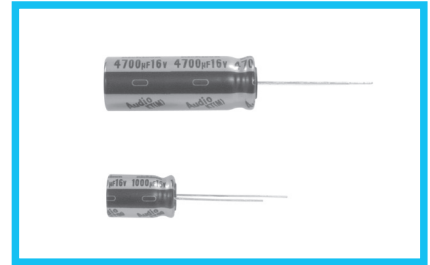


# ALUMINUM ELECTROLYTIC CAPACITORS

**UKT** For General Audio Equipment,  
Wide Temperature Range.

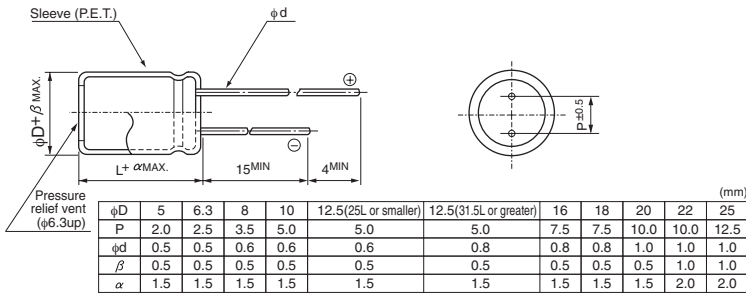


- 105°C standard for audio equipment.
- Compliant to the RoHS directive (2011/65/EU).
- AEC-Q200 compliant. Please contact us for details.

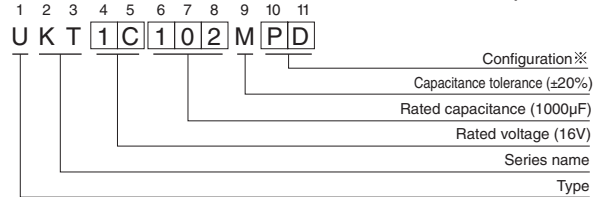
## Specifications

| Item                                                                       | Performance Characteristics                                                                                                                                                                                                                                     |                 |      |      |      |      |      |                                       |                                                   |
|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|------|------|------|------|------|---------------------------------------|---------------------------------------------------|
| Category Temperature Range                                                 | -55 to +105°C                                                                                                                                                                                                                                                   |                 |      |      |      |      |      |                                       |                                                   |
| Rated Voltage Range                                                        | 6.3 to 50V                                                                                                                                                                                                                                                      |                 |      |      |      |      |      |                                       |                                                   |
| Rated Capacitance Range                                                    | 2.2 to 33000μF                                                                                                                                                                                                                                                  |                 |      |      |      |      |      |                                       |                                                   |
| 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)                                              | Rated voltage (V)                                                                                                                                                                                                                                               | 6.3             | 10   | 16   | 25   | 35   | 50   | Measurement frequency : 120Hz at 20°C |                                                   |
|                                                                            | tan δ (MAX.)                                                                                                                                                                                                                                                    | 0.30            | 0.26 | 0.22 | 0.18 | 0.16 | 0.14 |                                       |                                                   |
| For capacitance of more than 1000μF, add 0.02 for every increase of 1000μF |                                                                                                                                                                                                                                                                 |                 |      |      |      |      |      |                                       |                                                   |
| Stability at Low Temperature                                               | Rated voltage (V)                                                                                                                                                                                                                                               |                 | 6.3  | 10   | 16   | 25   | 35   | 50                                    | Measurement frequency : 120Hz                     |
|                                                                            | Impedance ratio ZT / Z20 (MAX.)                                                                                                                                                                                                                                 | Z-25°C / Z+20°C | 5    | 4    | 3    | 2    | 2    | 2                                     |                                                   |
| Z-40°C / Z+20°C                                                            |                                                                                                                                                                                                                                                                 |                 |      |      |      |      |      |                                       |                                                   |
| 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 105°C.                                                                                                            |                 |      |      |      |      |      | 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)



| φ D        | Pb-free leadwire<br>Pb-free PET sleeve |
|------------|----------------------------------------|
| 5          | DD                                     |
| 6.3        | ED                                     |
| 8 . 10     | PD                                     |
| 12.5 to 18 | HD                                     |
| 20 to 25   | RD                                     |

## Dimensions

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

| Cap.(μF) | code | 6.3         |      | 10          |      | 16          |      | 25          |      | 35        |      | 50          |                       |              |
|----------|------|-------------|------|-------------|------|-------------|------|-------------|------|-----------|------|-------------|-----------------------|--------------|
|          |      | 0J          |      | 1A          |      | 1C          |      | 1E          |      | 1V        |      | 1H          |                       |              |
| 2.2      | 2R2  |             |      |             |      |             |      |             |      |           |      |             | 5 × 11                | 20           |
| 3.3      | 3R3  |             |      |             |      |             |      |             |      |           |      |             | 5 × 11                | 25           |
| 4.7      | 4R7  |             |      |             |      |             |      |             |      |           |      |             | 5 × 11                | 30           |
| 10       | 100  |             |      |             |      | 5 × 11      | 35   | 5 × 11      | 36   | 5 × 11    | 41   | 5 × 11      | 46                    |              |
| 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 | 20 × 40     | 2100                  |              |
| 6800     | 682  | 12.5 × 35.5 | 1360 | 12.5 × 40   | 1570 | 16 × 31.5   | 1780 | 18 × 35.5   | 2040 | 20 × 40   | 2150 | 22 × 50     | 2500                  |              |
| 10000    | 103  | 12.5 × 40   | 1650 | 16 × 35.5   | 1890 | 18 × 35.5   | 2060 | 20 × 40     | 2150 | 22 × 50   | 2650 |             |                       |              |
| 15000    | 153  | 16 × 35.5   | 2010 | 18 × 40     | 2400 | 20 × 40     | 2430 | 22 × 50     | 2750 |           |      |             |                       |              |
| 22000    | 223  | 18 × 40     | 2350 | 22 × 40     | 2650 | 22 × 50     | 3000 |             |      |           |      |             |                       |              |
| 33000    | 333  | 22 × 50     | 2800 | 25 × 50     | 2880 |             |      |             |      |           |      |             |                       |              |
|          |      |             |      |             |      |             |      |             |      |           |      |             | Case size φD × L (mm) | Rated ripple |

Rated ripple current (mA rms) at 105°C 120Hz

## Frequency coefficient of rated ripple current

| Cap.(μF)      | Frequency | 50Hz | 120Hz | 300Hz | 1kHz | 10kHz or more |
|---------------|-----------|------|-------|-------|------|---------------|
| 2.2 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 33000 |           | 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.

# Mouser Electronics

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