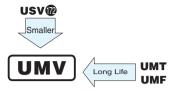


5mmL, Long Life Assurance



- ●Extended load life of 5000 hours at +105°C, with 5mm height.
- Compliant to the RoHS directive (2011/65/EU).

Values marked with an \*\* in the dimension table are scheduled to be discontinued and are not recommended for new designs.

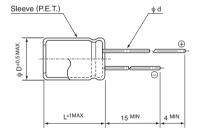


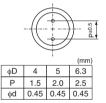


# ■Specifications

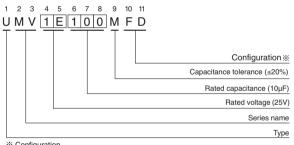
| Item                          | Performance Characteristics   |                   |           |    |     |      |                          |    |    |   |  |  |  |
|-------------------------------|---|-------------------|-----------|----|-----|------|--------------------------|----|----|---|--|--|--|
| Category Temperature Range    | -40 to +105°C   |                   |           |    |     |      |                          |    |    |   |  |  |  |
| Rated Voltage Range           | 4 to 50V  |                   |           |    |     |      |                          |    |    |   |  |  |  |
| Rated Capacitance Range       | 0.1 to 100μF  |                   |           |    |     |      |                          |    |    |   |  |  |  |
| Capacitance Tolerance         | ±20% at 120Hz, 20°C   |                   |           |    |     |      |                          |    |    |   |  |  |  |
| Leakage Current               | After 2 minutes' application of rated voltage at 20°C, leakage current is not more than 0.01CV or 3 (μA), whichever is greater.   |                   |           |    |     |      |                          |    |    |   |  |  |  |
|                               | Measurement frequency: 120Hz at 20°C  |                   |           |    |     |      |                          |    |    |   |  |  |  |
| Tangent of loss angle (tan δ) | Rated voltage (V)   | 4                 | 6.3       | 1  | 0   | 16   | 25                       | 3  | 5  | 50  |  |  |  |
|                               | tan δ (MAX.)  | 0.37              | 0.37 0.28 |    | 24  | 0.20 | 0.16                     | 0. | 13 | 0.12  |  |  |  |
|                               | Measurement frequency: 120Hz  |                   |           |    |     |      |                          |    |    |   |  |  |  |
| Otal: 333                     | Rated   | Rated voltage (V) |           | 4  | 6.3 | 10   | 16                       | 25 | 35 | 50  |  |  |  |
| Stability at Low Temperature  | Impedance ratio   | Z-25°C /          | Z+20°C    | 8  | 4   | 3    | 2                        | 2  | 2  | 2   |  |  |  |
|                               | ZT / Z20 (MAX.)   | Z-40°C / Z+20°C   |           | 14 | 10  | 7    | 5                        | 3  | 3  | 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 5000 hours at 105°C.  |                   |           |    |     |      | Capacitance change tan δ |    |    | Within ±30% of the initial capacitance value  300% or less than the initial specified value |  |  |  |
| Endurance                     |   |                   |           |    |     |      | Leakage current          |    |    | Less than or equal to the initial specified value   |  |  |  |
|                               | voltage is applied for 5000 flours at 105 C.  |                   |           |    |     |      |                          |    |    |   |  |  |  |
| 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 silver color letter on dark brown sleeve.  |                   |           |    |     |      |                          |    |    |   |  |  |  |

# ■Radial Lead Type





## Type numbering system (Example : $25V 10\mu F$ )



| 3 | Configuration |  |  |  |  |  |  |  |
|---|---------------|--|--|--|--|--|--|--|
|   | φD            | Pb-free leadwire<br>Pb-free PET sleeve |  |  |  |  |  |  |
|   | 4 to 6.3      | FD                                     |  |  |  |  |  |  |

#### ■ Dimensions

|          | V    | 4     |        | 6.3   | 3  | 10    | )  | 16    | 6  | 25    | j  | 35    | 5      | 50           |        |
|----------|------|-------|--------|-------|----|-------|----|-------|----|-------|----|-------|--------|--------------|--------|
| Cap.(µF) | Code | 00    | 3      | 0J    |    | 1A    |    | 1C    |    | 1E    |    | 1V    |        | 1H           |        |
| 0.1      | 0R1  |       |        |       |    |       |    |       |    |       |    |       |        | <b>※</b> 4×5 | 1.0    |
| 0.22     | R22  |       |        |       |    |       |    |       |    |       |    |       | İ      | <b>※</b> 4×5 | 2.6    |
| 0.33     | R33  |       | l<br>I |       |    |       |    |       |    |       |    |       | l<br>I | <b>※</b> 4×5 | 3.2    |
| 0.47     | R47  |       |        |       |    |       |    |       |    |       |    |       |        | <b>%</b> 4×5 | 3.8    |
| 1        | 010  |       | i      | į     |    |       |    |       |    |       |    |       |        | 4×5          | 6.2    |
| 2.2      | 2R2  |       | <br>   |       |    |       |    |       |    |       |    |       | <br>   | 4×5          | 11     |
| 3.3      | 3R3  |       |        |       |    |       |    |       |    |       |    |       |        | 4×5          | 14     |
| 4.7      | 4R7  |       |        |       |    |       |    |       |    | 4×5   | 13 | 4×5   | 15     | 5×5          | 19     |
| 10       | 100  |       | 1      |       |    |       |    | 4×5   | 18 | 5×5   | 23 | 5×5   | 25     | 6.3×5        | 30     |
| 22       | 220  | 4×5   | 22     | 4×5   | 22 | 5×5   | 27 | 5×5   | 30 | 6.3×5 | 38 | 6.3×5 | 42     |              |        |
| 33       | 330  | 5×5   | 30     | 5×5   | 30 | 5×5   | 35 | 6.3×5 | 40 | 6.3×5 | 48 |       | l<br>I | i            |        |
| 47       | 470  | 5×5   | 36     | 5×5   | 36 | 6.3×5 | 46 | 6.3×5 | 50 |       |    |       |        | Case size    | Rated  |
| 100      | 101  | 6.3×5 | 60     | 6.3×5 | 60 |       |    |       |    |       |    |       |        | φD×L (mm)    | ripple |

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

### Frequency coefficient of rated ripple current

|             |       |        | • •    |       |                |  |  |  |  |
|-------------|-------|--------|--------|-------|----------------|--|--|--|--|
| Frequency   | 50 Hz | 120 Hz | 300 Hz | 1 kHz | 10 kHz or more |  |  |  |  |
| Coefficient | 0.70  | 1.00   | 1.17   | 1.36  | 1.50           |  |  |  |  |

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