

UMP

5mmL, Bi-Polarized



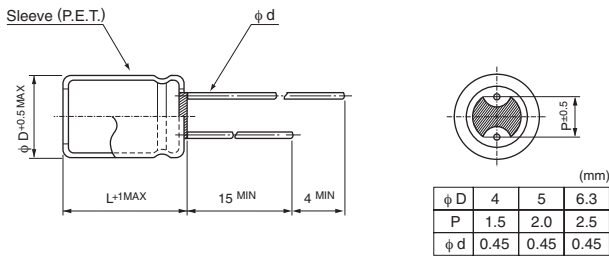
- Bi-polarized series with 5mm height.
- Compliant to the RoHS directive (2011/65/EU).



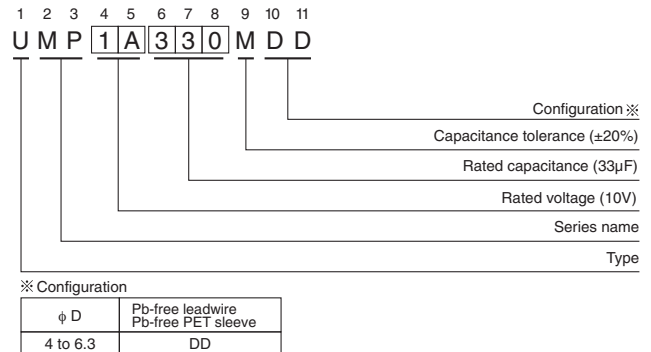
Specifications

| Item | Performance Characteristics | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------------|--|--------------------|--|-------|---|-----------------|---|----|--------------|------------------------------------|-----------------|------|------|------|------|---|---|-----------------|---|---|---|---|---|
| Category Temperature Range | -40 to +85°C | | | | | | | | | | | | | | | | | | | | | | |
| Rated Voltage Range | 6.3 to 50V | | | | | | | | | | | | | | | | | | | | | | |
| Rated Capacitance Range | 0.1 to 47μF | | | | | | | | | | | | | | | | | | | | | | |
| Rated 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 0.05CV or 10 (μA), whichever is greater. | | | | | | | | | | | | | | | | | | | | | | |
| Tangent of loss angle (tan δ) | Measurement frequency : 120Hz at 20°C | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1"> <tr> <td>Rated voltage (V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td>tan δ (MAX.)</td> <td>0.24</td> <td>0.20</td> <td>0.17</td> <td>0.17</td> <td>0.15</td> <td>0.15</td> </tr> </table> | Rated voltage (V) | 6.3 | 10 | 16 | 25 | 35 | 50 | tan δ (MAX.) | 0.24 | 0.20 | 0.17 | 0.17 | 0.15 | 0.15 | | | | | | | | |
| Rated voltage (V) | 6.3 | 10 | 16 | 25 | 35 | 50 | | | | | | | | | | | | | | | | | |
| tan δ (MAX.) | 0.24 | 0.20 | 0.17 | 0.17 | 0.15 | 0.15 | | | | | | | | | | | | | | | | | |
| Stability at Low Temperature | Measurement frequency : 120Hz | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1"> <tr> <td colspan="2">Rated voltage (V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td rowspan="2">Impedance ratio ZT / Z20 (MAX.)</td> <td>Z-25°C / Z+20°C</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z-40°C / Z+20°C</td> <td>8</td> <td>6</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> </tr> </table> | Rated voltage (V) | | 6.3 | 10 | 16 | 25 | 35 | 50 | Impedance ratio ZT / Z20 (MAX.) | Z-25°C / Z+20°C | 4 | 3 | 2 | 2 | 2 | 2 | Z-40°C / Z+20°C | 8 | 6 | 4 | 4 | 3 |
| Rated voltage (V) | | 6.3 | 10 | 16 | 25 | 35 | 50 | | | | | | | | | | | | | | | | |
| Impedance ratio ZT / Z20 (MAX.) | Z-25°C / Z+20°C | 4 | 3 | 2 | 2 | 2 | 2 | | | | | | | | | | | | | | | | |
| | Z-40°C / Z+20°C | 8 | 6 | 4 | 4 | 3 | 3 | | | | | | | | | | | | | | | | |
| Endurance | <p>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 85°C with the polarity inverted every 250 hours.</p> <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 85°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 white color letter on black sleeve. | | | | | | | | | | | | | | | | | | | | | | |

Radial Lead Type



Type numbering system (Example : 10V 33μF)



Dimensions

| Cap. (μF) | Code | V | | 6.3 | | 10 | | 16 | | 25 | | 35 | | 50 | | | |
|-----------|------|---------|----|---------|----|---------|----|---------|----|---------|----|----|-------|-------|---------|--------------------------|-----------------|
| | | 0J | 1A | 1C | 1E | 1V | 1H | | | | | | | | | | |
| 0.1 | 0R1 | | | | | | | | | | | | | 4 × 5 | 1.0 | | |
| 0.22 | R22 | | | | | | | | | | | | | 4 × 5 | 2.0 | | |
| 0.33 | R33 | | | | | | | | | | | | | 4 × 5 | 2.8 | | |
| 0.47 | R47 | | | | | | | | | | | | | 4 × 5 | 4.0 | | |
| 1 | 010 | | | | | | | | | | | | | 4 × 5 | 8.4 | | |
| 2.2 | 2R2 | | | | | | | | | | | | 4 × 5 | 8.4 | 5 × 5 | 13 | |
| 3.3 | 3R3 | | | | | | | | | 5 × 5 | 12 | | 5 × 5 | 16 | 5 × 5 | 17 | |
| 4.7 | 4R7 | | | | | | | 4 × 5 | 12 | 5 × 5 | 16 | | 5 × 5 | 18 | 6.3 × 5 | 20 | |
| 10 | 100 | | | 4 × 5 | 17 | 5 × 5 | 23 | 6.3 × 5 | 27 | 6.3 × 5 | 29 | | | | | | |
| 22 | 220 | 5 × 5 | 28 | 6.3 × 5 | 33 | 6.3 × 5 | 37 | | | | | | | | | | |
| 33 | 330 | 6.3 × 5 | 37 | 6.3 × 5 | 41 | 6.3 × 5 | 49 | | | | | | | | | | |
| 47 | 470 | 6.3 × 5 | 45 | | | | | | | | | | | | | Case size φD × L (mm) | Rated ripple |

Rated ripple current (mA rms) at 85°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 ordered or taped product spec.
Please refer to page 4 for the minimum order quantity.

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