

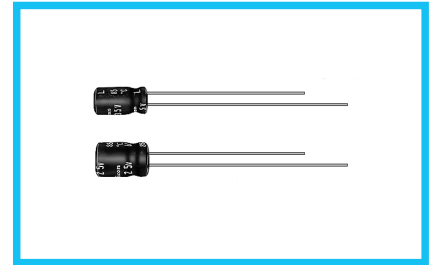
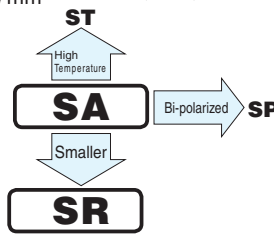
ALUMINUM ELECTROLYTIC CAPACITORS

SA 7mmL, For General Purposes
series

- Standard miniature series with 7mm height.
- Compliant to the RoHS directive (2011/65/EU).

SR 7mmL, High CV
series

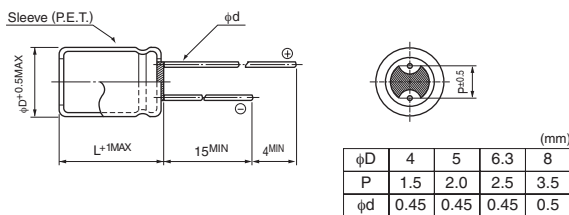
- Higher CV series with 7mm height.



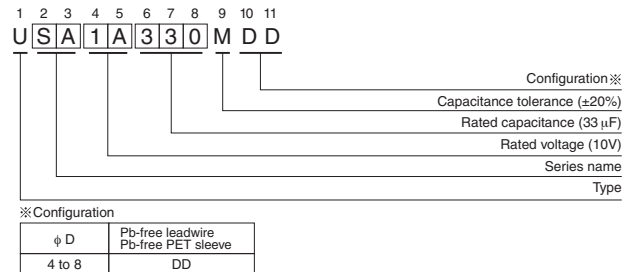
Specifications

| Item | SA series | SR series | | | | | | |
|-------------------------------|--|---|-----|----|----|----|----|----|
| Category Temperature Range | -40 to +85°C | -40 to +85°C | | | | | | |
| Rated Voltage Range | 6.3 to 50V | 4 to 50V | | | | | | |
| Rated Capacitance Range | 0.1 to 220μF | 0.1 to 470μF | | | | | | |
| Capacitance Tolerance | ±20% at 120Hz, 20°C | 0.1 to 470μF | | | | | | |
| 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. | | | | | | | |
| Tangent of loss angle (tan δ) | Measurement frequency : 120Hz at 20°C | | | | | | | |
| | Rated voltage (V) | 4 | 6.3 | 10 | 16 | 25 | 35 | 50 |
| Stability at Low Temperature | Measurement frequency : 120Hz | | | | | | | |
| | Rated voltage (V) | 4 | 6.3 | 10 | 16 | 25 | 35 | 50 |
| | Impedance ratio | Z-25°C / Z+20°C | 6 | 4 | 3 | 2 | 2 | 2 |
| 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 85°C. | | | | | | | |
| | Capacitance change | Within ±20% of the initial capacitance 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. | | | | | | | |
| | tan δ | 200% or less than the initial specified value | | | | | | |
| Marking | Printed with white color letter on black sleeve. | | | | | | | |
| | Leakage current | Less than or equal to the initial specified value | | | | | | |

Radial Lead Type



Type numbering system (Example : SA series : 10V 33μF)



Dimensions

| Cap.(μF) | V(Code) Series Code | 4 (0G) | | 6.3 (0J) | | 10 (1A) | | 16 (1C) | | 25 (1E) | | 35 (1V) | | 50 (1H) | |
|----------|---------------------------|---------|---------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| | | SR | SA | SR | SA | SR | SA | SR | SA | SR | SA | SR | SA | SR | |
| 0.1 | 0R1 | | | | | | | | | | | | | 4 × 7 | 4 × 7 |
| | | | | | | | | | | | | | | 1.0 | 1.0 |
| 0.22 | R22 | | | | | | | | | | | | | 4 × 7 | 4 × 7 |
| | | | | | | | | | | | | | | 2.3 | 2.3 |
| 0.33 | R33 | | | | | | | | | | | | | 4 × 7 | 4 × 7 |
| | | | | | | | | | | | | | | 3.5 | 3.5 |
| 0.47 | R47 | | | | | | | | | | | | | 4 × 7 | 4 × 7 |
| | | | | | | | | | | | | | | 5.0 | 5.0 |
| 1 | 010 | | | | | | | | | | | | | 4 × 7 | 4 × 7 |
| | | | | | | | | | | | | | | 10 | 10 |
| 2.2 | 2R2 | | | | | | | | | | | | | 4 × 7 | 4 × 7 |
| | | | | | | | | | | | | | | 19 | 19 |
| 3.3 | 3R3 | | | | | | | | | | | | | 4 × 7 | 4 × 7 |
| | | | | | | | | | | | | | | 24 | 24 |
| 4.7 | 4R7 | | | | | | | | | | | 4 × 7 | 4 × 7 | 5 × 7 | 4 × 7 |
| | | | | | | | | | | | | 24 | 24 | 29 | 28 |
| 10 | 100 | | | | | | | 4 × 7 | 4 × 7 | 5 × 7 | 4 × 7 | 5 × 7 | 4 × 7 | 6.3 × 7 | 5 × 7 |
| | | | | | | | | 28 | 28 | 33 | 28 | 36 | 31 | 44 | 38 |
| 22 | 220 | | 4 × 7 | 4 × 7 | 5 × 7 | 4 × 7 | 5 × 7 | 4 × 7 | 6.3 × 7 | 5 × 7 | 6.3 × 7 | 5 × 7 | 6.3 × 7 | 8 × 7 | 6.3 × 7 |
| | | | 34 | 34 | 38 | 35 | 44 | 39 | 51 | 48 | 57 | 52 | 65 | 65 | 58 |
| 33 | 330 | 4 × 7 | 5 × 7 | 4 × 7 | 5 × 7 | 4 × 7 | 6.3 × 7 | 5 × 7 | 6.3 × 7 | 5 × 7 | 8 × 7 | 6.3 × 7 | | 8 × 7 | |
| | | 33 | 42 | 40 | 47 | 43 | 57 | 55 | 63 | 58 | 72 | 65 | | 75 | |
| 47 | 470 | 4 × 7 | 5 × 7 | 4 × 7 | 6.3 × 7 | 5 × 7 | 6.3 × 7 | 5 × 7 | 8 × 7 | 6.3 × 7 | | | | | |
| | | 39 | 50 | 48 | 59 | 59 | 68 | 65 | 78 | 71 | | | | | |
| 100 | 101 | 5 × 7 | 6.3 × 7 | 5 × 7 | 8 × 7 | 6.3 × 7 | 8 × 7 | 6.3 × 7 | | 8 × 7 | | | | | |
| | | 65 | 77 | 78 | 96 | 87 | 107 | 98 | | 115 | | | | | |
| 220 | 221 | 6.3 × 7 | 8 × 7 | 6.3 × 7 | | 8 × 7 | | 8 × 7 | | | | | | | |
| | | 110 | 130 | 120 | | 145 | | 150 | | | | | | | |
| 330 | 331 | 8 × 7 | | 8 × 7 | | | | | | | | | | | |
| | | 165 | | 180 | | | | | | | | | | | |
| 470 | 471 | 8 × 7 | | | | | | | | | | | | | |
| | | 240 | | | | | | | | | | | | | |

Case size φD × L (mm)
Rated ripple

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 |

Rated ripple current (mA) at 85°C 120Hz

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