

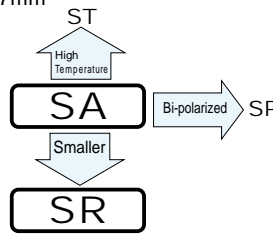
# ALUMINUM ELECTROLYTIC CAPACITORS

**SA** series  
7mmL, For General Purposes

- Standard miniature series with 7mm height.
- Compliant to the RoHS directive (2002/95/EC).

**SR** series  
7mmL, High CV

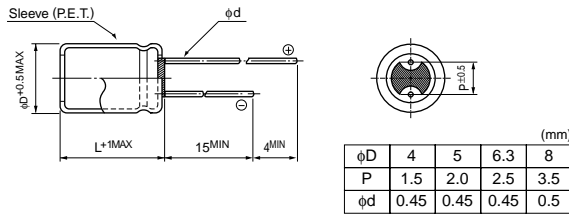
- Higher CV series with 7mm height.



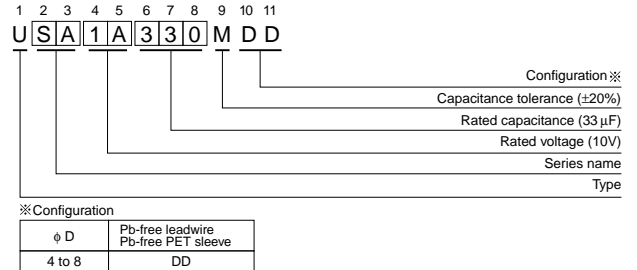
## Specifications

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							
Leakage Current	After 2 minutes' application of rated voltage, leakage current is not more than 0.01CV or 3 (μA), whichever is greater.							
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz, Temperature : 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	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	8 × 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	8 × 7	8 × 7			
		39	50	48	59	59	68	65	78	71	85				
100	101	5 × 7	6.3 × 7	5 × 7	8 × 7	6.3 × 7	8 × 7	6.3 × 7							
		65	77	78	96	87	107	98							
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													

## 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 (mArms) 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.