ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

SA 7mmL, For General Purposes series

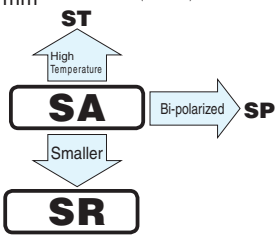
- Standard miniature series with 7mm height.
- Compliant to the RoHS directive (2011/65/EU).

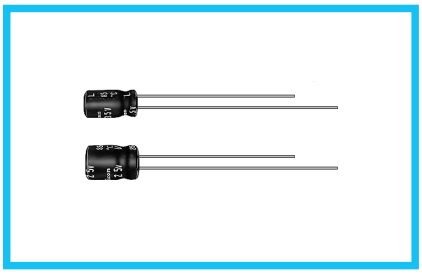
SR 7mmL, High CV series

- Higher CV series with 7mm height.

Smaller (SR series)

Anti-Solvent Feature





■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 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
tan δ (MAX.)	0.35	0.24	0.20	0.16	0.14	0.12	0.10

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
ZT / Z20 (MAX.)	Z–40˚C / Z+20˚C	12	8	6	4	4	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 2000 hours at 85°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

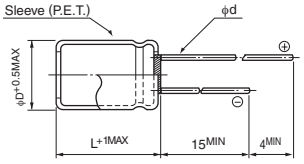
Shelf Life

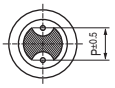
After storing the capacitors under no load at 85˚C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.

Marking

Printed with white color letter on black sleeve.

■Radial Lead Type





(mm)

φD	4	5	6.3	8
P	1.5	2.0	2.5	3.5
φd	0.45	0.45	0.45	0.5

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

1	2	3	4	5	6	7	8	9	10	11
U	S	A	1	A	3	3	0	M	D	D

- 11: Configuration※
- 9–10: Capacitance tolerance (±20%)
- 6–8: Rated capacitance (33 μF)
- 4–5: Rated voltage (10V)
- 2–3: Series name
- 1: Type

※Configuration

φ D	Pb-free leadwire Pb-free PET sleeve
4 to 8	DD

■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 1.0	4 × 7 1.0
0.22	R22												4 × 7 2.3	4 × 7 2.3
0.33	R33												4 × 7 3.5	4 × 7 3.5
0.47	R47												4 × 7 5.0	4 × 7 5.0
1	010												4 × 7 10	4 × 7 10
2.2	2R2												4 × 7 19	4 × 7 19
3.3	3R3												4 × 7 24	4 × 7 24
4.7	4R7										4 × 7 24	4 × 7 24	5 × 7 29	4 × 7 28
10	100						4 × 7 28	4 × 7 28	5 × 7 33	4 × 7 28	5 × 7 36	4 × 7 31	6.3 × 7 44	5 × 7 38
22	220		4 × 7 34	4 × 7 34	5 × 7 38	4 × 7 35	5 × 7 44	4 × 7 39	6.3 × 7 51	5 × 7 48	6.3 × 7 57	5 × 7 52	8 × 7 65	6.3 × 7 58
33	330	4 × 7 33	5 × 7 42	4 × 7 40	5 × 7 47	4 × 7 43	6.3 × 7 57	5 × 7 55	6.3 × 7 63	5 × 7 58	8 × 7 72	6.3 × 7 65		8 × 7 75
47	470	4 × 7 39	5 × 7 50	4 × 7 48	6.3 × 7 59	5 × 7 59	6.3 × 7 68	5 × 7 65	8 × 7 78	6.3 × 7 71		8 × 7 85		
100	101	5 × 7 65	6.3 × 7 77	5 × 7 78	8 × 7 96	6.3 × 7 87	8 × 7 107	6.3 × 7 98		8 × 7 115				
220	221	6.3 × 7 110	8 × 7 130	6.3 × 7 120		8 × 7 145		8 × 7 150						
330	331	8 × 7 165		8 × 7 180										
470	471	8 × 7 240											Case size φD × L (mm) Rated ripple	

Rated ripple current (mArms) 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 formed or taped product spec.
Please refer to page 4 for the minimum order quantity.

Mouser Electronics

Authorized Distributor

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Nichicon:

USA1C100MDA USA1C100MDA1TE USA1E330MCA1TP USA1E330MDA USA1H4R7MDA USA1V4R7MDA USA1V4R7MDA1TP USA0J101MCA1TP USA1E100MDA1TP USA1H2R2MCA1TE USA1H2R2MDA USA1H2R2MDA1TE USA1H2R2MDA1TP USA1C470MCA1TP USA1C470MDA USA1C470MDA1TP USA1E100MCA1TP USA1E100MDA USA1H100MDA USA1H100MDA1TP USA1H220MCA USA1HR47MCA1TE USA1V100MCA1TP USA1V100MDA USA1V100MDA1TE USA1C220MDA USA1C220MDA1TE USA1H010MCA1TE USA1H010MDA USA1V220MCA1TP USA1V220MDA USR1A101MDA1TP USR1A220MDA USR1A221MCA USR1A221MCA1TD USR0J221MDA USR0J330MDA USR0J331MCA USR0J101MCA USR0J101MDA USR0J220MDA USR1A330MDA USR1A470MDA USR1C470MDA USR1E100MDA USR1E100MDA1TE USR1E100MDA1TP USR1H220MDA USR1H2R2MDA USR1V220MDA USR1V330MDA USR0J331MCA1TD USR0J470MDA USR1A101MDA USR1C330MDA USR1H0R1MDA USR1H100MCA1TP USR1H100MDA USR1HR33MDA USR1HR47MDA USR1V100MDA USR1C100MDA USR1C101MCA1TP USR1C101MDA USR1C101MDA1TP USR1C220MDA USR1E330MDA USR1E470MDA USR1H010MCA1TP USR1H010MDA USR1H4R7MDA USR1HR22MDA USR1E101MCA USR1E220MDA USR1H330MCA USR1H330MCA1TE USR1H3R3MDA USR1V470MCA USR1V470MCA1TD USR1V4R7MDA USA1A470MDA USA1V220MDA1TP USR0J331MDA USR1A221MDA USA1H100MDA1TE USR0J331MCA1TP USR1E470MCA1TP USA1A330MCA1TP USR1E101MCD USR0J331MDD1TP USA1E470MCA1TD