ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

SA series
7mmL, For General Purposes

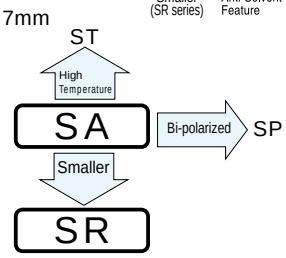
- Standard miniature series with 7mm height.
- Compliant to the RoHS directive (2002/95/EC).

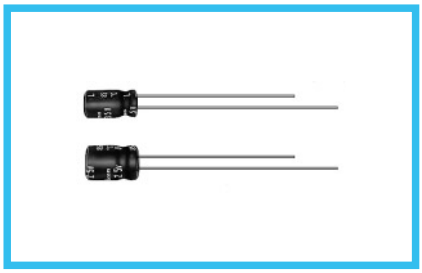
SR series
7mmL, High CV

- Higher CV series with 7mm height.

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, 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
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

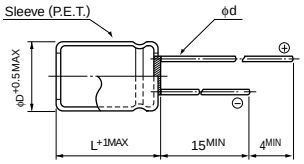
Shelf Life

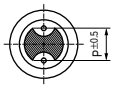
After storing the capacitors under no load at 85˚C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.

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

- Configuration※
- Capacitance tolerance (±20%)
- Rated capacitance (33 µF)
- Rated voltage (10V)
- Series name
- 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.