

# SA 系列 SERIES

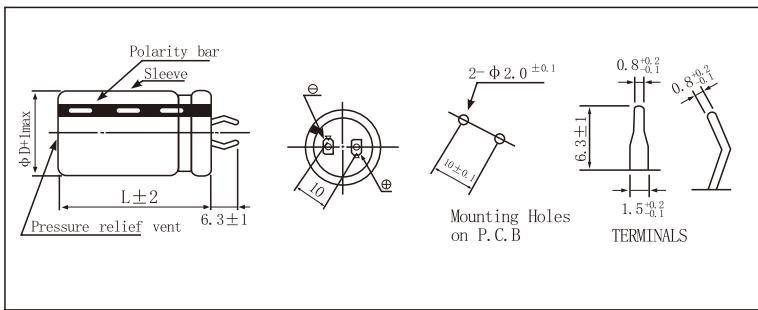
- 2000h at 105°C
- Miniatured
- design for high grade audio equipment , giving priority to high fidelity sound quality.



## ◆ SPECIFICATION

Items	Characteristics																															
Operating Temperature Range(°C)	-40~+105°C																															
Voltage range (V)	25~110V																															
Capacitance Range ( $\mu$ F)	680~33000 $\mu$ F																															
Capacitance Tolerance	$\pm 20\%$ (at 20°C, 120Hz)																															
leakage current ( $\mu$ A)	$I \leq 3\sqrt{CV}$ ( $\mu$ A) (After 5 minutes' application of rated voltage) A: Nominal Capacitance ( $\mu$ F) V : Rated Voltage (V)																															
Dissipation Factor (Tan δ)	<table border="1"> <tr> <td>WV (V)</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>80</td> <td>100</td> <td>110</td> </tr> <tr> <td>Tan δ (max)</td> <td colspan="6">0.30</td> <td>0.25</td> </tr> </table> (at 20°C, 120Hz)								WV (V)	25	35	50	63	80	100	110	Tan δ (max)	0.30						0.25								
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Low Temperature Characteristics	<table border="1"> <tr> <td>Rated Voltage (V)</td> <td colspan="7">25~110V</td> </tr> <tr> <td>Impedance  Z-25°C/Z+20°C </td> <td colspan="7">4</td> </tr> <tr> <td>Ratio  Z-40°C/Z+20°C </td> <td colspan="7">12</td> </tr> </table> (at 120Hz)								Rated Voltage (V)	25~110V							Impedance  Z-25°C/Z+20°C	4							Ratio  Z-40°C/Z+20°C	12						
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Load Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with the rated rippled current is applied for 2000 hours at 105°C . <table border="1"> <tr> <td>Capacitance change</td> <td>Within <math>\pm 20\%</math> initial value</td> </tr> <tr> <td>D. F. (Tan δ)</td> <td>Not more than 200% of specified value</td> </tr> <tr> <td>leakage current</td> <td>Not more than specified value</td> </tr> </table>								Capacitance change	Within $\pm 20\%$ initial value	D. F. (Tan δ)	Not more than 200% of specified value	leakage current	Not more than specified value																		
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Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 105°C without voltage applied. Before the measurement , the capacitor shall be preconditioned by applying voltage according to Item 4.1 of JIS C 5101-4. <table border="1"> <tr> <td>Capacitance change</td> <td>Within <math>\pm 20\%</math> initial value</td> </tr> <tr> <td>D. F. (Tan δ)</td> <td>Not more than 200% of specified value</td> </tr> <tr> <td>leakage current</td> <td>Not more than 200% of specified value</td> </tr> </table>								Capacitance change	Within $\pm 20\%$ initial value	D. F. (Tan δ)	Not more than 200% of specified value	leakage current	Not more than 200% of specified value																		
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## ◆ DIMENSIONS(mm)



## ◆ Temperature Coefficient

Temperature(°C)	+40	+55	+70	+85	+105
Coefficient	2.7	2.5	2.1	1.7	1.00

## ◆ Frequency Coefficient

Frequency (Hz)	50/60	120	1K	10k
Coefficient	0.95	1	1.1	1.15

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## ◆ STANDARD RATINGS

UR (Surge Voltage) Code	Rated Capacitance	Rated Ripple Current 105°C 120Hz	Size φD×L
(V)	(μF)	(mA rms)	(mm)
25V (32) 1E	3300	1400	22×20
	4700	1500	25×20
	5600	1650	22×25
	6800	1950	22×30
		1950	25×25
		1950	30×20
	8200	2250	22×35
		2450	22×40
	10000	2450	25×30
		2450	30×25
		2450	35×20
		2650	22×45
	12000	2650	25×35
		2650	30×30
		2650	35×25
	15000	3000	22×50
		3000	25×40
	18000	3350	25×50
		3350	30×35
		3350	35×30
	22000	3750	30×45
		3750	35×35
	27000	4200	30×50
		4200	35×40
	33000	4600	35×45
35V (44) 1V	2200	1400	22×20
	3300	1500	25×20
	3900	1700	22×25
	4700	2100	22×30
	5600	2250	22×35
		2250	25×25
	6800	2500	22×40
		2500	25×30
		2500	35×20
	8200	2700	22×45
		2700	25×35
		2700	30×25
	10000	2950	22×50
		2950	25×40
		2950	30×30
		2950	35×25
	12000	3250	25×45
		3250	30×35
		3250	35×30
	15000	3700	30×40
50V (63) 1H	18000	4050	30×50
		4050	35×35
	22000	4400	35×40
		4400	35×40
	27000	4800	35×50
	1500	1450	22×20
	1800	1600	22×20
	2200	1750	22×25
	2700	1900	30×20
	3300	2150	22×30

UR (Surge Voltage) Code	Rated Capacitance	Rated Ripple Current 105°C 120Hz	Size φD×L
(V)	(μF)	(mA rms)	(mm)
50V (63) 1H	3900	2300	22×35
		2300	25×30
		2300	35×20
	4700	2550	22×40
		2550	30×25
	5600	2800	22×45
		2800	25×35
		3150	30×30
	6800	3150	25×45
		3150	30×35
		3150	35×25
	8200	3450	30×40
		3450	35×30
	10000	3850	30×45
		3850	35×35
	12000	4200	30×50
		4200	35×40
	15000	4550	35×45
		4900	35×50
	1200	1500	22×20
	1500	1650	25×20
	1800	1800	22×25
	2200	2000	30×20
	2700	2250	22×30
		2250	25×25
	3300	2450	22×35
		2450	25×30
		2450	35×20
	3900	2700	22×40
		2700	25×35
		2700	30×25
	4700	3000	22×45
		3000	25×40
		3000	30×30
	5600	3300	35×25
63V (79) 1J		3300	25×45
		3300	30×35
	6800	3650	25×50
		3650	30×40
		3650	35×30
	8200	4050	30×45
		4050	35×35
	10000	4400	30×50
		4400	35×40
	12000	4750	35×45
	820	1400	22×20
	1000	1550	25×20
	1200	1700	22×25
	1500	1950	30×20
	1800	2250	22×30
80V (100) 1K	2200	2250	25×25
		2450	22×35
		2450	25×30
		2450	35×20
	2700	2700	22×45
		2700	25×35
		2700	30×25
	3300	3000	22×50
		3000	25×40
		3000	30×30

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UR (Surge Voltage) Code	Rated Capacitance	Rated Ripple Current 105°C 120Hz	Size $\phi D \times L$
(V)	( $\mu F$ )	(mA rms)	(mm)
80V (100) 1K	3900	3300	25×45
		3300	30×35
	4700	3600	25×50
		3600	30×40
		3600	35×30
	5600	3950	30×45
		3950	35×35
	6800	4250	30×50
		4250	35×40
	8200	4550	35×45
100V (125) 2A	10000	4700	35×50
	680	1600	25×20
	820	1750	22×25
	1000	1950	22×30
		1950	25×25
		1950	30×20
	1200	2150	22×35
		2450	22×40
	1500	2450	25×30
		2450	30×25
		2450	35×20
		2700	22×45
	1800	2700	25×35
		2700	30×30
		2950	22×50
	2200	2950	25×40
		2950	35×25
		3200	25×50
	2700	3200	30×35
		3200	35×30
		3600	30×40
	3300	3600	35×35
		4000	30×50
	3900	4000	35×40
		4300	35×45
	5600	4700	35×50

UR (Surge Voltage) Code	Rated Capacitance	Rated Ripple Current 105°C 120Hz	Size $\phi D \times L$
(V)	( $\mu F$ )	(mA rms)	(mm)
110V (138) 2B	680	1750	22×25
	820	1850	22×30
	1000	1850	25×25
		2050	22×35
		2050	25×30
	1200	2050	30×20
		2200	22×40
		2200	25×30
		2200	30×25
		2200	35×20
1500	2550	22×45	
	2550	25×35	
	2550	30×30	
	2550	35×25	
	2850	22×50	
	2850	25×40	
	3100	25×45	
	3100	30×35	
	3100	35×30	
	3350	30×40	
2700	3350	35×35	
	3750	30×50	
	3750	35×40	
	3900	4200	35×45
4700	4500	35×50	

Customer products are available on request