

# SNAP MOUNT TYPE ALUMINUM ELECTROLYTIC CAPACITORS

## Overvoltage-resistant Series

**SS3 Series** Useful of 4,000 hours at 105°C (Warranty of 2,000 hours at 105°C)

**SS2 Series** Useful of 4,000 hours at 105°C (Warranty of 2,000 hours at 105°C)

• Conform RoHS

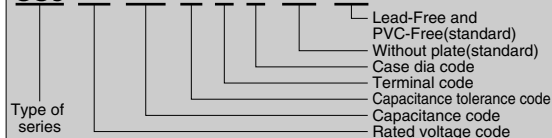
### Features

- SS2 series has good safe characteristics which shall be failed with open mode without catching any spike or fire when it is applied excess voltage.
- SS3 series is smaller sized versions of SS2 400V type.



Product code : (Example) SS3 Series 400V 220µF ±20%

**SS3 2G 221 M C Y WP EC**



Case dia code	Code
22	X
25	Y
30	Z
35	A

### Product Specifications

Items	Specifications
Temperature range	-40°C ~ +105°C
Rated voltage	200 ~ 450V.DC
Capacitance tolerance	±20% (20°C, 120Hz)
Leakage current	200V.DC : $\sqrt{CV} / 5$ ( $\mu A$ ) or less. 400V.DC : $\sqrt{CV} / 3$ ( $\mu A$ ) or less. 450V.DC : 0.02CV ( $\mu A$ ) or 3mA, whichever is smaller or less [C=capacitance ( $\mu F$ ), V=rated voltage (V)]
Dissipation factor	Less than the value specified in the standard products table. (20°C,120Hz)
Permissible ripple current	As specified in the standard products table. (105°C,120Hz)
High temp. Load life test	After 105°C,2000h, rated voltage with specified ripple current application Capacitance variation : Initial value $\pm 15\%$ Dissipation factor : 175% of less of specified initial value Leakage current : Not greater than the specified initial value
Withstanding	Do not catch any spike of fire when capacitor is applied.
Others	JIS C 5101-4.

### Ripple current correction coefficient

Temperature (°C)	60	70	85	105	
Correction coefficient	2.2	2.0	1.8	1.0	
Frequency (Hz)	50/60	120	300	1K	$\geq 10K$
Correction coefficient	0.7	1.0	1.1	1.3	1.4

A continuous load should be avoided over 10 A at the terminal in accordance with the permissible current.

### Over voltage test conditions

Voltage(V.DC)	Item		Test condition	
	Capacitance( $\mu F$ )	Voltage	Current	
200	<330	DC300V and 375V	4A	
	<330~470		5A	
	470 $\leq$		7A	
400	<100	DC500V and 600V	2A	
	<100~220		4A	
	220 $\leq$		7A	
450	<100	DC550V and 675V	2A	
	<100~220		4A	
	220 $\leq$		7A	

### Standard Products Table (SS3 Series)

Rated Voltage Code (Surge Voltage) (V. DC)	Capacitance ( $\mu F$ )	Case size $\phi$ DXL(mm)	$\tan \delta$ 20°C,120Hz	Ripple current (Arms) 105°C,120Hz	ESR(typ.) 20°C,100Hz (m $\Omega$ )	Product name
400 2G (450)	68	22×25	0.15	0.54	1522	SS32G680MCXWPEC
		22×30	0.15	0.64	1262	SS32G820MCXWPEC
	82	25×25	0.15	0.61	1262	SS32G820MCYWPEC
		22×35	0.15	0.74	1035	SS32G101MCXWPEC
	100	25×30	0.15	0.71	1035	SS32G101MCYWPEC
		22×40	0.15	0.86	863	SS32G121MCXWPEC
	120	25×30	0.15	0.79	863	SS32G121MCYWPEC
		22×45	0.15	1.01	690	SS32G151MCXWPEC
	150	25×35	0.15	0.93	690	SS32G151MCYWPEC
		30×25	0.15	0.91	690	SS32G151MCZWPEC
		25×40	0.15	1.06	575	SS32G181MCYWPEC
	180	30×30	0.15	1.05	575	SS32G181MCZWPEC
		35×25	0.15	1.05	575	SS32G181MCAWPEC
		25×45	0.15	1.24	470	SS32G221MCYWPEC
	220	30×35	0.15	1.11	470	SS32G221MCZWPEC
		35×30	0.15	1.23	470	SS32G221MCAWPEC
		30×40	0.15	1.43	383	SS32G271MCZWPEC
	270	35×30	0.15	1.36	383	SS32G271MCAWPEC
		30×45	0.15	1.64	314	SS32G331MCZWPEC
	330	35×35	0.15	1.58	314	SS32G331MCAWPEC
35×40		0.15	1.80	265	SS32G391MCAWPEC	
470	35×45	0.15	2.06	220	SS32G471MCAWPEC	

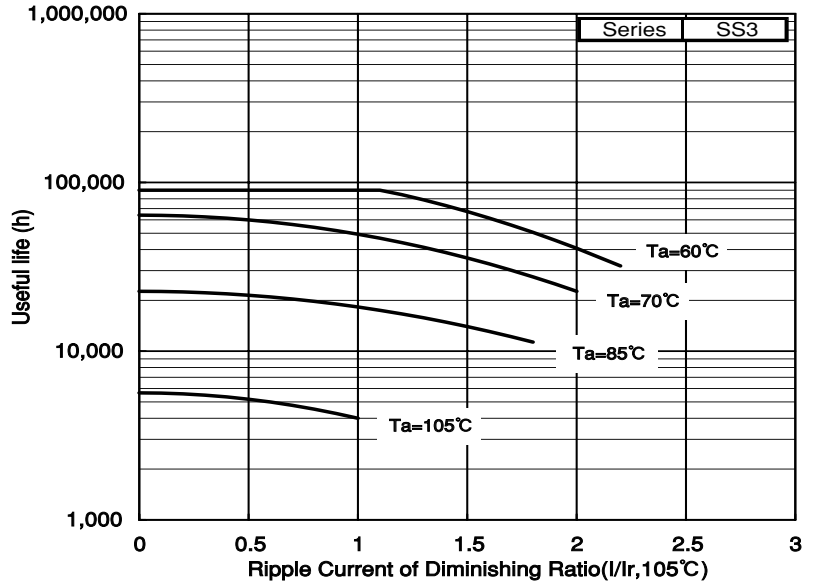
Rated Voltage Code (Surge Voltage) (V. DC)	Capacitance ( $\mu F$ )	Case size $\phi$ DXL(mm)	$\tan \delta$ 20°C,120Hz	Ripple current (Arms) 105°C,120Hz	ESR(typ.) 20°C,100Hz (m $\Omega$ )	Product name
450 2W (500)	39	22×25	0.15	0.40	2654	SS32W390MCXWPEC
		22×30	0.15	0.47	2202	SS32W470MCXWPEC
	56	22×30	0.15	0.52	1848	SS32W560MCXWPEC
		25×25	0.15	0.52	1848	SS32W560MCYWPEC
	68	22×35	0.15	0.61	1522	SS32W680MCXWPEC
		25×30	0.15	0.61	1522	SS32W680MCYWPEC
	82	22×40	0.15	0.70	1262	SS32W820MCXWPEC
		25×30	0.15	0.67	1262	SS32W820MCYWPEC
	100	22×45	0.15	0.82	1035	SS32W101MCXWPEC
		25×35	0.15	0.77	1035	SS32W101MCYWPEC
		30×25	0.15	0.75	1035	SS32W101MCZWPEC
	120	25×40	0.15	0.90	863	SS32W121MCYWPEC
		30×30	0.15	0.86	863	SS32W121MCZWPEC
		35×25	0.15	0.86	863	SS32W121MCAWPEC
	150	25×45	0.15	1.05	690	SS32W151MCXWPEC
		30×35	0.15	1.01	690	SS32W151MCYWPEC
		35×30	0.15	1.01	690	SS32W151MCAWPEC
	180	30×40	0.15	1.16	575	SS32W181MCZWPEC
		35×30	0.15	1.11	575	SS32W181MCAWPEC
	220	30×45	0.15	1.34	470	SS32W221MCZWPEC
35×35		0.15	1.30	470	SS32W221MCAWPEC	
270	35×40	0.15	1.50	383	SS32W271MCAWPEC	
330	35×45	0.15	1.72	314	SS32W331MCAWPEC	

ALUMINUM ELECTROLYTIC CAPACITORS

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## Life time graph

Useful life depending on ambient temperature  $T_a$  and ripple current operating conditions  $I_r$  versus rated ripple current at 105°C, 120Hz



Standard Products Table (SS2 Series)

Rated Voltage Code (Surge Voltage) (V. DC)	Capacitance (μF)	Case size øDXL (mm)	tanδ 20°C, 120Hz	Ripple current (Arms) 105°C, 120Hz	ESR (typ.) 20°C, 100Hz (mΩ)	Product name
200 2D (250)	150	22×25	0.15	0.62	850	SS22D151MCXWPEC
	180	22×30	0.15	0.73	707	SS22D181MCXWPEC
	220	22×30	0.15	0.79	579	SS22D221MCXWPEC
		25×25	0.15	0.77	579	SS22D221MCYWPEC
	270	22×35	0.15	0.95	472	SS22D271MCXWPEC
		25×30	0.15	0.90	472	SS22D271MCYWPEC
	330	22×40	0.15	1.10	386	SS22D331MCXWPEC
		25×30	0.15	1.00	386	SS22D331MCYWPEC
	390	22×50	0.15	1.31	327	SS22D391MCXWPEC
		25×35	0.15	1.16	327	SS22D391MCYWPEC
		30×25	0.15	1.11	327	SS22D391MCZWPEC
	470	25×40	0.15	1.33	271	SS22D471MCYWPEC
		30×30	0.15	1.30	271	SS22D471MCZWPEC
		25×45	0.15	1.52	227	SS22D561MCYWPEC
	560	30×30	0.15	1.42	227	SS22D561MCZWPEC
		35×25	0.15	1.41	227	SS22D561MCAWPEC
			30×35	0.15	1.65	187
	680	35×30	0.15	1.65	187	SS22D681MCAWPEC
		30×40	0.15	1.89	155	SS22D821MCZWPEC
	820	35×30	0.15	1.82	155	SS22D821MCAWPEC
1000		30×50	0.15	2.29	127	SS22D102MCZWPEC
	35×35	0.15	2.13	127	SS22D102MCAWPEC	
1200	35×40	0.15	2.42	106	SS22D122MCAWPEC	
1500	35×50	0.15	2.95	85	SS22D152MCAWPEC	

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400 2G (450)	68	22×30	0.15	0.58	1522	SS22G680MCXWPEC
		22×30	0.15	0.67	1262	SS22G820MCXWPEC
	82	25×25	0.15	0.61	1262	SS22G820MCYWPEC
		22×40	0.15	0.79	1035	SS22G101MCXWPEC
	100	25×30	0.15	0.72	1035	SS22G101MCYWPEC
		22×45	0.15	0.91	863	SS22G121MCXWPEC
	120	25×35	0.15	0.84	863	SS22G121MCYWPEC
		30×25	0.15	0.81	863	SS22G121MCZWPEC
		25×40	0.15	0.99	690	SS22G151MCYWPEC
	150	30×30	0.15	0.96	690	SS22G151MCZWPEC
		25×45	0.15	1.14	575	SS22G181MCYWPEC
	180	30×30	0.15	1.05	575	SS22G181MCZWPEC
		35×25	0.15	1.05	575	SS22G181MCAWPEC
		30×35	0.15	1.23	470	SS22G221MCZWPEC
	220	35×30	0.15	1.24	470	SS22G221MCAWPEC
		30×40	0.15	1.43	383	SS22G271MCZWPEC
	270	35×35	0.15	1.45	383	SS22G271MCAWPEC
		30×50	0.15	1.73	314	SS22G331MCZWPEC
	330	35×40	0.15	1.67	314	SS22G331MCAWPEC
		390	35×45	0.15	1.90	265
470	35×50	0.15	2.16	220	SS22G471MCAWPEC	

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