

# SNAP MOUNT TYPE ALUMINUM ELECTROLYTIC CAPACITORS

## XL1 Series

Useful of 15,000 hours at 105°C (Warranty of 10,000 hours at 105°C)

• Conform RoHS

### Features

- Warranty of 10,000 hours at 105°C through improvement of electrolyte liquid and etched foil technology



### Product Specifications

Items	Specifications
Temperature range	-40°C ~ +105°C
Rated voltage	200 ~ 450V.DC
Capacitance tolerance	±20% (20°C, 120Hz)
Leakage current	0.02CV (µA) or 3mA, whichever is smaller or less (20°C, after 5 minutes) [C = nominal capacitance (µF), 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)
Endurance	After the rated voltage with specified ripple current is applied at 105°C for 10,000 hours: Capacitance change : Within ±15% of initial value Dissipation factor : Not more than 200% of initial value specified Leakage current : Not more than initial value specified
Others	JIS C 5101-4.

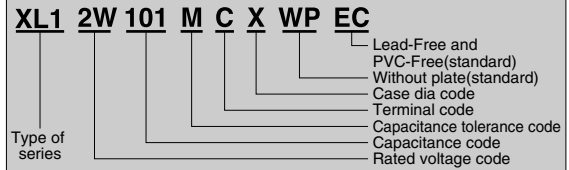
### Ripple current correction coefficient

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

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

Please consult us when the ripple voltage exceeds 70Vp-p.

Product code: (Example) XL1 series 450V 100µF±20%



Refer to page 66-67 for other terminal shape available on request.

### Standard Products Table

Rated 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	220	22×25	0.15	0.76	398	XL12D221MCXWPEC
		22×30	0.15	0.90	325	XL12D271MCXWPEC
	270	25×25	0.15	0.86	325	XL12D271MCYWPEC
		22×35	0.15	1.05	265	XL12D331MCXWPEC
	330	25×30	0.15	1.01	265	XL12D331MCYWPEC
		22×35	0.15	1.15	225	XL12D391MCXWPEC
	390	25×30	0.15	1.10	225	XL12D391MCYWPEC
		30×25	0.15	1.13	225	XL12D391MCZWPEC
		22×45	0.15	1.40	187	XL12D471MCXWPEC
	470	25×35	0.15	1.29	187	XL12D471MCYWPEC
		30×25	0.15	1.24	187	XL12D471MCZWPEC
		22×50	0.15	1.59	156	XL12D561MCXWPEC
	560	25×40	0.15	1.48	156	XL12D561MCYWPEC
		30×30	0.15	1.44	156	XL12D561MCZWPEC
		25×45	0.15	1.70	129	XL12D681MCYWPEC
	680	30×35	0.15	1.67	129	XL12D681MCZWPEC
		35×30	0.15	1.67	129	XL12D681MCAWPEC
		25×50	0.15	1.94	107	XL12D821MCYWPEC
	820	30×40	0.15	1.92	107	XL12D821MCZWPEC
		35×30	0.15	1.83	107	XL12D821MCAWPEC
30×45		0.15	2.22	88	XL12D102MCZWPEC	
1000	35×35	0.15	2.15	88	XL12D102MCAWPEC	
	30×50	0.15	2.53	73	XL12D122MCZWPEC	
1200	35×40	0.15	2.44	73	XL12D122MCAWPEC	
	35×45	0.15	2.85	59	XL12D152MCAWPEC	

Rated 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
250	150	22×25	0.15	0.62	584	XL12E151MCXWPEC
		22×30	0.15	0.73	487	XL12E181MCXWPEC
	180	25×25	0.15	0.70	487	XL12E181MCYWPEC
		22×35	0.15	0.86	398	XL12E221MCXWPEC
	220	25×30	0.15	0.83	398	XL12E221MCYWPEC
		22×40	0.15	1.00	325	XL12E271MCXWPEC
	270	25×30	0.15	0.92	325	XL12E271MCYWPEC
		22×45	0.15	1.16	265	XL12E331MCXWPEC
	330	25×35	0.15	1.07	265	XL12E331MCYWPEC
		30×25	0.15	1.03	265	XL12E331MCZWPEC
		22×50	0.15	1.32	225	XL12E391MCXWPEC
	390	25×40	0.15	1.23	225	XL12E391MCYWPEC
		30×30	0.15	1.20	225	XL12E391MCZWPEC
		25×45	0.15	1.42	187	XL12E471MCYWPEC
	470	30×35	0.15	1.39	187	XL12E471MCZWPEC
		35×30	0.15	1.40	187	XL12E471MCAWPEC
		25×50	0.15	1.62	156	XL12E561MCYWPEC
	560	30×40	0.15	1.58	156	XL12E561MCZWPEC
		35×35	0.15	1.60	156	XL12E561MCAWPEC
		30×45	0.15	1.83	129	XL12E681MCZWPEC
680	35×40	0.15	1.85	129	XL12E681MCAWPEC	
	30×50	0.15	2.09	107	XL12E821MCZWPEC	
820	35×45	0.15	2.11	107	XL12E821MCAWPEC	
	35×50	0.15	2.43	88	XL12E102MCAWPEC	

# SNAP MOUNT TYPE ALUMINUM ELECTROLYTIC CAPACITORS

ALUMINUM ELECTROLYTIC CAPACITORS

Rated 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
400	56	22×25	0.25	0.37	1650	XL12G560MCXWPEC
	68	22×30	0.25	0.44	1300	XL12G680MCXWPEC
	82	22×35	0.25	0.51	1126	XL12G820MCXWPEC
		25×25	0.25	0.47	1126	XL12G820MCYWPEC
	100	22×40	0.25	0.60	924	XL12G101MCXWPEC
		25×30	0.25	0.55	924	XL12G101MCYWPEC
	120	22×45	0.25	0.70	770	XL12G121MCXWPEC
		25×35	0.25	0.64	770	XL12G121MCYWPEC
		30×25	0.25	0.62	770	XL12G121MCZWPEC
	150	22×50	0.25	0.82	615	XL12G151MCXWPEC
		25×40	0.25	0.76	615	XL12G151MCYWPEC
		30×30	0.25	0.74	615	XL12G151MCZWPEC
	180	35×25	0.25	0.75	615	XL12G151MCAWPEC
		25×45	0.25	0.87	520	XL12G181MCYWPEC
		30×35	0.25	0.85	520	XL12G181MCZWPEC
	220	35×30	0.25	0.86	520	XL12G181MCAWPEC
		25×50	0.25	1.00	434	XL12G221MCYWPEC
		30×40	0.25	0.99	434	XL12G221MCZWPEC
	270	35×30	0.25	0.94	434	XL12G221MCAWPEC
		30×45	0.25	1.15	354	XL12G271MCZWPEC
35×35		0.25	1.11	354	XL12G271MCAWPEC	
330	30×50	0.25	1.32	290	XL12G331MCZWPEC	
	35×40	0.25	1.28	290	XL12G331MCAWPEC	
390	35×45	0.25	1.45	245	XL12G391MCAWPEC	
470	35×50	0.25	1.66	203	XL12G471MCAWPEC	

Rated 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
450	39	22×25	0.25	0.32	2409	XL12W390MCXWPEC
		22×30	0.25	0.38	1999	XL12W470MCXWPEC
	47	25×25	0.25	0.36	1999	XL12W470MCYWPEC
		22×35	0.25	0.43	1678	XL12W560MCXWPEC
	56	25×30	0.25	0.43	1678	XL12W560MCYWPEC
		22×40	0.25	0.50	1382	XL12W680MCXWPEC
	68	25×30	0.25	0.46	1382	XL12W680MCYWPEC
		22×40	0.25	0.55	1146	XL12W820MCXWPEC
	82	25×35	0.25	0.54	1146	XL12W820MCYWPEC
		30×25	0.25	0.51	1146	XL12W820MCZWPEC
		22×50	0.25	0.67	939	XL12W101MCXWPEC
	100	25×40	0.25	0.62	939	XL12W101MCYWPEC
		30×30	0.25	0.60	939	XL12W101MCZWPEC
		25×45	0.25	0.72	783	XL12W121MCYWPEC
	120	30×35	0.25	0.69	783	XL12W121MCZWPEC
		35×30	0.25	0.70	783	XL12W121MCAWPEC
		25×50	0.25	0.83	626	XL12W151MCYWPEC
	150	30×40	0.25	0.81	626	XL12W151MCZWPEC
		35×30	0.25	0.78	626	XL12W151MCAWPEC
		30×45	0.25	0.93	522	XL12W181MCZWPEC
	180	35×35	0.25	0.91	522	XL12W181MCAWPEC
		30×50	0.25	1.07	434	XL12W221MCZWPEC
	220	35×40	0.25	1.05	434	XL12W221MCAWPEC
		270	35×45	0.25	1.21	354

## 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

