

## XL1 Series

Useful of 15,000 hours at 105°C

- Conform RoHS

### Features

- Useful of 15,000 hours at 105°C through improvement of electrolyte liquid and etched foil technology.

YL  
P.146

→  
Long-life

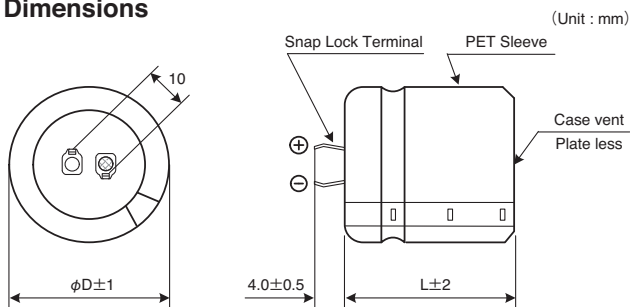
XL1



### 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 3 mA, 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 the initial value measured Dissipation factor : 200% or less than the initial value specified Leakage current : Less than or equal to the initial value specified
Shelf life	The following specification shall be meet when the capacitor are restored to 20°C after storage of 500 hours at 105°C with no voltage applied. Before the measurement, the capacitor shall be preconditioned by applying the voltage treatment according to Item 4.1 of JIS C 5101-4. Capacitance change : Within ±15% of the initial value measured Dissipation factor : 175% or less than the initial value specified Leakage current : Less than or equal to the initial value specified
Others	JIS C 5101-4

### Dimensions



### 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%

<b>XL1</b>	<b>2W</b>	<b>101</b>	<b>M</b>	<b>C</b>	<b>X</b>	<b>S5</b>	<b>WP</b>	<b>EC</b>
Type of series	Terminal code	Capacitance tolerance code	Capacitance code	Rated voltage code	Case dia code	Case height code	Without plate(standard)	Lead-Free and PVC-Free(standard)

Refer to page 124-125 for other terminal shape available on request.

# SNAP MOUNT TYPE ALUMINUM ELECTROLYTIC CAPACITORS

Standard Products Table

Rated Voltage (V. DC)	Capacitance (μF)	Case size φ D × L (mm)	tanδ 20°C, 120Hz	Ripple current (Arms)		ESR(typ.) (mΩ) 20°C, 100Hz	Product name
				105°C, 120Hz	20°C, 100Hz		
200	270	22 × 25	0.15	0.86	325	XL12D271MCXS2WPEC	
		22 × 30	0.15	1.03	265	XL12D331MCXS3WPEC	
	330	25 × 25	0.15	0.97	265	XL12D331MCYS2WPEC	
		22 × 35	0.15	1.19	225	XL12D391MCXS4WPEC	
	470	22 × 40	0.15	1.39	187	XL12D471MCXS5WPEC	
		25 × 30	0.15	1.24	187	XL12D471MCYS3WPEC	
	560	22 × 45	0.15	1.60	156	XL12D561MCXS6WPEC	
		25 × 35	0.15	1.45	156	XL12D561MCYS4WPEC	
		30 × 25	0.15	1.35	156	XL12D561MCZS2WPEC	
	680	22 × 50	0.15	1.84	129	XL12D681MCXS7WPEC	
		25 × 40	0.15	1.69	129	XL12D681MCYS5WPEC	
		30 × 30	0.15	1.60	129	XL12D681MCZS3WPEC	
		35 × 25	0.15	1.56	129	XL12D681MCAS2WPEC	
	820	25 × 45	0.15	1.95	107	XL12D821MCYS6WPEC	
		30 × 35	0.15	1.87	107	XL12D821MCZS4WPEC	
	1,000	35 × 30	0.15	1.83	107	XL12D821MCAS3WPEC	
		30 × 40	0.15	2.18	88	XL12D102MCXS7WPEC	
	1,200	35 × 35	0.15	2.15	88	XL12D102MCAS4WPEC	
		30 × 45	0.15	2.51	73	XL12D122MCZS6WPEC	
	1,500	35 × 40	0.15	2.48	73	XL12D122MCAS5WPEC	
35 × 45		0.15	2.92	59	XL12D152MCAS6WPEC		
1,800	35 × 50	0.15	3.34	50	XL12D182MCAS7WPEC		
250	180	22 × 25	0.15	0.70	487	XL12E181MCXS2WPEC	
		22 × 30	0.15	0.84	398	XL12E221MCXS3WPEC	
	220	25 × 25	0.15	0.79	398	XL12E221MCYS2WPEC	
		22 × 35	0.15	0.99	325	XL12E271MCXS4WPEC	
	330	22 × 40	0.15	1.16	265	XL12E331MCXS5WPEC	
		25 × 30	0.15	1.04	265	XL12E331MCYS3WPEC	
	390	22 × 45	0.15	1.33	225	XL12E391MCXS6WPEC	
		25 × 35	0.15	1.21	225	XL12E391MCYS4WPEC	
		30 × 25	0.15	1.13	225	XL12E391MCZS2WPEC	
	470	22 × 50	0.15	1.53	187	XL12E471MCXS7WPEC	
		25 × 40	0.15	1.40	187	XL12E471MCYS5WPEC	
		30 × 30	0.15	1.33	187	XL12E471MCZS3WPEC	
		35 × 25	0.15	1.29	187	XL12E471MCAS2WPEC	
	560	25 × 45	0.15	1.61	156	XL12E561MCYS6WPEC	
		30 × 35	0.15	1.55	156	XL12E561MCZS4WPEC	
		35 × 30	0.15	1.51	156	XL12E561MCAS3WPEC	
	680	30 × 40	0.15	1.80	129	XL12E681MCZS5WPEC	
		35 × 35	0.15	1.77	129	XL12E681MCAS4WPEC	
	820	30 × 45	0.15	2.08	107	XL12E821MCZS6WPEC	
		35 × 40	0.15	2.06	107	XL12E821MCAS5WPEC	
1,000	30 × 50	0.15	2.40	88	XL12E102MCZS7WPEC		
	35 × 45	0.15	2.38	88	XL12E102MCAS6WPEC		
1,200	35 × 50	0.15	2.73	74	XL12E122MCAS7WPEC		

Rated Voltage (V. DC)	Capacitance (μF)	Case size φ D × L (mm)	tanδ 20°C, 120Hz	Ripple current (Arms)		ESR(typ.) (mΩ) 20°C, 100Hz	Product name
				105°C, 120Hz	20°C, 100Hz		
400	68	22 × 25	0.25	0.43	1,300	XL12G680MCXS2WPEC	
		22 × 30	0.25	0.57	924	XL12G101MCXS3WPEC	
	100	25 × 25	0.25	0.53	924	XL12G101MCYS2WPEC	
		22 × 35	0.25	0.66	770	XL12G121MCXS4WPEC	
	120	25 × 30	0.25	0.63	770	XL12G121MCYS3WPEC	
		22 × 40	0.25	0.78	615	XL12G151MCXS5WPEC	
	150	30 × 25	0.25	0.70	615	XL12G151MCZS2WPEC	
		22 × 45	0.25	0.90	520	XL12G181MCXS6WPEC	
	180	25 × 35	0.25	0.82	520	XL12G181MCYS4WPEC	
		35 × 25	0.25	0.80	520	XL12G181MCAS2WPEC	
	220	25 × 45	0.25	1.01	434	XL12G221MCYS6WPEC	
		30 × 30	0.25	0.91	434	XL12G221MCZS3WPEC	
	270	25 × 50	0.25	1.17	354	XL12G271MCYS7WPEC	
		30 × 35	0.25	1.07	354	XL12G271MCZS4WPEC	
	330	35 × 30	0.25	1.05	354	XL12G271MCAS3WPEC	
		30 × 40	0.25	1.25	290	XL12G331MCZS5WPEC	
390	35 × 35	0.25	1.24	290	XL12G331MCAS4WPEC		
	30 × 50	0.25	1.50	245	XL12G391MCZS7WPEC		
470	35 × 40	0.25	1.42	245	XL12G391MCAS5WPEC		
	35 × 45	0.25	1.63	203	XL12G471MCAS6WPEC		
560	35 × 50	0.25	1.86	171	XL12G561MCAS7WPEC		
450	56	22 × 25	0.25	0.39	1,678	XL12W560MCXS2WPEC	
		22 × 30	0.25	0.47	1,382	XL12W680MCXS3WPEC	
	68	25 × 25	0.25	0.44	1,382	XL12W680MCYS2WPEC	
		22 × 35	0.25	0.55	1,146	XL12W820MCXS4WPEC	
	82	22 × 40	0.25	0.64	939	XL12W101MCXS5WPEC	
		25 × 30	0.25	0.57	939	XL12W101MCYS3WPEC	
	100	30 × 25	0.25	0.57	939	XL12W101MCZS2WPEC	
		22 × 45	0.25	0.74	783	XL12W121MCXS6WPEC	
	120	25 × 35	0.25	0.67	783	XL12W121MCYS4WPEC	
		35 × 25	0.25	0.65	783	XL12W121MCAS2WPEC	
		25 × 45	0.25	0.84	626	XL12W151MCYS6WPEC	
	150	30 × 30	0.25	0.75	626	XL12W151MCZS3WPEC	
		25 × 50	0.25	0.96	522	XL12W181MCYS7WPEC	
	180	30 × 35	0.25	0.88	522	XL12W181MCZS4WPEC	
		35 × 30	0.25	0.86	522	XL12W181MCAS3WPEC	
	220	30 × 40	0.25	1.02	434	XL12W221MCZS5WPEC	
35 × 35		0.25	1.01	434	XL12W221MCAS4WPEC		
270	30 × 50	0.25	1.25	354	XL12W271MCZS7WPEC		
	35 × 40	0.25	1.18	354	XL12W271MCAS5WPEC		
330	35 × 45	0.25	1.37	290	XL12W331MCAS6WPEC		
390	35 × 50	0.25	1.56	246	XL12W391MCAS7WPEC		

ALUMINUM ELECTROLYTIC CAPACITORS

Life time graph

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

