



## LXM Series

- Endurance with ripple current : 7,000 hours at 105°C
- Non solvent resistant type
- RoHS2 Compliant

LXM

Longer life

LXQ



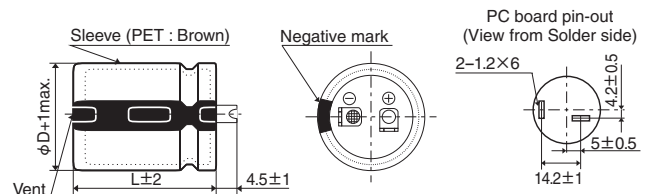
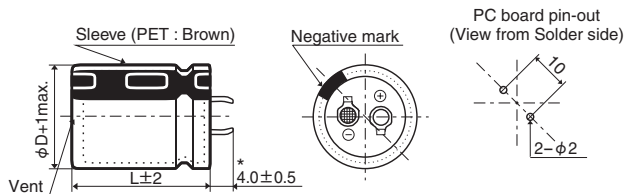
### SPECIFICATIONS

Items	Characteristics		
Category	-25 to +105°C		
Temperature Range	-25 to +105°C		
Rated Voltage Range	160 to 450V <sub>dc</sub>		
Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)		
Leakage Current	I ≤ 3√CV Where, I : Max. leakage current (µA), C : Nominal capacitance (µF), V : Rated voltage (V) (at 20°C after 5 minutes)		
Dissipation Factor (tan δ)	Rated voltage (V <sub>dc</sub> )	160 to 400V	420 & 450V
	tan δ (Max.)	0.15	0.20
Low Temperature Characteristics (Max. Impedance Ratio)	Rated voltage (V <sub>dc</sub> )	160 to 400V	420 & 450V
	Z (-25°C)/Z (+20°C)	4	8
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with the rated ripple current is applied (the peak voltage shall not exceed the rated voltage) for 7,000 hours at 105°C.		
	Capacitance change	≤ ±20% of the initial value	
	D.F. (tan δ)	≤ 250% of the initial specified value	
	Leakage current	≤ The initial specified value	
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.		
	Capacitance change	≤ ±15% of the initial value	
	D.F. (tan δ)	≤ 150% of the initial specified value	
	Leakage current	≤ The initial specified value	

### DIMENSIONS [mm]

Terminal Code : VS (φ22 to φ35) : Standard

Terminal Code : LI (φ35)



\* φD=35mm : 3.5 ± 0.5mm

The standard design has no plastic disc.

### PART NUMBERING SYSTEM



Please refer to "Product code guide (snap-in type)"

◆ STANDARD RATINGS

WV (V <sub>dc</sub> )	Cap (µF)	Case size ϕD×L(mm)	tan δ	Rated ripple current (Arms/105°C, 120Hz)	Part No.	WV (V <sub>dc</sub> )	Cap (µF)	Case size ϕD×L(mm)	tan δ	Rated ripple current (Arms/105°C, 120Hz)	Part No.
160	330	22 × 25	0.15	1.11	ELXM161VSN331MP25S	220	220	22 × 25	0.15	0.90	ELXM221VSN221MP25S
	390	22 × 30	0.15	1.26	ELXM161VSN391MP30S		270	22 × 30	0.15	1.05	ELXM221VSN271MP30S
	470	22 × 30	0.15	1.39	ELXM161VSN471MP30S		330	22 × 35	0.15	1.19	ELXM221VSN331MP35S
	470	25.4 × 25	0.15	1.38	ELXM161VSN471MQ25S		330	25.4 × 25	0.15	1.16	ELXM221VSN331MQ25S
	560	22 × 35	0.15	1.55	ELXM161VSN561MP35S		390	22 × 40	0.15	1.33	ELXM221VSN391MP40S
	560	25.4 × 30	0.15	1.55	ELXM161VSN561MQ30S		390	25.4 × 30	0.15	1.29	ELXM221VSN391MQ30S
	680	22 × 40	0.15	1.75	ELXM161VSN681MP40S		470	22 × 45	0.15	1.49	ELXM221VSN471MP45S
	680	25.4 × 35	0.15	1.78	ELXM161VSN681MQ35S		470	25.4 × 35	0.15	1.48	ELXM221VSN471MQ35S
	680	30 × 25	0.15	1.74	ELXM161VSN681MR25S		470	30 × 25	0.15	1.45	ELXM221VSN471MR25S
	820	22 × 50	0.15	1.97	ELXM161VSN821MP50S		560	22 × 50	0.15	1.63	ELXM221VSN561MP50S
	820	25.4 × 40	0.15	2.01	ELXM161VSN821MQ40S		560	25.4 × 40	0.15	1.71	ELXM221VSN821MQ40S
	820	30 × 30	0.15	1.96	ELXM161VSN821MR30S		560	30 × 30	0.15	1.62	ELXM221VSN561MR30S
	1,000	25.4 × 45	0.15	2.27	ELXM161VSN102MQ45S		680	25.4 × 45	0.15	1.87	ELXM221VSN681MQ45S
	1,000	30 × 35	0.15	2.26	ELXM161VSN102MR35S		680	30 × 35	0.15	1.86	ELXM221VSN681MR35S
	1,200	25.4 × 50	0.15	2.54	ELXM161VSN122MQ50S		820	25.4 × 50	0.15	2.10	ELXM221VSN821MQ50S
	1,200	30 × 40	0.15	2.56	ELXM161VSN122MR40S		820	30 × 40	0.15	2.12	ELXM221VSN821MR40S
	1,200	35 × 30	0.15	2.52	ELXM161VSN122MA30S		820	35 × 30	0.15	2.08	ELXM221VSN821MA30S
	1,500	30 × 45	0.15	2.96	ELXM161VSN152MR45S		1,000	30 × 50	0.15	2.48	ELXM221VSN102MR50S
	1,500	35 × 35	0.15	2.89	ELXM161VSN152MA35S		1,000	35 × 40	0.15	2.46	ELXM221VSN102MA40S
	1,800	30 × 50	0.15	3.32	ELXM161VSN182MR50S		1,200	35 × 45	0.15	2.78	ELXM221VSN122MA45S
	1,800	35 × 40	0.15	3.30	ELXM161VSN182MA40S		1,500	35 × 50	0.15	3.20	ELXM221VSN152MA50S
	2,200	35 × 50	0.15	3.87	ELXM161VSN222MA50S						
180	270	22 × 25	0.15	1.00	ELXM181VSN271MP25S	250	180	22 × 25	0.15	0.82	ELXM251VSN181MP25S
	330	22 × 30	0.15	1.16	ELXM181VSN331MP30S		220	22 × 30	0.15	0.95	ELXM251VSN221MP30S
	390	22 × 30	0.15	1.26	ELXM181VSN391MP30S		270	22 × 35	0.15	1.08	ELXM251VSN271MP35S
	390	25.4 × 25	0.15	1.26	ELXM181VSN391MQ25S		270	25.4 × 25	0.15	1.05	ELXM251VSN271MQ25S
	470	22 × 35	0.15	1.42	ELXM181VSN471MP35S		330	22 × 40	0.15	1.22	ELXM251VSN331MP40S
	470	25.4 × 30	0.15	1.42	ELXM181VSN471MQ30S		330	25.4 × 30	0.15	1.19	ELXM251VSN331MQ30S
	560	22 × 40	0.15	1.59	ELXM181VSN561MP40S		390	22 × 45	0.15	1.36	ELXM251VSN391MP45S
	560	25.4 × 30	0.15	1.55	ELXM181VSN561MQ30S		390	25.4 × 35	0.15	1.35	ELXM251VSN391MQ35S
	560	30 × 25	0.15	1.58	ELXM181VSN561MR25S		390	30 × 25	0.15	1.32	ELXM251VSN391MR25S
	680	22 × 45	0.15	1.79	ELXM181VSN681MP45S		470	22 × 50	0.15	1.49	ELXM251VSN471MP50S
	680	25.4 × 35	0.15	1.78	ELXM181VSN681MQ35S		470	25.4 × 40	0.15	1.52	ELXM251VSN471MQ40S
	680	30 × 30	0.15	1.79	ELXM181VSN681MR30S		470	30 × 30	0.15	1.49	ELXM251VSN471MR30S
	820	25.4 × 40	0.15	2.01	ELXM181VSN821MQ40S		560	25.4 × 45	0.15	1.70	ELXM251VSN561MQ45S
	820	30 × 35	0.15	2.04	ELXM181VSN821MR35S		560	30 × 35	0.15	1.69	ELXM251VSN561MR35S
	1,000	25.4 × 50	0.15	2.32	ELXM181VSN102MQ50S		680	25.4 × 50	0.15	1.91	ELXM251VSN681MQ50S
	1,000	30 × 35	0.15	2.26	ELXM181VSN102MR35S		680	30 × 40	0.15	1.93	ELXM251VSN681MR40S
	1,000	35 × 30	0.15	2.30	ELXM181VSN102MA30S		680	35 × 30	0.15	1.90	ELXM251VSN681MA30S
	1,200	30 × 45	0.15	2.65	ELXM181VSN122MR45S		820	30 × 45	0.15	2.19	ELXM251VSN821MR45S
	1,200	35 × 35	0.15	2.58	ELXM181VSN122MA35S		820	35 × 35	0.15	2.13	ELXM251VSN821MA35S
	1,500	30 × 50	0.15	3.03	ELXM181VSN152MR50S		1,000	35 × 40	0.15	2.46	ELXM251VSN102MA40S
	1,500	35 × 40	0.15	3.01	ELXM181VSN152MA40S		1,200	35 × 50	0.15	2.86	ELXM251VSN122MA50S
	1,800	35 × 45	0.15	3.41	ELXM181VSN182MA45S						
2,200	35 × 50	0.15	3.87	ELXM181VSN222MA50S							
200	220	22 × 25	0.15	0.90	ELXM201VSN221MP25S	315	100	22 × 25	0.15	0.67	ELXM3B1VSN101MP25S
	270	22 × 30	0.15	1.05	ELXM201VSN271MP30S		120	22 × 30	0.15	0.77	ELXM3B1VSN121MP30S
	330	22 × 30	0.15	1.16	ELXM201VSN331MP30S		150	22 × 30	0.15	0.86	ELXM3B1VSN151MP30S
	330	25.4 × 25	0.15	1.16	ELXM201VSN331MQ25S		150	25.4 × 25	0.15	0.85	ELXM3B1VSN151MQ25S
	390	22 × 35	0.15	1.29	ELXM201VSN391MP35S		180	22 × 35	0.15	0.96	ELXM3B1VSN181MP35S
	390	25.4 × 30	0.15	1.29	ELXM201VSN391MQ30S		180	25.4 × 30	0.15	0.96	ELXM3B1VSN181MQ30S
	470	22 × 40	0.15	1.46	ELXM201VSN471MP40S		220	22 × 40	0.15	1.09	ELXM3B1VSN221MP40S
	470	25.4 × 30	0.15	1.42	ELXM201VSN471MQ30S		220	25.4 × 30	0.15	1.06	ELXM3B1VSN221MQ30S
	470	30 × 25	0.15	1.45	ELXM201VSN471MR25S		220	30 × 25	0.15	1.08	ELXM3B1VSN221MR25S
	560	22 × 45	0.15	1.63	ELXM201VSN561MP45S		270	22 × 45	0.15	1.24	ELXM3B1VSN271MP45S
	560	25.4 × 35	0.15	1.62	ELXM201VSN561MQ35S		270	25.4 × 35	0.15	1.23	ELXM3B1VSN271MQ35S
	560	30 × 30	0.15	1.62	ELXM201VSN561MR30S		270	30 × 30	0.15	1.23	ELXM3B1VSN271MR30S
	680	25.4 × 40	0.15	1.83	ELXM201VSN681MQ40S		330	25.4 × 40	0.15	1.40	ELXM3B1VSN331MQ40S
	680	30 × 30	0.15	1.79	ELXM201VSN681MR30S		330	30 × 35	0.15	1.42	ELXM3B1VSN331MR35S
	820	25.4 × 45	0.15	2.06	ELXM201VSN821MQ45S		330	35 × 30	0.15	1.45	ELXM3B1VSN331MA30S
	820	30 × 35	0.15	2.04	ELXM201VSN821MR35S		390	25.4 × 50	0.15	1.59	ELXM3B1VSN391MQ50S
	1,000	30 × 45	0.15	2.42	ELXM201VSN102MR45S		390	30 × 35	0.15	1.54	ELXM3B1VSN391MR35S
	1,000	35 × 30	0.15	2.30	ELXM201VSN102MA30S		390	35 × 30	0.15	1.57	ELXM3B1VSN391MA30S
	1,200	30 × 50	0.15	2.71	ELXM201VSN122MR50S		470	30 × 45	0.15	1.81	ELXM3B1VSN471MR45S
	1,200	35 × 40	0.15	2.70	ELXM201VSN122MA40S		470	35 × 35	0.15	1.77	ELXM3B1VSN471MA35S
	1,500	35 × 45	0.15	3.11	ELXM201VSN152MA45S		560	30 × 50	0.15	2.03	ELXM3B1VSN561MR50S
	1,800	35 × 50	0.15	3.50	ELXM201VSN182MA50S		560	35 × 40	0.15	2.02	ELXM3B1VSN561MA40S
							680	35 × 45	0.15	2.29	ELXM3B1VSN681MA45S
							820	35 × 50	0.15	2.59	ELXM3B1VSN821MA50S



## ◆STANDARD RATINGS

WV (V <sub>dc</sub> )	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (Arms/105°C, 120Hz)	Part No.	WV (V <sub>dc</sub> )	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (Arms/105°C, 120Hz)	Part No.
350	100	22 × 25	0.15	0.67	ELXM351VSN101MP25S	420	56	22 × 25	0.20	0.50	ELXM421VSN560MP25S
	120	22 × 30	0.15	0.77	ELXM351VSN121MP30S		68	22 × 30	0.20	0.58	ELXM421VSN680MP30S
	120	25.4 × 25	0.15	0.76	ELXM351VSN121MQ25S		82	22 × 30	0.20	0.63	ELXM421VSN820MP30S
	150	22 × 35	0.15	0.88	ELXM351VSN151MP35S		82	25.4 × 25	0.20	0.63	ELXM421VSN820MQ25S
	150	25.4 × 30	0.15	0.88	ELXM351VSN151MQ30S		100	22 × 35	0.20	0.72	ELXM421VSN101MP35S
	180	22 × 40	0.15	0.99	ELXM351VSN181MP40S		100	25.4 × 30	0.20	0.72	ELXM421VSN101MQ30S
	180	25.4 × 30	0.15	0.96	ELXM351VSN181MQ30S		120	22 × 40	0.20	0.81	ELXM421VSN121MP40S
	180	30 × 25	0.15	0.98	ELXM351VSN181MR25S		120	25.4 × 30	0.20	0.79	ELXM421VSN121MQ30S
	220	22 × 45	0.15	1.12	ELXM351VSN221MP45S		120	30 × 25	0.20	0.80	ELXM421VSN121MR25S
	220	25.4 × 35	0.15	1.11	ELXM351VSN221MQ35S		150	22 × 45	0.20	0.92	ELXM421VSN151MP45S
	220	30 × 30	0.15	1.11	ELXM351VSN221MR30S		150	25.4 × 35	0.20	0.92	ELXM421VSN151MQ35S
	270	25.4 × 40	0.15	1.26	ELXM351VSN271MQ40S		150	30 × 30	0.20	0.92	ELXM421VSN151MR30S
	270	30 × 35	0.15	1.28	ELXM351VSN271MR35S		180	25.4 × 40	0.20	1.03	ELXM421VSN181MQ40S
	330	25.4 × 45	0.15	1.40	ELXM351VSN331MQ45S		180	30 × 35	0.20	1.05	ELXM421VSN181MR35S
	330	30 × 35	0.15	1.42	ELXM351VSN331MR35S		220	25.4 × 50	0.20	1.19	ELXM421VSN221MQ50S
	330	35 × 30	0.15	1.45	ELXM351VSN331MA30S		220	30 × 35	0.20	1.16	ELXM421VSN221MR35S
	390	30 × 40	0.15	1.60	ELXM351VSN391MR40S		220	35 × 30	0.20	1.18	ELXM421VSN221MA30S
	390	35 × 35	0.15	1.61	ELXM351VSN391MA35S		270	30 × 45	0.20	1.38	ELXM421VSN271MR45S
	470	30 × 50	0.15	1.86	ELXM351VSN471MR50S		270	35 × 35	0.20	1.34	ELXM421VSN271MA35S
	470	35 × 40	0.15	1.85	ELXM351VSN471MA40S		330	30 × 50	0.20	1.56	ELXM421VSN331MR50S
560	35 × 40	0.15	2.02	ELXM351VSN561MA40S	330	35 × 40	0.20	1.55	ELXM421VSN331MA40S		
680	35 × 50	0.15	2.36	ELXM351VSN681MA50S	390	35 × 45	0.20	1.74	ELXM421VSN391MA45S		
400	68	22 × 25	0.15	0.55	ELXM401VSN680MP25S	470	35 × 50	0.20	1.96	ELXM421VSN471MA50S	
	82	22 × 30	0.15	0.63	ELXM401VSN820MP30S	450	47	22 × 25	0.20	0.46	ELXM451VSN470MP25S
	100	22 × 30	0.15	0.70	ELXM401VSN101MP30S		56	22 × 30	0.20	0.52	ELXM451VSN560MP30S
	100	25.4 × 25	0.15	0.70	ELXM401VSN101MQ25S		68	22 × 30	0.20	0.58	ELXM451VSN680MP30S
	120	22 × 35	0.15	0.79	ELXM401VSN121MP35S		68	25.4 × 25	0.20	0.58	ELXM451VSN680MQ25S
	120	25.4 × 30	0.15	0.79	ELXM401VSN121MQ30S		82	22 × 35	0.20	0.65	ELXM451VSN820MP35S
	150	22 × 40	0.15	0.90	ELXM401VSN151MP40S		82	25.4 × 30	0.20	0.65	ELXM451VSN820MQ30S
	150	25.4 × 30	0.15	0.88	ELXM401VSN151MQ30S		100	22 × 40	0.20	0.74	ELXM451VSN101MP40S
	150	30 × 25	0.15	0.90	ELXM401VSN151MR25S		100	25.4 × 30	0.20	0.72	ELXM451VSN101MQ30S
	180	22 × 45	0.15	0.99	ELXM401VSN181MP45S		100	30 × 25	0.20	0.73	ELXM451VSN101MR25S
	180	25.4 × 35	0.15	1.01	ELXM401VSN181MQ35S		120	22 × 45	0.20	0.83	ELXM451VSN121MP45S
	180	30 × 30	0.15	1.01	ELXM401VSN181MR30S		120	25.4 × 35	0.20	0.82	ELXM451VSN121MQ35S
	220	25.4 × 40	0.15	1.14	ELXM401VSN221MQ40S		120	30 × 30	0.20	0.82	ELXM451VSN121MR30S
	220	30 × 35	0.15	1.16	ELXM401VSN221MR35S		150	25.4 × 40	0.20	0.94	ELXM451VSN151MQ40S
	270	25.4 × 50	0.15	1.32	ELXM401VSN271MQ50S		150	30 × 35	0.20	0.96	ELXM451VSN151MR35S
	270	30 × 40	0.15	1.33	ELXM401VSN271MR40S		180	25.4 × 45	0.20	1.06	ELXM451VSN181MQ45S
	270	35 × 30	0.15	1.31	ELXM401VSN271MA30S		180	30 × 35	0.20	1.05	ELXM451VSN181MR35S
	330	30 × 45	0.15	1.52	ELXM401VSN331MR45S		180	35 × 30	0.20	1.07	ELXM451VSN181MA30S
	330	35 × 35	0.15	1.48	ELXM401VSN331MA35S		220	30 × 40	0.20	1.20	ELXM451VSN221MR40S
	390	30 × 50	0.15	1.69	ELXM401VSN391MR50S		220	35 × 35	0.20	1.21	ELXM451VSN221MA35S
390	35 × 40	0.15	1.68	ELXM401VSN391MA40S	270		30 × 50	0.20	1.41	ELXM451VSN271MR50S	
470	35 × 45	0.15	1.91	ELXM401VSN471MA45S	270	35 × 40	0.20	1.40	ELXM451VSN271MA40S		
560	35 × 50	0.15	2.14	ELXM401VSN561MA50S	330	35 × 45	0.20	1.60	ELXM451VSN331MA45S		
					390	35 × 50	0.20	1.79	ELXM451VSN391MA50S		

## ◆RATED RIPPLE CURRENT MULTIPLIERS

### ● Frequency Multipliers

Frequency(Hz)	50	120	300	1k	10k	50k
160 to 250V <sub>dc</sub>	0.81	1.00	1.17	1.32	1.45	1.50
315 to 450V <sub>dc</sub>	0.77	1.00	1.16	1.30	1.41	1.43

The deterioration of aluminum electrolytic capacitors accelerates their life due to the internal heating produced by ripple current. For details, refer to Section "5-3 Ripple Current Effect on Lifetime" in the catalog, Technical Note.



- Always read "Notes on Use" before using the product in order to enable you to use the product correctly and prevent any faults and accidents from occurring.
- Request the Product Specification on the product of NIPPON CHEMI-CON CORPORATION to refer to it as well as this brochure prior to the order of the products. Some specific notes on use of the ordered product may be described in the specifications.
- The products listed in this catalog are designed and manufactured for general electronics equipment use and are not intended for use in applications that can adversely affect human life; where the malfunction of equipment may cause damage to life or property. In addition, our products are not intended to be used in specific applications that may cause a major social impact. Please consult with us in advance of usage of our products in the following listed applications. ① Aerospace equipment ② Power generation equipment such as thermal power, nuclear power etc. ③ Medical equipment ④ Transport equipment (automobiles, trains, ships, etc.) ⑤ Transportation control equipment ⑥ Disaster prevention / crime prevention equipment ⑦ Highly publicized information processing equipment ⑧ Submarine equipment ⑨ Other applications that are not considered general-purpose applications.
- The circuits described as examples in this catalog and the "delivery specifications" are featured in order to show the operations and usage of our products, however, this fact does not guarantee that the circuits are available to function in your equipment systems. We are not in any case responsible for any failures or damage caused by the use of information contained herein. You should examine our products, of which the characteristics are described in the "delivery specifications" and other documents, and determine whether or not our products suit your requirements according to the specifications of your equipment systems. Therefore, you bear final responsibility regarding the use of our products.  
Please make sure that you take appropriate safety measures such as use of redundant design and malfunction prevention measures in order to prevent fatal accidents and/or fires in the event any of our products malfunction.
- We strongly recommend our customers to purchase Nippon Chemi-Con products only through our official sales channels. We assume no responsibility for any defects or damages caused by using products purchased from outside our official sales channel or of counterfeit goods. In addition, we will ask the customer to pay the investigation cost for products purchased outside our official sales channel.
- We reserve the right to discontinue production and delivery of products. We do not guarantee that all the products included in this catalog will be available in the future.  
The aforementioned does not apply in the case of individual agreements deviating from the foregoing for customer-specific products
- We continually strive to improve the quality and reliability of our products, but in any case that our product does not meet our published specifications, please stop using it promptly and contact us immediately. As for compensation for non-conforming goods delivered by Chemi-Con, we will limit it only to goods found in non-compliance of our published specifications. This may be accomplished by a no cost replacement of non-conforming individual products, a credit of the piece price paid per each individual non-conforming product, or in other ways deemed necessary.  
In addition, we have an established system with enhanced traceability, therefore we will limit the applicable lot items for any potential compensation.

[Part Numbering System](#)

[Part Numbering System \(Appendix\)](#)

[Standardization](#)

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