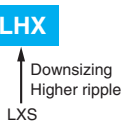
LHX Series

- The LXS series has been improved to have a higher capacitance and ripple current.
- Endurance with ripple current : 5,000 hours at 105℃
- Rated voltage range : 350 to 400V, Capacitance range: 190 to 1,530μF
- Suitable for use in switching power supply equipment and inverters.
- Non solvent resistant type
- The logo mark printed on the sleeve will be changed.
- RoHS2 Compliant

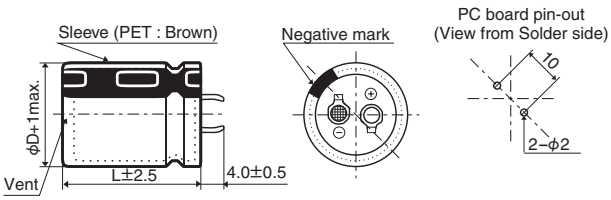


◆SPECIFICATIONS

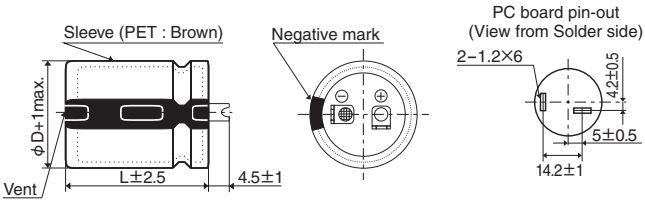
Items	Characteristics		
Category Temperature Range	-40 to +105℃		
Rated Voltage Range	350 to 400Vdc		
Capacitance Tolerance	±20% (M)		(at 20℃, 120Hz)
Leakage Current	I≦3√CV Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V)		(at 20℃ after 5 minutes)
Dissipation Factor (tan δ)	Rated voltage (Vdc)	350 to 400V	
	tan δ (Max.)	0.15	(at 20℃, 120Hz)
Low Temperature Characteristics (Max. Impedance Ratio)	Rated voltage (Vdc)	350 to 400V	
	Z(-25℃)/Z(+20℃)	5	
	Z(-40℃)/Z(+20℃)	20	(at 120Hz)
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20℃ after subjected to DC voltage with the rated ripple current is applied (the peak voltage shall not exceed the rated voltage) for 5,000 hours at 105℃.		
	Capacitance change	≦±20% of the initial value	
	D.F. (tan δ)	≦200% 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℃ after exposing them for 1,000 hours at 105℃ 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

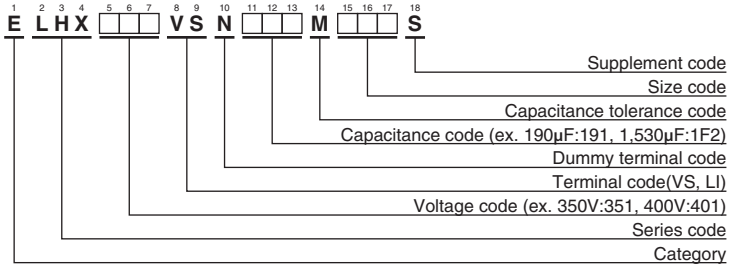


●Terminal Code : LI (φ30, φ35)



The standard design has no plastic disc.

◆PART NUMBERING SYSTEM



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

LHX Series

◆STANDARD RATINGS

WV (V_{dc})	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (Arms/ 105℃, 120Hz)	Part No.
350	230	22 × 30	0.15	1.70	ELHX351VSN231MP30S
	280	22 × 35	0.15	1.92	ELHX351VSN281MP35S
	320	25.4 × 30	0.15	1.95	ELHX351VSN321MQ30S
	330	22 × 40	0.15	2.13	ELHX351VSN331MP40S
	370	30 × 25	0.15	2.08	ELHX351VSN371MR25S
	380	22 × 45	0.15	2.33	ELHX351VSN381MP45S
	390	25.4 × 35	0.15	2.25	ELHX351VSN391MQ35S
	440	22 × 50	0.15	2.56	ELHX351VSN441MP50S
	460	25.4 × 40	0.15	2.49	ELHX351VSN461MQ40S
	480	30 × 30	0.15	2.40	ELHX351VSN481MR30S
	480	35 × 25	0.15	2.19	ELHX351VSN481MA25S
	490	22 × 55	0.15	2.75	ELHX351VSN491MP55S
	540	22 × 60	0.15	2.94	ELHX351VSN541MP60S
	540	25.4 × 45	0.15	2.76	ELHX351VSN541MQ45S
	590	30 × 35	0.15	2.72	ELHX351VSN591MR35S
	610	25.4 × 50	0.15	2.98	ELHX351VSN611MQ50S
	630	35 × 30	0.15	2.56	ELHX351VSN631MA30S
	680	25.4 × 55	0.15	3.19	ELHX351VSN681MQ55S
	710	30 × 40	0.15	3.07	ELHX351VSN711MR40S
	760	25.4 × 60	0.15	3.43	ELHX351VSN761MQ60S
	780	35 × 35	0.15	2.89	ELHX351VSN781MA35S
	820	30 × 45	0.15	3.38	ELHX351VSN821MR45S
	930	30 × 50	0.15	3.67	ELHX351VSN931MR50S
	930	35 × 40	0.15	3.26	ELHX351VSN931MA40S
	1,040	30 × 55	0.15	3.95	ELHX351VSN1A2MR55S
	1,080	35 × 45	0.15	3.60	ELHX351VSN112MA45S
	1,150	30 × 60	0.15	4.24	ELHX351VSN1B2MR60S
	1,230	35 × 50	0.15	3.93	ELHX351VSN1C2MA50S
	1,380	35 × 55	0.15	4.25	ELHX351VSN142MA55S
	1,530	35 × 60	0.15	4.55	ELHX351VSN1F2MA60S
375	210	22 × 30	0.15	1.62	ELHX3H1VSN211MP30S
	260	22 × 35	0.15	1.85	ELHX3H1VSN261MP35S
	290	25.4 × 30	0.15	1.86	ELHX3H1VSN291MQ30S
	310	22 × 40	0.15	2.06	ELHX3H1VSN311MP40S
	350	22 × 45	0.15	2.23	ELHX3H1VSN351MP45S
	350	30 × 25	0.15	2.02	ELHX3H1VSN351MR25S
	360	25.4 × 35	0.15	2.16	ELHX3H1VSN361MQ35S
	400	22 × 50	0.15	2.44	ELHX3H1VSN401MP50S
	430	25.4 × 40	0.15	2.41	ELHX3H1VSN431MQ40S
	440	35 × 25	0.15	2.10	ELHX3H1VSN441MA25S
	450	22 × 55	0.15	2.64	ELHX3H1VSN451MP55S
	450	30 × 30	0.15	2.32	ELHX3H1VSN451MR30S
	500	22 × 60	0.15	2.83	ELHX3H1VSN501MP60S
	500	25.4 × 45	0.15	2.65	ELHX3H1VSN501MQ45S
	550	30 × 35	0.15	2.63	ELHX3H1VSN551MR35S

WV (V_{dc})	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (Arms/ 105℃, 120Hz)	Part No.
375	560	25.4 × 50	0.15	2.85	ELHX3H1VSN561MQ50S
	580	35 × 30	0.15	2.45	ELHX3H1VSN581MA30S
	630	25.4 × 55	0.15	3.07	ELHX3H1VSN631MQ55S
	650	30 × 40	0.15	2.94	ELHX3H1VSN651MR40S
	700	25.4 × 60	0.15	3.30	ELHX3H1VSN701MQ60S
	720	35 × 35	0.15	2.77	ELHX3H1VSN721MA35S
	750	30 × 45	0.15	3.24	ELHX3H1VSN751MR45S
	850	30 × 50	0.15	3.50	ELHX3H1VSN851MR50S
	860	35 × 40	0.15	3.13	ELHX3H1VSN861MA40S
	960	30 × 55	0.15	3.80	ELHX3H1VSN961MR55S
	1,000	35 × 45	0.15	3.47	ELHX3H1VSN102MA45S
	1,060	30 × 60	0.15	4.07	ELHX3H1VSN1A2MR60S
	1,140	35 × 50	0.15	3.78	ELHX3H1VSN1B2MA50S
	1,280	35 × 55	0.15	4.09	ELHX3H1VSN132MA55S
	1,410	35 × 60	0.15	4.37	ELHX3H1VSN142MA60S
400	190	22 × 30	0.15	1.54	ELHX401VSN191MP30S
	240	22 × 35	0.15	1.78	ELHX401VSN241MP35S
	270	25.4 × 30	0.15	1.80	ELHX401VSN271MQ30S
	290	22 × 40	0.15	1.99	ELHX401VSN291MP40S
	320	30 × 25	0.15	1.93	ELHX401VSN321MR25S
	330	22 × 45	0.15	2.17	ELHX401VSN331MP45S
	340	25.4 × 35	0.15	2.10	ELHX401VSN341MQ35S
	380	22 × 50	0.15	2.38	ELHX401VSN381MP50S
	400	25.4 × 40	0.15	2.33	ELHX401VSN401MQ40S
	410	35 × 25	0.15	2.03	ELHX401VSN411MA25S
	420	22 × 55	0.15	2.55	ELHX401VSN421MP55S
	420	30 × 30	0.15	2.24	ELHX401VSN421MR30S
	460	25.4 × 45	0.15	2.54	ELHX401VSN461MQ45S
	470	22 × 60	0.15	2.74	ELHX401VSN471MP60S
	510	30 × 35	0.15	2.53	ELHX401VSN511MR35S
	530	25.4 × 50	0.15	2.77	ELHX401VSN531MQ50S
	540	35 × 30	0.15	2.37	ELHX401VSN541MA30S
	590	25.4 × 55	0.15	2.97	ELHX401VSN591MQ55S
	610	30 × 40	0.15	2.85	ELHX401VSN611MR40S
	650	25.4 × 60	0.15	3.18	ELHX401VSN651MQ60S
	670	35 × 35	0.15	2.68	ELHX401VSN671MA35S
	700	30 × 45	0.15	3.13	ELHX401VSN701MR45S
	800	30 × 50	0.15	3.40	ELHX401VSN801MR50S
	800	35 × 40	0.15	3.02	ELHX401VSN801MA40S
	900	30 × 55	0.15	3.68	ELHX401VSN901MR55S
	930	35 × 45	0.15	3.34	ELHX401VSN931MA45S
	990	30 × 60	0.15	3.93	ELHX401VSN991MR60S
	1,060	35 × 50	0.15	3.65	ELHX401VSN1A2MA50S
	1,190	35 × 55	0.15	3.94	ELHX401VSN122MA55S
	1,320	35 × 60	0.15	4.23	ELHX401VSN132MA60S

LHX Series

◆HIGHER RIPPLE CURRENT RATINGS

WV (V_{dc})	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (Arms/ 105℃, 120Hz)	Part No.
350	330	30 × 25	0.15	2.43	ELHX351VSN331MR25S
	440	30 × 30	0.15	2.84	ELHX351VSN441MR30S
	460	35 × 25	0.15	2.84	ELHX351VSN461MA25S
	540	30 × 35	0.15	3.22	ELHX351VSN541MR35S
	600	35 × 30	0.15	3.30	ELHX351VSN601MA30S
	650	30 × 40	0.15	3.64	ELHX351VSN651MR40S
	740	35 × 35	0.15	3.72	ELHX351VSN741MA35S
	750	30 × 45	0.15	4.00	ELHX351VSN751MR45S
	860	30 × 50	0.15	4.36	ELHX351VSN861MR50S
	890	35 × 40	0.15	4.22	ELHX351VSN891MA40S
	970	30 × 55	0.15	4.72	ELHX351VSN971MR55S
	1,030	35 × 45	0.15	4.66	ELHX351VSN1A2MA45S
	1,070	30 × 60	0.15	5.05	ELHX351VSN1A2MR60S
	1,180	35 × 50	0.15	5.09	ELHX351VSN122MA50S
	1,320	35 × 55	0.15	5.50	ELHX351VSN132MA55S
	1,460	35 × 60	0.15	5.89	ELHX351VSN1E2MA60S
375	310	30 × 25	0.15	2.36	ELHX3H1VSN311MR25S
	400	30 × 30	0.15	2.71	ELHX3H1VSN401MR30S
	420	35 × 25	0.15	2.72	ELHX3H1VSN421MA25S
	500	30 × 35	0.15	3.10	ELHX3H1VSN501MR35S
	550	35 × 30	0.15	3.16	ELHX3H1VSN551MA30S
	600	30 × 40	0.15	3.49	ELHX3H1VSN601MR40S
	690	35 × 35	0.15	3.59	ELHX3H1VSN691MA35S
	700	30 × 45	0.15	3.87	ELHX3H1VSN701MR45S

WV (V_{dc})	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (Arms/ 105℃, 120Hz)	Part No.
375	790	30 × 50	0.15	4.18	ELHX3H1VSN791MR50S
	820	35 × 40	0.15	4.05	ELHX3H1VSN821MA40S
	890	30 × 55	0.15	4.52	ELHX3H1VSN891MR55S
	950	35 × 45	0.15	4.47	ELHX3H1VSN951MA45S
	990	30 × 60	0.15	4.86	ELHX3H1VSN991MR60S
	1,080	35 × 50	0.15	4.87	ELHX3H1VSN112MA50S
	1,220	35 × 55	0.15	5.28	ELHX3H1VSN122MA55S
	1,350	35 × 60	0.15	5.66	ELHX3H1VSN1D2MA60S
400	290	30 × 25	0.15	2.28	ELHX401VSN291MR25S
	380	30 × 30	0.15	2.64	ELHX401VSN381MR30S
	390	35 × 25	0.15	2.62	ELHX401VSN391MA25S
	470	30 × 35	0.15	3.00	ELHX401VSN471MR35S
	520	35 × 30	0.15	3.07	ELHX401VSN521MA30S
	560	30 × 40	0.15	3.37	ELHX401VSN561MR40S
	640	35 × 35	0.15	3.46	ELHX401VSN641MA35S
	650	30 × 45	0.15	3.73	ELHX401VSN651MR45S
	740	30 × 50	0.15	4.04	ELHX401VSN741MR50S
	770	35 × 40	0.15	3.92	ELHX401VSN771MA40S
	830	30 × 55	0.15	4.37	ELHX401VSN831MR55S
	890	35 × 45	0.15	4.33	ELHX401VSN891MA45S
	920	30 × 60	0.15	4.69	ELHX401VSN921MR60S
	1,020	35 × 50	0.15	4.73	ELHX401VSN102MA50S
	1,140	35 × 55	0.15	5.11	ELHX401VSN1B2MA55S
	1,260	35 × 60	0.15	5.47	ELHX401VSN1C2MA60S

◆RATED RIPPLE CURRENT MULTIPLIERS

●Frequency Multipliers

Frequency(Hz)	50	120	300	1k	10k	50k
350 to 400V_{dc}	0.70	1.00	1.10	1.17	1.25	1.31

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.

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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.

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