KHX New! Series

- The KMS series has been improved to have a higher capacitance and ripple current.
- Endurance with ripple current : 105℃ 3,000 hours
- Rated voltage range : 350 to 400V
- Capacitance range : 150 to 1,570μF
- 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

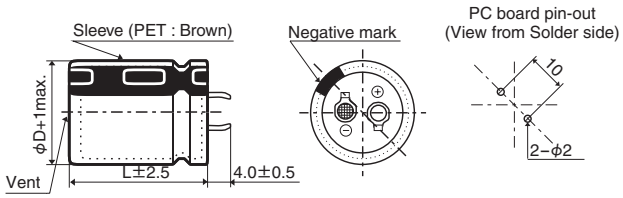
KHX
↑ Downsizing
Higher ripple
KMS

◆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 3,000 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	

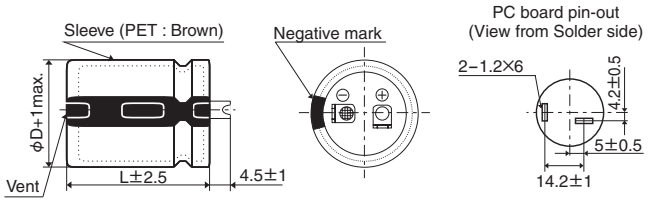
◆DIMENSIONS [mm]

●Terminal Code : VS (φ22 to φ35) : Standard

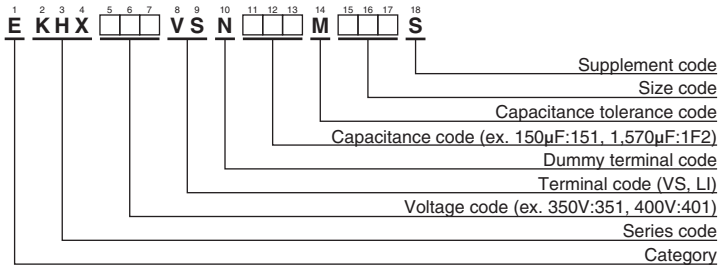


The standard design has no plastic disc.

●Terminal Code : LI (φ30, φ35)



◆PART NUMBERING SYSTEM



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

KHX New! Series

◆STANDARD RATINGS

WV (V_{dc})	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (Arms/ 105℃, 120Hz)	Part No.
350	180	22×25	0.15	1.43	EKHX351VSN181MP25S
	230	22×30	0.15	1.70	EKHX351VSN231MP30S
	250	25.4×25	0.15	1.68	EKHX351VSN251MQ25S
	290	22×35	0.15	1.95	EKHX351VSN291MP35S
	330	25.4×30	0.15	1.99	EKHX351VSN331MQ30S
	340	22×40	0.15	2.16	EKHX351VSN341MP40S
	380	30×25	0.15	2.11	EKHX351VSN381MR25S
	390	22×45	0.15	2.36	EKHX351VSN391MP45S
	400	25.4×35	0.15	2.28	EKHX351VSN401MQ35S
	450	22×50	0.15	2.59	EKHX351VSN451MP50S
	480	25.4×40	0.15	2.55	EKHX351VSN481MQ40S
	490	35×25	0.15	2.22	EKHX351VSN491MA25S
	500	22×55	0.15	2.78	EKHX351VSN501MP55S
	500	30×30	0.15	2.45	EKHX351VSN501MR30S
	550	25.4×45	0.15	2.78	EKHX351VSN551MQ45S
	560	22×60	0.15	3.00	EKHX351VSN561MP60S
	610	30×35	0.15	2.77	EKHX351VSN611MR35S
	630	25.4×50	0.15	3.03	EKHX351VSN631MQ50S
	640	35×30	0.15	2.58	EKHX351VSN641MA30S
	700	25.4×55	0.15	3.24	EKHX351VSN701MQ55S
	720	30×40	0.15	3.09	EKHX351VSN721MR40S
	780	25.4×60	0.15	3.48	EKHX351VSN781MQ60S
	800	35×35	0.15	2.92	EKHX351VSN801MA35S
	840	30×45	0.15	3.43	EKHX351VSN841MR45S
	950	30×50	0.15	3.70	EKHX351VSN951MR50S
	950	35×40	0.15	3.29	EKHX351VSN951MA40S
	1,060	30×55	0.15	3.99	EKHX351VSN1A2MR55S
	1,110	35×45	0.15	3.65	EKHX351VSN112MA45S
	1,180	30×60	0.15	4.29	EKHX351VSN122MR60S
	1,260	35×50	0.15	3.98	EKHX351VSN1C2MA50S
	1,420	35×55	0.15	4.31	EKHX351VSN142MA55S
	1,570	35×60	0.15	4.61	EKHX351VSN1F2MA60S
375	160	22×25	0.15	1.35	EKHX3H1VSN161MP25S
	210	22×30	0.15	1.62	EKHX3H1VSN211MP30S
	230	25.4×25	0.15	1.61	EKHX3H1VSN231MQ25S
	260	22×35	0.15	1.85	EKHX3H1VSN261MP35S
	300	25.4×30	0.15	1.89	EKHX3H1VSN301MQ30S
	310	22×40	0.15	2.06	EKHX3H1VSN311MP40S
	350	30×25	0.15	2.02	EKHX3H1VSN351MR25S
	360	22×45	0.15	2.26	EKHX3H1VSN361MP45S
	370	25.4×35	0.15	2.19	EKHX3H1VSN371MQ35S
	410	22×50	0.15	2.47	EKHX3H1VSN411MP50S
	440	25.4×40	0.15	2.44	EKHX3H1VSN441MQ40S
	450	30×30	0.15	2.32	EKHX3H1VSN451MR30S
	450	35×25	0.15	2.12	EKHX3H1VSN451MA25S
	460	22×55	0.15	2.67	EKHX3H1VSN461MP55S
	500	25.4×45	0.15	2.65	EKHX3H1VSN501MQ45S
	510	22×60	0.15	2.86	EKHX3H1VSN511MP60S

WV (V_{dc})	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (Arms/ 105℃, 120Hz)	Part No.
375	560	30×35	0.15	2.65	EKHX3H1VSN561MR35S
	570	25.4×50	0.15	2.88	EKHX3H1VSN571MQ50S
	590	35×30	0.15	2.47	EKHX3H1VSN591MA30S
	640	25.4×55	0.15	3.10	EKHX3H1VSN641MQ55S
	660	30×40	0.15	2.96	EKHX3H1VSN661MR40S
	710	25.4×60	0.15	3.32	EKHX3H1VSN711MQ60S
	730	35×35	0.15	2.79	EKHX3H1VSN731MA35S
	770	30×45	0.15	3.28	EKHX3H1VSN771MR45S
	870	30×50	0.15	3.54	EKHX3H1VSN871MR50S
	870	35×40	0.15	3.15	EKHX3H1VSN871MA40S
	980	30×55	0.15	3.84	EKHX3H1VSN981MR55S
	1,020	35×45	0.15	3.50	EKHX3H1VSN102MA45S
	1,080	30×60	0.15	4.10	EKHX3H1VSN112MR60S
	1,160	35×50	0.15	3.81	EKHX3H1VSN1B2MA50S
	1,300	35×55	0.15	4.12	EKHX3H1VSN132MA55S
	1,440	35×60	0.15	4.42	EKHX3H1VSN1E2MA60S
400	150	22×25	0.15	1.31	EKHX401VSN151MP25S
	200	22×30	0.15	1.58	EKHX401VSN201MP30S
	220	25.4×25	0.15	1.58	EKHX401VSN221MQ25S
	250	22×35	0.15	1.81	EKHX401VSN251MP35S
	280	25.4×30	0.15	1.83	EKHX401VSN281MQ30S
	290	22×40	0.15	1.99	EKHX401VSN291MP40S
	330	30×25	0.15	1.96	EKHX401VSN331MR25S
	340	22×45	0.15	2.20	EKHX401VSN341MP45S
	340	25.4×35	0.15	2.10	EKHX401VSN341MQ35S
	390	22×50	0.15	2.41	EKHX401VSN391MP50S
	410	25.4×40	0.15	2.35	EKHX401VSN411MQ40S
	420	35×25	0.15	2.05	EKHX401VSN421MA25S
	430	22×55	0.15	2.58	EKHX401VSN431MP55S
	430	30×30	0.15	2.27	EKHX401VSN431MR30S
	470	25.4×45	0.15	2.57	EKHX401VSN471MQ45S
	480	22×60	0.15	2.77	EKHX401VSN481MP60S
	520	30×35	0.15	2.55	EKHX401VSN521MR35S
	540	25.4×50	0.15	2.80	EKHX401VSN541MQ50S
	550	35×30	0.15	2.39	EKHX401VSN551MA30S
	600	25.4×55	0.15	3.00	EKHX401VSN601MQ55S
	620	30×40	0.15	2.87	EKHX401VSN621MR40S
	670	25.4×60	0.15	3.22	EKHX401VSN671MQ60S
	690	35×35	0.15	2.71	EKHX401VSN691MA35S
	720	30×45	0.15	3.17	EKHX401VSN721MR45S
	820	30×50	0.15	3.44	EKHX401VSN821MR50S
	820	35×40	0.15	3.06	EKHX401VSN821MA40S
	920	30×55	0.15	3.72	EKHX401VSN921MR55S
	950	35×45	0.15	3.38	EKHX401VSN951MA45S
	1,010	30×60	0.15	3.97	EKHX401VSN102MR60S
	1,090	35×50	0.15	3.70	EKHX401VSN112MA50S
	1,220	35×55	0.15	3.99	EKHX401VSN122MA55S
	1,350	35×60	0.15	4.28	EKHX401VSN1D2MA60S

KHX New! 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	340	30×25	0.15	2.47	EKHX351VSN341MR25S
	450	30×30	0.15	2.87	EKHX351VSN451MR30S
	470	35×25	0.15	2.87	EKHX351VSN471MA25S
	560	30×35	0.15	3.28	EKHX351VSN561MR35S
	620	35×30	0.15	3.36	EKHX351VSN621MA30S
	670	30×40	0.15	3.69	EKHX351VSN671MR40S
	760	35×35	0.15	3.77	EKHX351VSN761MA35S
	770	30×45	0.15	4.06	EKHX351VSN771MR45S
	880	30×50	0.15	4.41	EKHX351VSN881MR50S
	910	35×40	0.15	4.26	EKHX351VSN911MA40S
	990	30×55	0.15	4.77	EKHX351VSN991MR55S
	1,060	35×45	0.15	4.73	EKHX351VSN1A2MA45S
	1,100	30×60	0.15	5.12	EKHX351VSN112MR60S
	1,210	35×50	0.15	5.15	EKHX351VSN122MA50S
	1,350	35×55	0.15	5.56	EKHX351VSN1D2MA55S
	1,500	35×60	0.15	5.97	EKHX351VSN152MA60S
375	310	30×25	0.15	2.36	EKHX3H1VSN311MR25S
	410	30×30	0.15	2.74	EKHX3H1VSN411MR30S
	430	35×25	0.15	2.75	EKHX3H1VSN431MA25S
	510	30×35	0.15	3.13	EKHX3H1VSN511MR35S
	560	35×30	0.15	3.19	EKHX3H1VSN561MA30S
	610	30×40	0.15	3.52	EKHX3H1VSN611MR40S
	700	35×35	0.15	3.62	EKHX3H1VSN701MA35S
	710	30×45	0.15	3.90	EKHX3H1VSN711MR45S
375	810	30×50	0.15	4.23	EKHX3H1VSN811MR50S
	830	35×40	0.15	4.07	EKHX3H1VSN831MA40S
	910	30×55	0.15	4.57	EKHX3H1VSN911MR55S
	970	35×45	0.15	4.52	EKHX3H1VSN971MA45S
	1,010	30×60	0.15	4.91	EKHX3H1VSN102MR60S
	1,110	35×50	0.15	4.94	EKHX3H1VSN112MA50S
	1,240	35×55	0.15	5.33	EKHX3H1VSN1C2MA55S
	1,380	35×60	0.15	5.72	EKHX3H1VSN142MA60S
400	290	30×25	0.15	2.28	EKHX401VSN291MR25S
	390	30×30	0.15	2.67	EKHX401VSN391MR30S
	400	35×25	0.15	2.65	EKHX401VSN401MA25S
	480	30×35	0.15	3.04	EKHX401VSN481MR35S
	530	35×30	0.15	3.10	EKHX401VSN531MA30S
	570	30×40	0.15	3.40	EKHX401VSN571MR40S
	660	35×35	0.15	3.51	EKHX401VSN661MA35S
	670	30×45	0.15	3.78	EKHX401VSN671MR45S
	760	30×50	0.15	4.10	EKHX401VSN761MR50S
	780	35×40	0.15	3.95	EKHX401VSN781MA40S
	850	30×55	0.15	4.42	EKHX401VSN851MR55S
	910	35×45	0.15	4.38	EKHX401VSN911MA45S
	940	30×60	0.15	4.74	EKHX401VSN941MR60S
	1,040	35×50	0.15	4.78	EKHX401VSN1A2MA50S
	1,160	35×55	0.15	5.15	EKHX401VSN1B2MA55S
	1,290	35×60	0.15	5.53	EKHX401VSN132MA60S

◆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.

■ 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.

CAT. No. E1001Z 2025