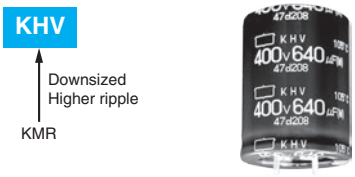
KHV New! Series

- The KMR series has been improved to have a higher capacitance and ripple current.
- Endurance with ripple current : 2,000 hours at 105℃
- Rated voltage range : 350 to 400Vdc, Capacitance range : 160 to 1,610μF
- For inverter control, switching power supplies
- Non solvent resistant type
- RoHS2 Compliant
- The logo mark printed on the sleeve will be changed.

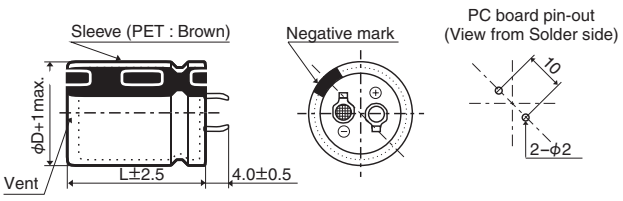


◆SPECIFICATIONS

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 2,000 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	

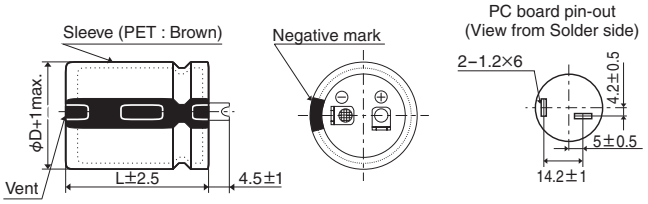
◆DIMENSIONS [mm]

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

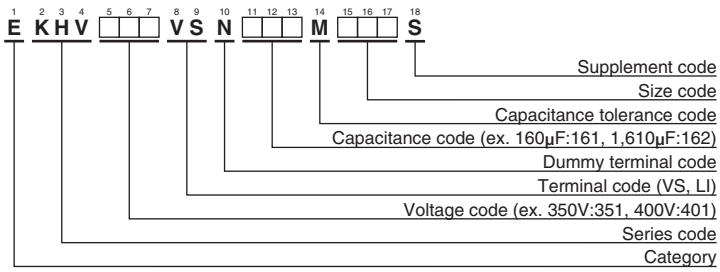


The standard design has no plastic disc.

●Terminal Code : LI (φ30, φ35)



◆PART NUMBERING SYSTEM



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

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KHV 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	EKHV351VSN181MP25S
	240	22 × 30	0.15	1.73	EKHV351VSN241MP30S
	260	25.4 × 25	0.15	1.72	EKHV351VSN261MQ25S
	290	22 × 35	0.15	1.95	EKHV351VSN291MP35S
	330	25.4 × 30	0.15	1.99	EKHV351VSN331MQ30S
	350	22 × 40	0.15	2.19	EKHV351VSN351MP40S
	390	30 × 25	0.15	2.14	EKHV351VSN391MR25S
	400	22 × 45	0.15	2.39	EKHV351VSN401MP45S
	410	25.4 × 35	0.15	2.31	EKHV351VSN411MQ35S
	460	22 × 50	0.15	2.62	EKHV351VSN461MP50S
	490	25.4 × 40	0.15	2.57	EKHV351VSN491MQ40S
	500	35 × 25	0.15	2.24	EKHV351VSN501MA25S
	510	22 × 55	0.15	2.81	EKHV351VSN511MP55S
	510	30 × 30	0.15	2.47	EKHV351VSN511MR30S
	560	25.4 × 45	0.15	2.81	EKHV351VSN561MQ45S
	570	22 × 60	0.15	3.02	EKHV351VSN571MP60S
	620	30 × 35	0.15	2.79	EKHV351VSN621MR35S
	640	25.4 × 50	0.15	3.05	EKHV351VSN641MQ50S
	660	35 × 30	0.15	2.62	EKHV351VSN661MA30S
	720	25.4 × 55	0.15	3.29	EKHV351VSN721MQ55S
	740	30 × 40	0.15	3.14	EKHV351VSN741MR40S
	790	25.4 × 60	0.15	3.50	EKHV351VSN791MQ60S
	820	35 × 35	0.15	2.96	EKHV351VSN821MA35S
	860	30 × 45	0.15	3.47	EKHV351VSN861MR45S
	970	30 × 50	0.15	3.74	EKHV351VSN971MR50S
	980	35 × 40	0.15	3.34	EKHV351VSN981MA40S
	1,090	30 × 55	0.15	4.05	EKHV351VSN112MR55S
	1,130	35 × 45	0.15	3.69	EKHV351VSN1B2MA45S
	1,210	30 × 60	0.15	4.34	EKHV351VSN122MR60S
	1,290	35 × 50	0.15	4.02	EKHV351VSN132MA50S
	1,450	35 × 55	0.15	4.35	EKHV351VSN1E2MA55S
	1,610	35 × 60	0.15	4.67	EKHV351VSN162MA60S
375	170	22 × 25	0.15	1.39	EKHV3H1VSN171MP25S
	220	22 × 30	0.15	1.66	EKHV3H1VSN221MP30S
	240	25.4 × 25	0.15	1.65	EKHV3H1VSN241MQ25S
	270	22 × 35	0.15	1.88	EKHV3H1VSN271MP35S
	310	25.4 × 30	0.15	1.92	EKHV3H1VSN311MQ30S
	320	22 × 40	0.15	2.09	EKHV3H1VSN321MP40S
	370	30 × 25	0.15	2.08	EKHV3H1VSN371MR25S
	380	22 × 45	0.15	2.33	EKHV3H1VSN381MP45S
	380	25.4 × 35	0.15	2.22	EKHV3H1VSN381MQ35S
	430	22 × 50	0.15	2.53	EKHV3H1VSN431MP50S
	450	25.4 × 40	0.15	2.47	EKHV3H1VSN451MQ40S
	470	30 × 30	0.15	2.37	EKHV3H1VSN471MR30S
	470	35 × 25	0.15	2.17	EKHV3H1VSN471MA25S
	480	22 × 55	0.15	2.72	EKHV3H1VSN481MP55S
	520	25.4 × 45	0.15	2.70	EKHV3H1VSN521MQ45S
	530	22 × 60	0.15	2.91	EKHV3H1VSN531MP60S

WV (V_{dc})	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (Arms/ 105℃, 120Hz)	Part No.
375	580	30 × 35	0.15	2.70	EKHV3H1VSN581MR35S
	600	25.4 × 50	0.15	2.95	EKHV3H1VSN601MQ50S
	610	35 × 30	0.15	2.51	EKHV3H1VSN611MA30S
	670	25.4 × 55	0.15	3.17	EKHV3H1VSN671MQ55S
	690	30 × 40	0.15	3.03	EKHV3H1VSN691MR40S
	740	25.4 × 60	0.15	3.39	EKHV3H1VSN741MQ60S
	760	35 × 35	0.15	2.85	EKHV3H1VSN761MA35S
	800	30 × 45	0.15	3.34	EKHV3H1VSN801MR45S
	910	30 × 50	0.15	3.63	EKHV3H1VSN911MR50S
	910	35 × 40	0.15	3.22	EKHV3H1VSN911MA40S
	1,010	30 × 55	0.15	3.90	EKHV3H1VSN102MR55S
	1,060	35 × 45	0.15	3.57	EKHV3H1VSN1A2MA45S
	1,120	30 × 60	0.15	4.18	EKHV3H1VSN112MR60S
	1,200	35 × 50	0.15	3.88	EKHV3H1VSN122MA50S
	1,350	35 × 55	0.15	4.20	EKHV3H1VSN1D2MA55S
	1,500	35 × 60	0.15	4.51	EKHV3H1VSN152MA60S
400	160	22 × 25	0.15	1.35	EKHV401VSN161MP25S
	200	22 × 30	0.15	1.58	EKHV401VSN201MP30S
	220	25.4 × 25	0.15	1.58	EKHV401VSN221MQ25S
	250	22 × 35	0.15	1.81	EKHV401VSN251MP35S
	290	25.4 × 30	0.15	1.86	EKHV401VSN291MQ30S
	300	22 × 40	0.15	2.03	EKHV401VSN301MP40S
	340	30 × 25	0.15	1.99	EKHV401VSN341MR25S
	350	22 × 45	0.15	2.23	EKHV401VSN351MP45S
	350	25.4 × 35	0.15	2.13	EKHV401VSN351MQ35S
	390	22 × 50	0.15	2.41	EKHV401VSN391MP50S
	420	25.4 × 40	0.15	2.38	EKHV401VSN421MQ40S
	430	35 × 25	0.15	2.08	EKHV401VSN431MA25S
	440	22 × 55	0.15	2.61	EKHV401VSN441MP55S
	440	30 × 30	0.15	2.29	EKHV401VSN441MR30S
	480	25.4 × 45	0.15	2.60	EKHV401VSN481MQ45S
	490	22 × 60	0.15	2.80	EKHV401VSN491MP60S
	540	30 × 35	0.15	2.60	EKHV401VSN541MR35S
	550	25.4 × 50	0.15	2.83	EKHV401VSN551MQ50S
	570	35 × 30	0.15	2.43	EKHV401VSN571MA30S
	620	25.4 × 55	0.15	3.05	EKHV401VSN621MQ55S
	640	30 × 40	0.15	2.92	EKHV401VSN641MR40S
	680	25.4 × 60	0.15	3.25	EKHV401VSN681MQ60S
	700	35 × 35	0.15	2.73	EKHV401VSN701MA35S
	740	30 × 45	0.15	3.22	EKHV401VSN741MR45S
	840	30 × 50	0.15	3.48	EKHV401VSN841MR50S
	840	35 × 40	0.15	3.10	EKHV401VSN841MA40S
	940	30 × 55	0.15	3.76	EKHV401VSN941MR55S
	980	35 × 45	0.15	3.43	EKHV401VSN981MA45S
	1,040	30 × 60	0.15	4.03	EKHV401VSN1A2MR60S
	1,110	35 × 50	0.15	3.73	EKHV401VSN112MA50S
	1,250	35 × 55	0.15	4.04	EKHV401VSN1C2MA55S
	1,380	35 × 60	0.15	4.32	EKHV401VSN142MA60S

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KHV 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	350	30×25	0.15	2.50	EKHV351VSN351MR25S
	460	30×30	0.15	2.90	EKHV351VSN461MR30S
	480	35×25	0.15	2.90	EKHV351VSN481MA25S
	570	30×35	0.15	3.31	EKHV351VSN571MR35S
	630	35×30	0.15	3.38	EKHV351VSN631MA30S
	680	30×40	0.15	3.72	EKHV351VSN681MR40S
	780	35×35	0.15	3.82	EKHV351VSN781MA35S
	790	30×45	0.15	4.11	EKHV351VSN791MR45S
	900	30×50	0.15	4.46	EKHV351VSN901MR50S
	930	35×40	0.15	4.31	EKHV351VSN931MA40S
	1,010	30×55	0.15	4.82	EKHV351VSN102MR55S
	1,080	35×45	0.15	4.77	EKHV351VSN112MA45S
	1,120	30×60	0.15	5.17	EKHV351VSN112MR60S
	1,230	35×50	0.15	5.20	EKHV351VSN1C2MA50S
	1,390	35×55	0.15	5.64	EKHV351VSN142MA55S
	1,540	35×60	0.15	6.05	EKHV351VSN1F2MA60S
375	330	30×25	0.15	2.43	EKHV3H1VSN331MR25S
	430	30×30	0.15	2.81	EKHV3H1VSN431MR30S
	450	35×25	0.15	2.81	EKHV3H1VSN451MA25S
	530	30×35	0.15	3.19	EKHV3H1VSN531MR35S
	590	35×30	0.15	3.27	EKHV3H1VSN591MA30S
	630	30×40	0.15	3.58	EKHV3H1VSN631MR40S
	730	35×35	0.15	3.70	EKHV3H1VSN731MA35S
	740	30×45	0.15	3.98	EKHV3H1VSN741MR45S

WV (V_{dc})	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (Arms/ 105℃, 120Hz)	Part No.
375	840	30×50	0.15	4.31	EKHV3H1VSN841MR50S
	870	35×40	0.15	4.17	EKHV3H1VSN871MA40S
	940	30×55	0.15	4.65	EKHV3H1VSN941MR55S
	1,010	35×45	0.15	4.61	EKHV3H1VSN102MA45S
	1,050	30×60	0.15	5.01	EKHV3H1VSN1A2MR60S
	1,150	35×50	0.15	5.03	EKHV3H1VSN1B2MA50S
	1,290	35×55	0.15	5.43	EKHV3H1VSN132MA55S
	1,430	35×60	0.15	5.83	EKHV3H1VSN1E2MA60S
400	300	30×25	0.15	2.32	EKHV401VSN301MR25S
	400	30×30	0.15	2.71	EKHV401VSN401MR30S
	410	35×25	0.15	2.68	EKHV401VSN411MA25S
	490	30×35	0.15	3.07	EKHV401VSN491MR35S
	540	35×30	0.15	3.13	EKHV401VSN541MA30S
	590	30×40	0.15	3.46	EKHV401VSN591MR40S
	670	35×35	0.15	3.54	EKHV401VSN671MA35S
	680	30×45	0.15	3.81	EKHV401VSN681MR45S
	780	30×50	0.15	4.15	EKHV401VSN781MR50S
	800	35×40	0.15	4.00	EKHV401VSN801MA40S
	870	30×55	0.15	4.47	EKHV401VSN871MR55S
	930	35×45	0.15	4.43	EKHV401VSN931MA45S
	970	30×60	0.15	4.81	EKHV401VSN971MR60S
	1,060	35×50	0.15	4.82	EKHV401VSN1A2MA50S
	1,190	35×55	0.15	5.22	EKHV401VSN122MA55S
	1,320	35×60	0.15	5.60	EKHV401VSN132MA60S

◆RATED RIPPLE CURRENT MULTIPLIERS

●Frequency Multipliers

Frequency(Hz)	50	120	300	1k	10k	50k
350 to 450V_{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.

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■ 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.

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