KHE Series

- Upgraded capacitance rating
- Endurance with ripple current : 2,000 hours at 105℃
- Rated voltage range : 400 to 450Vdc, Capacitance range : 210 to 1,500μF
- Non solvent resistant type
- RoHS2 Compliant

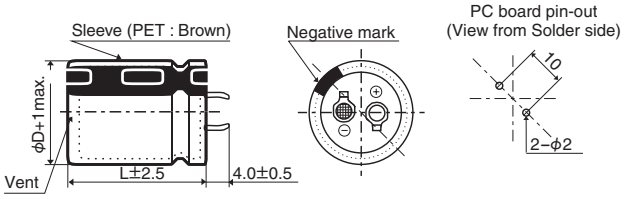
KHE
↑ Downsized
KMZ

◆SPECIFICATIONS

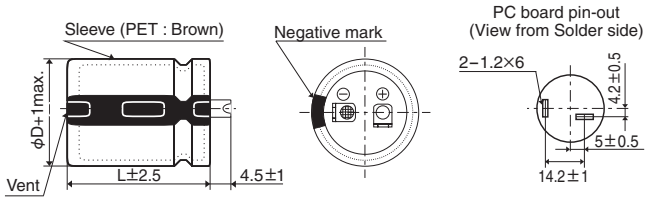
Items	Characteristics		
Category Temperature Range	-40 to +105℃		
Rated Voltage Range	400 to 450Vdc		
Capacitance Tolerance	±20% (M)		(at 20℃, 120Hz)
Leakage Current	I≦3√CV Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V)		(at 20℃ after 5 minutes)
Dissipation Factor (tan δ)	Rated voltage (Vdc)	400 to 450V	
	tan δ (Max.)	0.20	(at 20℃, 120Hz)
Low Temperature Characteristics (Max. Impedance Ratio)	Rated voltage (Vdc)	400 to 450V	
	Z(-25℃)/Z(+20℃)	8	(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 (φ25.4 to φ35) : Standard



●Terminal Code : LI (φ30, φ35)



The standard design has no plastic disc.

◆PART NUMBERING SYSTEM

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
E	K	H	E				V	S	N				M				Z

- Supplement code
- Size code
- Capacitance tolerance code
- Capacitance code (ex. 470μF:471, 1,000μF:102)
- Dummy terminal code
- Terminal code (VS, LI)
- Voltage code (ex. 400V:401, 450V:451)
- Series code
- Category

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

KHE Series

◆STANDARD RATINGS

WV (V_{dc})	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (Arms/ 105℃, 120Hz)	Part No.
400	240	25.4×25	0.20	1.17	EKHE401VSN241MQ25Z
	310	25.4×30	0.20	1.37	EKHE401VSN311MQ30Z
	370	30×25	0.20	1.50	EKHE401VSN371MR25Z
	390	25.4×35	0.20	1.60	EKHE401VSN391MQ35Z
	460	25.4×40	0.20	1.77	EKHE401VSN461MQ40Z
	470	35×25	0.20	1.55	EKHE401VSN471MA25Z
	480	30×30	0.20	1.73	EKHE401VSN481MR30Z
	530	25.4×45	0.20	1.94	EKHE401VSN531MQ45Z
	590	30×35	0.20	1.96	EKHE401VSN591MR35Z
	600	25.4×50	0.20	2.10	EKHE401VSN601MQ50Z
	620	35×30	0.20	1.81	EKHE401VSN621MA30Z
	680	25.4×55	0.20	2.30	EKHE401VSN681MQ55Z
	700	30×40	0.20	2.20	EKHE401VSN701MR40Z
	750	25.4×60	0.20	2.47	EKHE401VSN751MQ60Z
	760	35×35	0.20	2.04	EKHE401VSN761MA35Z
	810	30×45	0.20	2.42	EKHE401VSN811MR45Z
	910	35×40	0.20	2.31	EKHE401VSN911MA40Z
	930	30×50	0.20	2.64	EKHE401VSN931MR50Z
	1,030	30×55	0.20	2.83	EKHE401VSN1A2MR55Z
	1,060	35×45	0.20	2.55	EKHE401VSN1A2MA45Z
	1,140	30×60	0.20	3.04	EKHE401VSN1B2MR60Z
	1,210	35×50	0.20	2.78	EKHE401VSN122MA50Z
	1,350	35×55	0.20	2.97	EKHE401VSN1D2MA55Z
	1,500	35×60	0.20	3.15	EKHE401VSN152MA60Z
420	230	25.4×25	0.20	1.15	EKHE421VSN231MQ25Z
	300	25.4×30	0.20	1.35	EKHE421VSN301MQ30Z
	350	30×25	0.20	1.46	EKHE421VSN351MR25Z
	370	25.4×35	0.20	1.56	EKHE421VSN371MQ35Z
	440	25.4×40	0.20	1.74	EKHE421VSN441MQ40Z
	440	35×25	0.20	1.51	EKHE421VSN441MA25Z
	460	30×30	0.20	1.68	EKHE421VSN461MR30Z
	510	25.4×45	0.20	1.90	EKHE421VSN511MQ45Z
	560	30×35	0.20	1.91	EKHE421VSN561MR35Z
	570	25.4×50	0.20	2.05	EKHE421VSN571MQ50Z
	580	35×30	0.20	1.75	EKHE421VSN581MA30Z
	640	25.4×55	0.20	2.23	EKHE421VSN641MQ55Z

WV (V_{dc})	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (Arms/ 105℃, 120Hz)	Part No.
420	670	30×40	0.20	2.15	EKHE421VSN671MR40Z
	720	25.4×60	0.20	2.42	EKHE421VSN721MQ60Z
	730	35×35	0.20	2.00	EKHE421VSN731MA35Z
	770	30×45	0.20	2.36	EKHE421VSN771MR45Z
	870	35×40	0.20	2.26	EKHE421VSN871MA40Z
	880	30×50	0.20	2.57	EKHE421VSN881MR50Z
	980	30×55	0.20	2.76	EKHE421VSN981MR55Z
	1,010	35×45	0.20	2.49	EKHE421VSN102MA45Z
	1,080	30×60	0.20	2.96	EKHE421VSN112MR60Z
	1,150	35×50	0.20	2.71	EKHE421VSN1B2MA50Z
	1,290	35×55	0.20	2.90	EKHE421VSN132MA55Z
	1,430	35×60	0.20	3.07	EKHE421VSN1E2MA60Z
450	210	25.4×25	0.20	1.10	EKHE451VSN211MQ25Z
	270	25.4×30	0.20	1.28	EKHE451VSN271MQ30Z
	320	30×25	0.20	1.39	EKHE451VSN321MR25Z
	330	25.4×35	0.20	1.48	EKHE451VSN331MQ35Z
	400	25.4×40	0.20	1.65	EKHE451VSN401MQ40Z
	400	35×25	0.20	1.43	EKHE451VSN401MA25Z
	410	30×30	0.20	1.59	EKHE451VSN411MR30Z
	460	25.4×45	0.20	1.81	EKHE451VSN461MQ45Z
	510	30×35	0.20	1.82	EKHE451VSN511MR35Z
	520	25.4×50	0.20	1.95	EKHE451VSN521MQ50Z
	530	35×30	0.20	1.67	EKHE451VSN531MA30Z
	580	25.4×55	0.20	2.13	EKHE451VSN581MQ55Z
	600	30×40	0.20	2.03	EKHE451VSN601MR40Z
	640	25.4×60	0.20	2.28	EKHE451VSN641MQ60Z
	660	35×35	0.20	1.90	EKHE451VSN661MA35Z
	690	30×45	0.20	2.23	EKHE451VSN691MR45Z
	780	35×40	0.20	2.14	EKHE451VSN781MA40Z
	790	30×50	0.20	2.43	EKHE451VSN791MR50Z
	890	30×55	0.20	2.63	EKHE451VSN891MR55Z
	910	35×45	0.20	2.36	EKHE451VSN911MA45Z
	1,000	30×60	0.20	2.83	EKHE451VSN102MR60Z
	1,040	35×50	0.20	2.58	EKHE451VSN1A2MA50Z
	1,160	35×55	0.20	2.75	EKHE451VSN1B2MA55Z
	1,290	35×60	0.20	2.92	EKHE451VSN132MA60Z

◆RATED RIPPLE CURRENT MULTIPLIERS

●Frequency Multipliers

Frequency(Hz)	50	120	300	1k	10k	50k
Multipliers	0.77	1.00	1.10	1.21	1.32	1.33

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. E1001Y 2024

Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

- View EKHE421VSN1B2MA50Z on WIN SOURCE
- United Chemi-Con Information

Optimize Your Supply Chain with WIN SOURCE Solutions

- Global Sourcing Solution
- Obsolete Management
- Cost Control Management
- Shortage Management
- Alternative Solution
- Excess Inventory Management