



## KVA Series

- Designed for automotive application (including On Board Charger) by high vibration resistance structure.
- Endurance with ripple current : 2,000 hours at 105°C
- Rated voltage range : 450V<sub>dc</sub>, Capacitance range : 160 to 970μF
- Non solvent resistant type
- RoHS2 Compliant
- AEC-Q200 compliant : Please contact Chemi-Con for more details, test data, information.



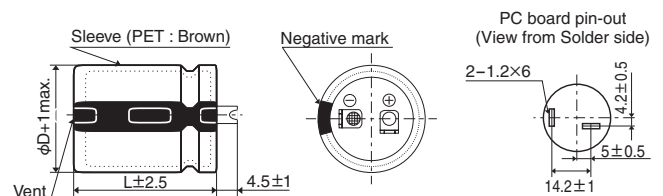
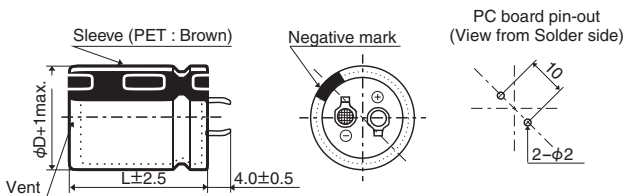
### ◆ SPECIFICATIONS

Items	Characteristics	
Category	-40 to +105°C	
Temperature Range		
Rated Voltage Range	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> )	450V
	tan δ (Max.)	0.20 (at 20°C, 120Hz)
Low Temperature Characteristics (Max. Impedance Ratio)	Rated voltage (V <sub>dc</sub> )	450V
	Z(-25°C)/Z(+20°C)	8 (at 120Hz)
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 2,000 hours at 105°C.	
	Capacitance change	≤ ±20% of the initial value
	D.F. (tan δ)	≤ 200% of 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
Vibration	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to vibration test (vibration profile shown below) at room temperature (15 to 35°C).	
	Capacitance change	≤ ±5% of the initial value
	D.F. (tan δ)	≤ The initial specified value
	Leakage current	≤ The initial specified value
	Vibration profile	
	Vibration frequency range	10 to 2,000Hz
	Acceleration	49m/s <sup>2</sup> (5G)
	Sweep rate	10 to 2,000 to 10Hz 20 minutes
	Direction and period of motion	4 hours in each of 3 mutually perpendicular directions (total of 12 hours)
	Fixation	Securely attach the main body using a fixing tool. Please contact us for details.

### ◆ DIMENSIONS [mm]

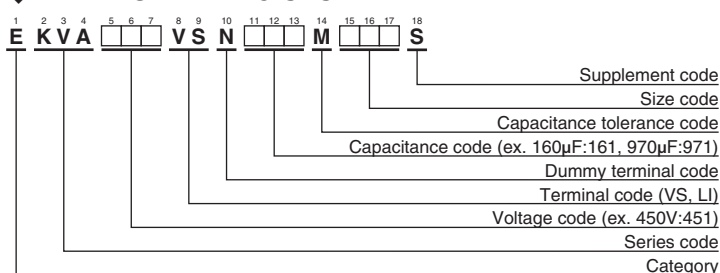
● Terminal Code : VS (φ25.4 to φ35) : Standard

● Terminal Code : LI (φ30, φ35)



The standard design has no plastic disc.

### ◆ PART NUMBERING SYSTEM



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



## KVA Series

### ◆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.
450	160	25.4 × 25	0.20	0.96	EKVA451VSN161MQ25S	450	450	25.4 × 55	0.20	1.87	EKVA451VSN451MQ55S
	210	25.4 × 30	0.20	1.13	EKVA451VSN211MQ30S		480	35 × 35	0.20	1.71	EKVA451VSN481MA35S
	230	30 × 25	0.20	1.18	EKVA451VSN231MR25S		490	25.4 × 60	0.20	2.00	EKVA451VSN491MQ60S
	250	25.4 × 35	0.20	1.29	EKVA451VSN251MQ35S		510	30 × 45	0.20	1.91	EKVA451VSN511MR45S
	290	35 × 25	0.20	1.29	EKVA451VSN291MA25S		580	30 × 50	0.20	2.08	EKVA451VSN581MR50S
	300	25.4 × 40	0.20	1.44	EKVA451VSN301MQ40S		580	35 × 40	0.20	1.95	EKVA451VSN581MA40S
	300	30 × 30	0.20	1.36	EKVA451VSN301MR30S		650	30 × 55	0.20	2.24	EKVA451VSN651MR55S
	350	25.4 × 45	0.20	1.58	EKVA451VSN351MQ45S		680	35 × 45	0.20	2.16	EKVA451VSN681MA45S
	370	30 × 35	0.20	1.55	EKVA451VSN371MR35S		730	30 × 60	0.20	2.42	EKVA451VSN731MR60S
	390	35 × 30	0.20	1.52	EKVA451VSN391MA30S		780	35 × 50	0.20	2.36	EKVA451VSN781MA50S
	400	25.4 × 50	0.20	1.72	EKVA451VSN401MQ50S		880	35 × 55	0.20	2.56	EKVA451VSN881MA55S
440	30 × 40	0.20	1.73	EKVA451VSN441MR40S	970	35 × 60	0.20	2.73	EKVA451VSN971MA60S		

### ◆RATED RIPPLE CURRENT MULTIPLIERS

● Frequency Multipliers

Frequency(Hz)	50	120	300	1k	10k	50k
450V	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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[Precautions and Guidelines](#)

[Recommended Soldering Conditions](#)

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[Available Terminals for Snap-in and Screw Mount Type](#)