

## KVB Series

- Designed for automotive application (including On Board Charger) by high vibration resistance structure.
- Endurance with ripple current : 3,000 hours at 105°C
- Rated voltage range : 450V<sub>dc</sub>, Capacitance range : 150 to 920μF
- Non solvent resistant type
- RoHS2 Compliant
- AEC-Q200 compliant : Please contact Chemi-Con for more details, test data, information.



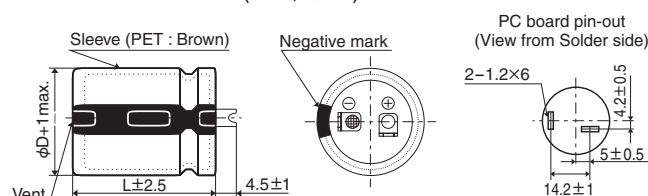
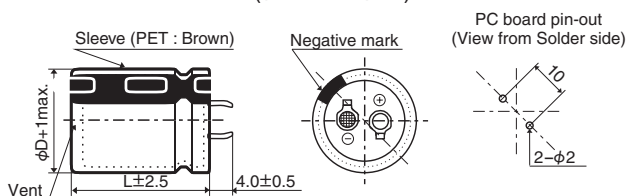
## ◆SPECIFICATIONS

Items	Characteristics		
Category	-40 to +105℃		
Temperature Range			
Rated Voltage Range	450V <sub>dc</sub>		
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 (V <sub>dc</sub> )	450V	(at 20℃, 120Hz)
	tan δ (Max.)	0.20	
Low Temperature Characteristics (Max. Impedance Ratio)	Rated voltage (V <sub>dc</sub> )	450V	(at 120Hz)
	Z(-25℃)/Z(+20℃)	8	
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	
Vibration	The following specifications shall be satisfied when the capacitors are restored to 20℃ after subjected to vibration test (vibration profile shown below) at room temperature (15 to 35℃).		
	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]

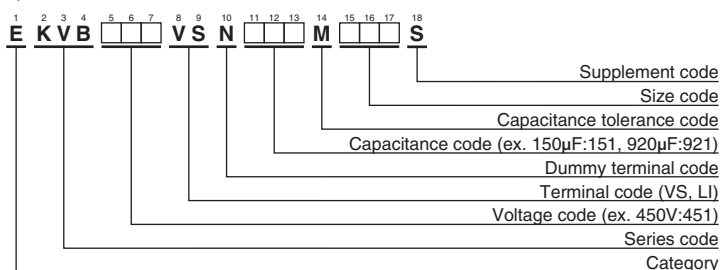
●Terminal Code : VS (φ25.4 to φ35) : Standard

●Terminal Code : LI (φ30, φ35)



The standard design has no plastic disc.

## ◆PART NUMBERING SYSTEM



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



## KVB 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	150	25.4 × 25	0.20	0.93	EKVB451VSN151MQ25S	450	420	30 × 40	0.20	1.69	EKVB451VSN421MR40S
	200	25.4 × 30	0.20	1.10	EKVB451VSN201MQ30S		460	35 × 35	0.20	1.67	EKVB451VSN461MA35S
	220	30 × 25	0.20	1.15	EKVB451VSN221MR25S		470	25.4 × 60	0.20	1.96	EKVB451VSN471MQ60S
	240	25.4 × 35	0.20	1.26	EKVB451VSN241MQ35S		490	30 × 45	0.20	1.88	EKVB451VSN491MR45S
	270	35 × 25	0.20	1.24	EKVB451VSN271MA25S		550	35 × 40	0.20	1.90	EKVB451VSN551MA40S
	290	25.4 × 40	0.20	1.41	EKVB451VSN291MQ40S		560	30 × 50	0.20	2.04	EKVB451VSN561MR50S
	290	30 × 30	0.20	1.34	EKVB451VSN291MR30S		620	30 × 55	0.20	2.19	EKVB451VSN621MR55S
	330	25.4 × 45	0.20	1.54	EKVB451VSN331MQ45S		650	35 × 45	0.20	2.11	EKVB451VSN651MA45S
	350	30 × 35	0.20	1.50	EKVB451VSN351MR35S		690	30 × 60	0.20	2.35	EKVB451VSN691MR60S
	370	35 × 30	0.20	1.48	EKVB451VSN371MA30S		740	35 × 50	0.20	2.30	EKVB451VSN741MA50S
	380	25.4 × 50	0.20	1.67	EKVB451VSN381MQ50S		830	35 × 55	0.20	2.48	EKVB451VSN831MA55S
	420	25.4 × 55	0.20	1.81	EKVB451VSN421MQ55S		920	35 × 60	0.20	2.66	EKVB451VSN921MA60S

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