



- Higher ripple current on high frequency band
- Endurance with high frequency ripple current: 3,000 hours at 105°C
- Rated voltage range: 400 to 450V<sub>dc</sub>, Capacitance range: 90 to 340µF
- Ideal for high frequency drive power conversion system applications such as solar power conditioners
- Non solvent resistant type
- RoHS2 Compliant

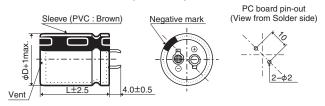


#### **SPECIFICATIONS**

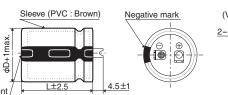
Items	Characteristics							
Category Temperature Range	-40 to +105℃							
Rated Voltage Range	400 to 450V <sub>dc</sub>							
Capacitance Tolerance	±20% (M) (at 20℃, 120Hz)							
Leakage Current	I≦3√CV Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (at 20°C after 5 minutes)							
Dissipation Factor	Rated voltage (Vdc)	400V	420 & 450V					
(tan δ)	tan δ (Max.)	0.15	0.20	(at 20℃, 120Hz)				
Low Temperature	Rated voltage (Vdc)	400V	420 & 450V					
Characteristics	Z(-25°C)/Z(+20°C)	3	8					
(Max. Impedance Ratio)	Z(-40°C)/Z(+20°C)	12	14	(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 3,000 hours at 105°C.							
	Capacitance change	≤±20% of the init	tial value					
	D.F. (tan $\delta$ )	≦200% of the initi	al specified value					
	Leakage current	≦The initial specif	ied 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 init	tial value					
	D.F. (tan $\delta$ )	≦150% of the initial specified value						
	Leakage current	≦The initial specif	ied value					

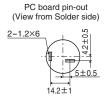
## **◆DIMENSIONS** [mm]

•Terminal Code : VS (φ30, φ35) : Standard



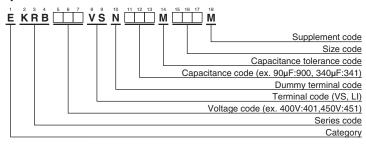
•Terminal Code : LI (φ30, φ35)





The standard design has no plastic disc.

### **◆PART NUMBERING SYSTEM**



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





### **STANDARD RATINGS**

WV (V <sub>dc</sub> )	Cap (µF)	Case size φD×L(mm)	tan δ	Rated ripple current (Arms/ 105°C, 100kHz)	Part No.
	120	30 × 35	0.15	5.54	EKRB401VSN121MR35M
	150	30 × 41	0.15	5.69	EKRB401VSN151MR41M
	170	30 × 46	0.15	5.83	EKRB401VSN171MR46M
	170	35 × 35	0.15	5.87	EKRB401VSN171MA35M
	200	30 × 51	0.15	5.97	EKRB401VSN201MR51M
400	210	35 × 41	0.15	6.10	EKRB401VSN211MA41M
400	220	30 × 54	0.15	6.06	EKRB401VSN221MR54M
	240	30 × 59	0.15	6.20	EKRB401VSN241MR59M
	240	35 × 46	0.15	6.30	EKRB401VSN241MA46M
	280	35 × 51	0.15	6.45	EKRB401VSN281MA51M
	300	35 × 54	0.15	6.60	EKRB401VSN301MA54M
	340	35 × 59	0.15	6.85	EKRB401VSN341MA59M
	100	30 × 35	0.20	4.58	EKRB421VSN101MR35M
	130	30 × 41	0.20	4.91	EKRB421VSN131MR41M
	140	30 × 46	0.20	5.15	EKRB421VSN141MR46M
	140	35 × 35	0.20	5.23	EKRB421VSN141MA35M
	170	30 × 51	0.20	5.39	EKRB421VSN171MR51M
420	180	30 × 54	0.20	5.54	EKRB421VSN181MR54M
420	180	35 × 41	0.20	5.63	EKRB421VSN181MA41M
	200	30 × 59	0.20	5.78	EKRB421VSN201MR59M
	210	35 × 46	0.20	5.95	EKRB421VSN211MA46M
	240	35 × 51	0.20	6.28	EKRB421VSN241MA51M
	260	35 × 54	0.20	6.47	EKRB421VSN261MA54M
	290	35 × 59	0.20	6.72	EKRB421VSN291MA59M

WV (V <sub>dc</sub> )	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (Arms/ 105℃, 100kHz)	Part No.		
	90	30 × 35	0.20	4.58	EKRB451VSN900MR35M		
	110	30 × 41	0.20	4.91	EKRB451VSN111MR41M		
	120	35 × 35	0.20	5.23	EKRB451VSN121MA35M		
	130	30 × 46	0.20	5.15	EKRB451VSN131MR46M		
	150	30 × 51	0.20	5.39	EKRB451VSN151MR51M		
450	160	30 × 54	0.20	5.54	EKRB451VSN161MR54M		
450	160	35 × 41	0.20	5.63	EKRB451VSN161MA41M		
	180	30 × 59	0.20	5.78	EKRB451VSN181MR59M		
	180	35 × 46	0.20	5.95	EKRB451VSN181MA46M		
	210	35 × 51	0.20	6.28	EKRB451VSN211MA51M		
	220	35 × 54	0.20	6.47	EKRB451VSN221MA54M		
	250	35 × 59	0.20	6.72	EKRB451VSN251MA59M		

## **PRATED RIPPLE CURRENT MULTIPLIERS**

# Frequency Multipliers

	•						
Frequency(Hz)	50	120	300	1k	10k	50k	100k
400 to 450V	0.22	0.33	0.49	0.73	1.00	1.00	1 00

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
Available Items by Manufacturing Locations
Environmental Measures
Technical Note
Precautions and Guidelines
Recommended Soldering Conditions
Taping, Lead-preforming and Packaging
Available Terminals for Snap-in and Screw Mount Type