



- Endurance with ripple current: 10,000 hours at 105°C
- Non solvent resistant type
- RoHS2 Compliant



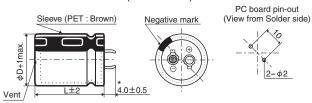


### **SPECIFICATIONS**

Items	Characteristics							
Category Temperature Range	-25 to +105℃							
Rated Voltage Range	200 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)	200 to 400V	450V					
(tan δ )	tan δ (Max.)	0.15	0.20	(at 20℃, 120Hz)				
Low Temperature Characteristics	Rated voltage (Vdc)	200 to 400V	450V					
	Z (-25°C)/Z (+20°C)	4	8					
(Max. Impedance Ratio)				(at 120Hz)				
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage ripple current is applied (the peak voltage shall not exceed the rated voltage) for 10,000 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 with							
	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]

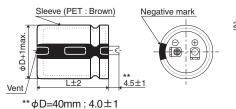
●Terminal Code : VS (φ30 to φ40) : Standard

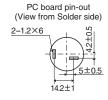


 $^* \phi D = 40 \text{mm} : 3.5 \pm 0.5 \text{mm}$ 

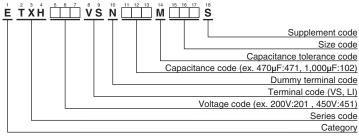
The standard design has no plastic disc.

#### ■Terminal Code : LI (φ35, φ40)





# **◆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, 120Hz)	Part No.
	560	30 × 30	0.15	1.50	ETXH201VSN561MR30S
	680	30 × 35	0.15	1.70	ETXH201VSN681MR35S
	820	30 × 40	0.15	2.00	ETXH201VSN821MR40S
	820	35 × 30	0.15	2.00	ETXH201VSN821MA30S
	1,000	30 × 45	0.15	2.20	ETXH201VSN102MR45S
200	1,000	35 × 35	0.15	2.20	ETXH201VSN102MA35S
200	1,000	40 × 30	0.15	2.17	ETXH201VSN102MB30S
	1,200	35 × 40	0.15	2.40	ETXH201VSN122MA40S
	1,200	40 × 35	0.15	2.45	ETXH201VSN122MB35S
	1,500	35 × 50	0.15	2.81	ETXH201VSN152MA50S
	1,500	40 × 40	0.15	2.79	ETXH201VSN152MB40S
	1,800	40 × 50	0.15	3.24	ETXH201VSN182MB50S
	390	30 × 30	0.15	1.30	ETXH251VSN391MR30S
	470	30 × 35	0.15	1.42	ETXH251VSN471MR35S
	560	35 × 30	0.15	1.58	ETXH251VSN561MA30S
	680	30 × 45	0.15	1.80	ETXH251VSN681MR45S
	680	35 × 35	0.15	1.76	ETXH251VSN681MA35S
	820	30 × 50	0.15	2.03	ETXH251VSN821MR50S
250	820	35 × 40	0.15	2.01	ETXH251VSN821MA40S
	820	40 × 30	0.15	1.96	ETXH251VSN821MB30S
	1,000	35 × 45	0.15	2.30	ETXH251VSN102MA45S
	1,000	40 × 35	0.15	2.27	ETXH251VSN102MB35S
	1,200	35 × 50	0.15	2.55	ETXH251VSN122MA50S
	1,200	40 × 40	0.15	2.53	ETXH251VSN122MB40S
	1,500	40 × 50	0.15	2.96	ETXH251VSN152MB50S
	1,800	40 × 60	0.15	3.39	ETXH251VSN182MB60S

WV (V <sub>dc</sub> )	Cap (µF)	Case size φD×L(mm)	tan δ	Rated ripple current (Arms/ 105°C, 120Hz)	Part No.
	220	30 × 35	0.15	1.00	ETXH401VSN221MR35S
	270	30 × 40	0.15	1.15	ETXH401VSN271MR40S
	270	35 × 30	0.15	1.13	ETXH401VSN271MA30S
	330	30 × 45	0.15	1.29	ETXH401VSN331MR45S
	330	35 × 35	0.15	1.26	ETXH401VSN331MA35S
	330	40 × 30	0.15	1.28	ETXH401VSN331MB30S
400	390	30 × 50	0.15	1.44	ETXH401VSN391MR50S
400	390	35 × 40	0.15	1.43	ETXH401VSN391MA40S
	470	35 × 45	0.15	1.60	ETXH401VSN471MA45S
	470	40 × 35	0.15	1.58	ETXH401VSN471MB35S
	560	35 × 50	0.15	1.79	ETXH401VSN561MA50S
	560	40 × 40	0.15	1.78	ETXH401VSN561MB40S
	680	40 × 50	0.15	2.05	ETXH401VSN681MB50S
	820	40 × 60	0.15	2.36	ETXH401VSN821MB60S
450	220	30 × 40	0.20	1.04	ETXH451VSN221MR40S
	220	35 × 30	0.20	1.02	ETXH451VSN221MA30S
	270	30 × 45	0.20	1.19	ETXH451VSN271MR45S
	270	35 × 35	0.20	1.16	ETXH451VSN271MA35S
	330	30 × 50	0.20	1.33	ETXH451VSN331MR50S
	330	35 × 40	0.20	1.32	ETXH451VSN331MA40S
	390	35 × 45	0.20	1.48	ETXH451VSN391MA45S
	470	$35 \times 50$	0.20	1.64	ETXH451VSN471MA50S
	560	40 × 60	0.20	1.98	ETXH451VSN561MB60S

## **◆RATED RIPPLE CURRENT MULTIPLIERS**

### Frequency Multipliers

Frequency(Hz)	50	120	300	1k	10k	50k
200, 250V <sub>dc</sub>	0.81	1.00	1.17	1.32	1.45	1.50
400, 450V <sub>dc</sub>	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.
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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