

# TXH Series

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



## SPECIFICATIONS

Items	Characteristics		
Category	-25 to +105°C		
Temperature Range	-25 to +105°C		
Rated Voltage Range	200 to 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> )	200 to 400V	450V
	tan δ (Max.)	0.15	0.20
Low Temperature Characteristics (Max. Impedance Ratio)	Rated voltage (V <sub>dc</sub> )	200 to 400V	450V
	Z (-25°C)/Z (+20°C)	4	8
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 10,000 hours at 105°C.		
	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°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	
	Leakage current	≤ The initial specified value	

## DIMENSIONS [mm]

Terminal Code : VS (φ30 to φ40) : Standard



\* φD=40mm : 3.5±0.5mm

The standard design has no plastic disc.

Terminal Code : LI (φ35, φ40)



\*\* φD=40mm : 4.0±1

## 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.	WV (V <sub>dc</sub> )	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (Arms/105°C, 120Hz)	Part No.
200	560	30 × 30	0.15	1.50	ETXH201VSN561MR30S	400	220	30 × 35	0.15	1.00	ETXH401VSN221MR35S
	680	30 × 35	0.15	1.70	ETXH201VSN681MR35S		270	30 × 40	0.15	1.15	ETXH401VSN271MR40S
	820	30 × 40	0.15	2.00	ETXH201VSN821MR40S		270	35 × 30	0.15	1.13	ETXH401VSN271MA30S
	820	35 × 30	0.15	2.00	ETXH201VSN821MA30S		330	30 × 45	0.15	1.29	ETXH401VSN331MR45S
	1,000	30 × 45	0.15	2.20	ETXH201VSN102MR45S		330	35 × 35	0.15	1.26	ETXH401VSN331MA35S
	1,000	35 × 35	0.15	2.20	ETXH201VSN102MA35S		330	40 × 30	0.15	1.28	ETXH401VSN331MB30S
	1,000	40 × 30	0.15	2.17	ETXH201VSN102MB30S		390	30 × 50	0.15	1.44	ETXH401VSN391MR50S
	1,200	35 × 40	0.15	2.40	ETXH201VSN122MA40S		390	35 × 40	0.15	1.43	ETXH401VSN391MA40S
	1,200	40 × 35	0.15	2.45	ETXH201VSN122MB35S		470	35 × 45	0.15	1.60	ETXH401VSN471MA45S
	1,500	35 × 50	0.15	2.81	ETXH201VSN152MA50S		470	40 × 35	0.15	1.58	ETXH401VSN471MB35S
	1,500	40 × 40	0.15	2.79	ETXH201VSN152MB40S		560	35 × 50	0.15	1.79	ETXH401VSN561MA50S
	1,800	40 × 50	0.15	3.24	ETXH201VSN182MB50S		560	40 × 40	0.15	1.78	ETXH401VSN561MB40S
250	390	30 × 30	0.15	1.30	ETXH251VSN391MR30S	680	40 × 50	0.15	2.05	ETXH401VSN681MB50S	
	470	30 × 35	0.15	1.42	ETXH251VSN471MR35S	820	40 × 60	0.15	2.36	ETXH401VSN821MB60S	
	560	35 × 30	0.15	1.58	ETXH251VSN561MA30S	450	220	30 × 40	0.20	1.04	ETXH451VSN221MR40S
	680	30 × 45	0.15	1.80	ETXH251VSN681MR45S		220	35 × 30	0.20	1.02	ETXH451VSN221MA30S
	680	35 × 35	0.15	1.76	ETXH251VSN681MA35S		270	30 × 45	0.20	1.19	ETXH451VSN271MR45S
	820	30 × 50	0.15	2.03	ETXH251VSN821MR50S		270	35 × 35	0.20	1.16	ETXH451VSN271MA35S
	820	35 × 40	0.15	2.01	ETXH251VSN821MA40S		330	30 × 50	0.20	1.33	ETXH451VSN331MR50S
	820	40 × 30	0.15	1.96	ETXH251VSN821MB30S		330	35 × 40	0.20	1.32	ETXH451VSN331MA40S
	1,000	35 × 45	0.15	2.30	ETXH251VSN102MA45S		390	35 × 45	0.20	1.48	ETXH451VSN391MA45S
	1,000	40 × 35	0.15	2.27	ETXH251VSN102MB35S		470	35 × 50	0.20	1.64	ETXH451VSN471MA50S
	1,200	35 × 50	0.15	2.55	ETXH251VSN122MA50S		560	40 × 60	0.20	1.98	ETXH451VSN561MB60S
	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							

◆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 endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5°C rise. When long life performance is required in actual use, the rms ripple current has to be reduced.