

## NICHICON CORPORATION Launches the UTH Series of Miniature Aluminum Electrolytic Capacitors with Long Life (Guaranteed for 5,000 hours at 105°C)

NICHICON CORPORATION has launched the UTH series of miniature aluminum electrolytic capacitors with long life (guaranteed for 5,000 hours at 105°C), to meet the demand for compactness and long life in the power supply field.

### Overview and Development Background

In the market for server power supplies and switching power supplies, there has been a strong demand for more compact passive components, including capacitors, to improve surface power density. This is in addition to demand for more highly integrated circuits and high-density mounting of electronic components. Further, the thermal design of equipment is also becoming more sophisticated due to the miniaturization, high integration, and high-density mounting of equipment, and capacitors are required to have high reliability. To meet these market needs, we have developed and launched a new series, the UTH series, which is smaller in size than the current UPT series (guaranteed for 5,000 hours at 105°C).

### Features

The UTH series is based on our accumulated technologies. It realizes high capacitance and miniaturization by utilizing a newly developed high-capacity electrode foil and newly developed sealing rubber. As a result, the UTH series is as much as 50% smaller in height and 52.4% smaller in volume than the current UPT series when comparing products rated to the same voltage and capacitance. This product will contribute to more compact, lower-profile, space-saving circuit designs.

[Volume Ratio Versus the Current UPT Series]

Rated Voltage (V)	Capacitance (μF)	Dimensions φD×L(mm)		Height Ratio	Volume Ratio
		UPT Series (Current product)	UTH Series (Developed product)		
400	56	12.5 × 40	<b>16 × 20</b>	-50.0%	-18.1%
	180	22 × 40	<b>18 × 36</b>	-10.0%	-39.8%
420	68	18 × 30.5	<b>18 × 20</b>	-34.4%	-34.4%
	180	22 × 50	<b>18 × 40</b>	-20.0%	-46.4%
450	47	16 × 30.5	<b>16 × 20</b>	-34.4%	-34.4%
	120	22 × 40	<b>16 × 36</b>	-10.0%	-52.4%

\*Capacitance: 120Hz at 20°C

## Main Specifications

- Rated voltage range : 400 to 450V
- Rated capacitance range : 47 to 200 $\mu$ F
- Category temperature range : -40 to 105°C
- Product dimensions :  $\phi$ 16 $\times$ 20 L to  $\phi$ 18 $\times$ 40 L (10 Sizes)
- Life : 5000 hours guaranteed at 105°C (Rated ripple current superimposed)
- Terminal shape : Lead type
- Samples : From October 2023
- Mass production launch / Production capacity : From November 2023 [Planned production volume: 50,000 / month]
- Production plant : NICHICON (OHNO) CORPORATION  
1-11-2 Shimoyoro, Ohno-shi, Fukui Pref., 912-0095 Japan  
(ISO 9001, IATF 16949, and ISO 14001 certified)

## Product Appearance



### UTH Series of Miniature Aluminum Electrolytic Capacitors

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