



Press Release

Nippon Chemi-Con Corporation

July 14, 2023

KHU/LHU Series of Snap-in Type Aluminum Electrolytic Capacitors with Increased Voltage and size Ranges Selection of new sizes at heights of 65mm and above (65/70/75/80L)

Nippon Chemi-Con announces it has developed new voltage ranges (400V to 450V) and new sizes ($\varnothing 30 \times 65L$ to $\varnothing 35 \times 80L$ mm) to expand the production selection of the KHU Series (guaranteed for 3,000 hours at 105°C) and the LHU Series (guaranteed for 5,000 hours at 105°C) of snap-in type aluminum electrolytic capacitors. These capacitors are for power supply input smoothing and contribute to reduced size and increased endurance for switching PSU and general use invertors.

Snap-in type aluminum electrolytic capacitors are mainly used in the smoothing circuits of devices such as switching PSU. In recent years, the market has seen increased demand for higher capacitance for large-sized products used in server PSU due to an increase in designs that use single product with a height of 65mm or more that is horizontally positioned and that use mainly 450V. We have worked to develop products that respond to the demands of these PSU devices.

For the voltage range (added 400V to 450V), we have achieved increased endurance (3,000 to 5,000 hours guaranteed) without any significant changes in product characteristics compared to the KHE Series, the existing product that is guaranteed for 2,000 hours at 105°C.

We also are planning to add the size range of 65L to 80Lmm to our catalog. This surpasses the catalog standard size and represents the first time these sizes will be added to a catalog in our industry.

[KHU/LHU Performance Comparison with Existing KHE Series]

Table figures: Capacitance (μF , 20°C, 120Hz) / Rated ripple current (Arms 105°C, 120Hz)

| Rated voltage | Case size | KHE Series | KHU Series | LHU Series |
|---------------|-----------------------------|----------------------|----------------------|----------------------|
| | | 2,000 hours at 105°C | 3,000 hours at 105°C | 5,000 hours at 105°C |
| 450V | $\varnothing 30 \times 60L$ | 1,000 / 2.83 | 940 / 2.76 | 940 / 2.76 |
| | $\varnothing 30 \times 70L$ | — | 1,080 / 3.06 | 1,080 / 3.06 |
| | $\varnothing 30 \times 80L$ | — | 1,230 / 3.38 | 1,230 / 3.38 |
| | $\varnothing 35 \times 60L$ | 1,290 / 2.92 | 1,260 / 2.88 | 1,260 / 2.88 |
| | $\varnothing 35 \times 70L$ | — | 1,410 / 3.16 | 1,410 / 3.16 |
| | $\varnothing 35 \times 80L$ | — | 1,650 / 3.54 | 1,650 / 3.54 |

Technical Features

Increased voltage range: We extended the product lifetime through the optimal selection of high-capacitance electrode foil developed in-house.

Increased size range: We achieved higher reliability (increased vibration resistance) by optimizing the element structure.

Specifications of Newly Added Products

KHU Series (Endurance: Guaranteed for 3,000 hours at 105°C)

| | | |
|----------------------------|------------------------|--------------------|
| Rated voltage range | 400V to 450V | 475V to 500V |
| Category temperature range | - 40°C to +105°C | |
| Case size | ø25.4×25L to ø35×80L*1 | ø30×65L to ø35×80L |
| Capacitance range | 200µF to 1,910µF | 680µF to 1,290µF |

*1) ø25.4 excludes 65L and above

LHU Series (Endurance: Guaranteed for 5,000 hours at 105°C)

| | | |
|----------------------------|------------------------|--------------------|
| Rated voltage range | 400V to 450V | 475V to 500V |
| Category temperature range | - 40°C to +105°C | |
| Case size | ø25.4×25L to ø35×80L*2 | ø30×65L to ø35×80L |
| Capacitance range | 390µF to 1,910µF | 650µF to 1,220µF |

*2) 25 to 35L and 65L and above for ø25.4, ø30 excludes 25L

Samples and Mass Production

-Samples: June 2023

-Mass production: October 2023

Production Site

Chemi-Con East Japan Corp. Fukushima Plant

Product Appearance

