



# Press Release

Nippon Chemi-Con Corporation  
May 18, 2021

## **Conductive Polymer Hybrid Aluminum Electrolytic Capacitors HXU Series**

**Development of products with twice the life of conventional products  
and a 40G vibration resistance guarantee by adopting a new composite  
sealing structure**

Nippon Chemi-Con has developed SMD type conductive polymer hybrid aluminum electrolytic capacitors HXU Series for the automotive electronics, industrial equipment, and communication base station markets where high reliability is required.

With the downsizing and high density mounting of electronic substrates, electronic components are required to have stable product characteristics under severe environments. In recent years, the automotive electronics market has required high heat resistance, long life, and high vibration resistance, while the communications and industrial equipment markets have required high reliability and long life to achieve high environment resistance and maintenance-free operation.

To meet these requirements, the HXU Series has realized a life that is two times longer than that of conventional products and a high vibration resistance of 40G. (Conventional vibration-resistant support base specification: 30G)

### [Technical Features]

The HXU Series employs the "composite sealing structure" which was first put into practice in the SMD type aluminum electrolytic capacitors MHU Series.

The composite sealing structure is our proprietary technology that dramatically improves the airtightness by using rubber and resin for the sealing material that normally uses only rubber. As a result, the evaporation of electrolyte has been reduced to approximately 50% of that of the conventional Series and longer life at high temperature environments has been achieved.

The composite sealing structure also allows the case and support base to be integrated, providing high vibration resistance as well.

Furthermore, the HXU Series supports up to twice the size of ripple current compared to the conventional Series by lowering the ESR through optimization of conductive polymer materials and adoption of electrolyte with excellent stability in a high temperature range.

[Main Specifications]

- Category temperature range: -55 to +135°C
- Rated voltage range: 25 to 63V
- Capacitance range: 82 to 330 $\mu$ F (capacitance tolerance  $\pm$ 20%)
- Case size:  $\phi$ 10 x 10 Lmm
- Endurance: guarantees 8,000 hours at 125°C/135°C
- Moisture resistance: guarantees 2,000 hours at 85°C85%RH
- Vibration resistance: vibration-resistant support base specification 40G

[Samples and Mass Production]

Samples: August 2021

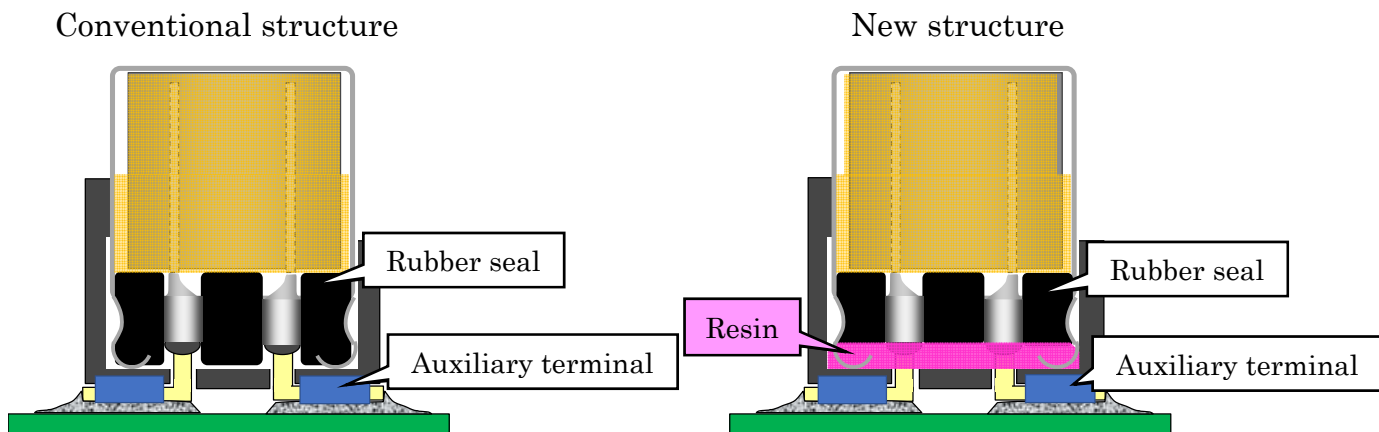
Mass production: June 2022

[Production Site] Chemi-Con East Japan Corp. Miyagi Plant

[List of standard products]

Case size $\phi$ DxL [mm]	Rated voltage [Vdc]	Cap. [ $\mu$ F/120Hz]	Endurance[hrs.] 125°C/135°C		ESR [m $\Omega$ max/100kHz]		Rated ripple current [mA rms/100kHz]			
			HXE	<b>HXU</b>	HXE	<b>HXU</b>	125°C		135°C	
							HXE	<b>HXU</b>	HXE	<b>HXU</b>
10.0 x 10.0	25	330	4,000	<b>8,000</b>	20	<b>16</b>	3,300	<b>4,500</b>	2,000	<b>3,300</b>
	35	270			20	<b>16</b>	3,300	<b>4,500</b>	2,000	<b>3,300</b>
	50	120			25	<b>20</b>	2,900	<b>4,300</b>	1,600	<b>3,000</b>
	63	82			30	<b>22</b>	2,600	<b>4,000</b>	1,400	<b>2,800</b>

[Structure Comparison]



[Product Appearance]

