



# Press Release

Nippon Chemi-Con Corporation  
April 3, 2019

## **Large-Size, High-Capacitance Products Added to Conductive Polymer Hybrid Aluminum Electrolytic Capacitors HXE Series**

Nippon Chemi-Con has developed a JH0 size ( $\phi 10 \times 16.5$  L mm) for SMD type conductive polymer hybrid aluminum electrolytic capacitors HXE Series, with even larger capacitance and higher ripple current. We propose them as filter capacitors for automotive electronics and industrial equipment which require high reliability.

Firstly, we will commercialize 63V rated voltage products for use in inverter circuit applications, where output and current is becoming higher.

By using conductive polymers and liquid electrolyte for electrolyte, conductive polymer hybrid aluminum electrolytic capacitors have low ESR characteristics and excellent heat resistance due to conductive polymer and oxide layer repairability due to liquid electrolyte.

In the development of the JH0 size ( $\phi 10 \times 16.5$  L mm) HXE Series, we carried out structural design for a new size, expanded the electrode foil surface area and optimized the conductive polymer material and impregnation process. As a result, large capacitance and high ripple current have been achieved while maintaining high reliability.

Compared with the existing JA0 size ( $\phi 10 \times 10.0$  L mm), the capacitance is approximately 1.8 times ( $82\mu\text{F} \Rightarrow 150\mu\text{F}$ ), the ripple current approximately 1.5 times ( $2600\text{mA}_{\text{rms}} \Rightarrow 4000\text{mA}_{\text{rms}}$ ) higher. By adding the JH0 size with large capacitance and high allowable ripple current, it contributes to the downsizing and weight reduction of the unit by reducing the number of capacitors used.

### [Samples and Mass Production]

Samples: June 2019

Mass production: March 2020

### [Production Site]

Chemi-Con Yamagata Corp. (a wholly owned subsidiary of Nippon Chemi-Con)

### [Main Specifications]

- Category temperature range:  $-55^{\circ}\text{C}$  to  $+135^{\circ}\text{C}$
- Rated capacitance range: 63WV
- Capacitance:  $150\mu\text{F}$
- Case size:  $\phi 10 \times 16.5$  Lmm
- Endurance: guarantees 4,000 hours at  $135^{\circ}\text{C}$

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[Performance Comparison]

Series	HXE				
Case size $\phi$ D x L [mm]	Rated voltage [WV]	Cap. [ $\mu$ F/120Hz]	ESR [m $\Omega$ /100k Hz]	Rated ripple current (125°C) [mA <sub>rms</sub> /100kHz]	Rated ripple current (135°C) [mA <sub>rms</sub> /100kHz]
$\phi$ 10 x 10.0 (existing)	63	82	30	2,600	1,400
$\phi$ 10 x 16.5 (new)	63	150	14	4,000	2,300

[Product Appearance]

