



## *Press Release*

Nippon Chemi-Con Corporation  
May 17, 2022

**Conductive Polymer Hybrid Aluminum Electrolytic Capacitors HXF Series  
New Sizes (ø10×12.5L, ø10×16.5L) Developed  
A maximum 1.7 times higher ripple current capability compared to  
existing high ripple current capability products**

Nippon Chemi-Con has developed and added new sizes (ø10×12.5L, ø10×16.5L) to conductive polymer hybrid aluminum electrolytic capacitors HXF Series. The Series is in mass production for the automotive electronics market and industrial equipment market which require high reliability.

We have realized approximately 1.2 to 1.7 times higher ripple current capability while maintaining high reliability (HXE Series: 4,000 hours at 125°C or 135°C/2,000 hours at 85°C85%RH). This will reduce the number of capacitors required and contribute to the weight and size reduction of circuit units such as DC/DC converters and inverters.

### **Technical Features**

Conductive polymer hybrid aluminum electrolytic capacitors use conductive polymer and liquid electrolyte for electrolytes. This achieves low ESR characteristics and remarkable heat resistance due to the conductive polymer as well as oxide layer repairability due to the liquid electrolyte. These characteristics have supported the development of high withstand voltage products with low ESR and high reliability. The HXF Series has low ESR due to conductive polymer material and optimized electrolyte with remarkable stability at high temperatures. We have achieved even higher ripple current capability than existing high ripple current capability products by adopting the above technology.

### **Specifications of Newly Added Products**

- Category temperature range: -55°C to +135°C
- Rated voltage range: 25V to 63V
- Capacitance range: 100μF to 560μF (capacitance tolerance ±20%)
- Case size: ø10.0×12.5mmL, ø10.0×16.5mmL
- Endurance: 4,000h at 125°C/135°C
- Moisture resistance: 2,000 hours at 85°C85%RH

## Samples and Mass Production

Samples: June 2022

Mass production: September 2022

## Production Sites

ø10×12.5L: Chemi-Con East Japan Corp. Miyagi Plant

ø10×16.5L: Chemi-Con Yamagata Corp. Yonezawa Plant

## List of Standard Products

Size øD×L [mm]	Rated voltage [Vdc]	Cap. [μF/120Hz]		ESR [mΩmax/100kHz]		Rated ripple current [mA <sub>rms</sub> /100kHz]			
		HXE	<b>HXF</b>	HXE	<b>HXF</b>	125°C		135°C	
						HXE	<b>HXF</b>	HXE	<b>HXF</b>
10.0×12.5	25	470	<b>470</b>	16	<b>14</b>	4,050	<b>5,100</b>	2,500	<b>3,600</b>
	35	330	<b>330</b>	17	<b>15</b>	3,950	<b>4,900</b>	2,400	<b>3,500</b>
	50	150	<b>150</b>	19	<b>17</b>	3,700	<b>4,600</b>	2,250	<b>3,300</b>
	63	100	<b>100</b>	22	<b>17</b>	3,450	<b>4,600</b>	2,100	<b>3,300</b>
10.0×16.5	25	560	<b>560</b>	14	<b>10</b>	4,300	<b>6,000</b>	2,500	<b>4,300</b>
	35	470	<b>470</b>	14	<b>11</b>	4,300	<b>5,800</b>	2,500	<b>4,100</b>
	50	220	<b>220</b>	16	<b>13</b>	4,100	<b>5,300</b>	2,400	<b>3,800</b>
	63	150	<b>150</b>	16	<b>13</b>	4,100	<b>5,300</b>	2,400	<b>3,800</b>

## Product Appearance

