
NICHICON Expands Ratings for GYE and GYF Series of Conductive Polymer Hybrid Aluminum Electrolytic Capacitors

NICHICON CORPORATION has expanded its GYE/GYF series of high-capacitance conductive polymer hybrid aluminum electrolytic capacitors with high ripple current and low ESR performance, which are increasingly demanded in the automotive and telecommunications applications, to include products rated to 16V, 50V, and 63V. We have moreover expanded the GYE series to include a $\phi 10 \times 12.5L$ size.

Overview and Development Background

NICHICON CORPORATION has previously launched the GYA series of conductive polymer hybrid aluminum electrolytic capacitors, the GYE series, which offers higher capacitance, and the GYF series, which offers even higher capacitance (all guaranteed for 4,000 hours at 125°C). We have proposed these products for applications that require high reliability, such as automotive, industrial equipment, and telecommunications.

Now, we have added 16V, 50V, and 63V ratings to the GYE/GYF Series and expanded the size of the GYE Series to include a $\phi 10 \times 12.5L$ size. The expanded ratings will enable us to offer a wide range of proposals to serve various applications and contribute to optimization and further enhancements in performance of set devices.

Features

Conductive polymer hybrid aluminum electrolytic capacitors use both conductive polymers and electrolytic solutions as electrolytes and thus retain both the low ESR performance and high heat resistance characteristic of conductive polymers and the oxide film repair performance of electrolytic solutions.

We have expanded the GYF series, rated to the industry's highest capacitance level, from the original rated voltage of 25–35V to 16–63V. By covering a wide range of rated voltages, the product contributes to optimal circuit design, such as reducing the number of capacitors needed. The series offers the industry's highest level of capacitance for 16V capacitors for DC12V power supplies. In particular, demand for high-capacitance products is increasing in response to demand for replacing aluminum electrolytic capacitors.

Meanwhile, the new $\phi 10 \times 12.5L$ size of the GYE series enables a maximum 1.5 times higher ripple compared to the $\phi 10 \times 10L$ size, while maintaining the same guaranteed life.

【Capacitance and Rated Ripple Current Comparison】

Dimensions (mm)	Rated Voltage (V)	GYA Series (Existing series)		GYE Series (1 rank Higher Capacitance)		GYF Series (2 rank Higher Capacitance)	
		Capacitance (μF)	Rated Ripple Current (mArms)	Capacitance (μF)	Rated Ripple Current (mArms)	Capacitance (μF)	Rated Ripple Current (mArms)
φ6.3×5.8L	16	82	1,000	120	1,100	180	1,100
	25	56	900	82	1,100	100	1,300
	35	47	900	56	1,100	68	1,200
φ6.3×7.7L	16	150	1,500	180	1,800	270	1,800
	25	100	1,400	150	1,700	180	1,800
	35	68	1,400	100	1,700	120	1,700
φ8×10L	16	270	1,700	390	2,000	560	2,000
	25	220	1,600	270	2,000	330	2,000
	35	150	1,600	180	2,000	220	2,000
	50	68	1,250	82	1,700	100	1,700
	63	47	1,100	56	1,700	68	1,700
φ10×10L	16	470	2,100	680	2,800	1,000	2,800
	25	330	2,000	470	2,800	560	2,800
	35	270	2,000	330	2,800	390	2,800
	50	120	1,600	150	2,000	180	2,000
	63	82	1,400	100	2,000	120	2,000
φ10×12.5L	25	470	2,300	560	3,500	-	-
	35	330	2,300	390	3,500	-	-
	50	150	2,000	180	3,000	-	-
	63	100	1,900	120	3,000	-	-

*Capacitance: 120Hz at 20°C *Rated ripple current: 100kHz at 125°C

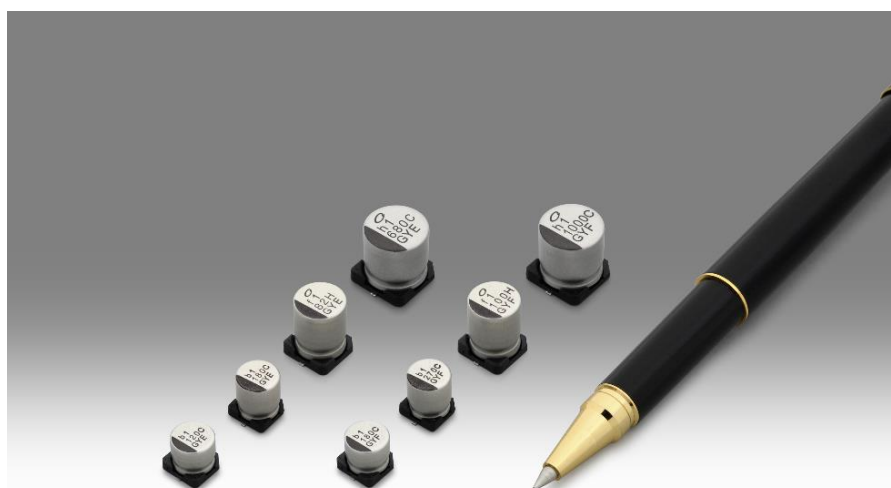
Main Specifications (GYE Series)

- Rated voltage range : 16 to 63V
- Rated capacitance range : 56 to 680μF
- Category temperature range : -55 to 125°C
- Product dimensions : φ6.3×5.8L to φ10×12.5L(mm)
- Life : 4000 hours guaranteed at 125°C (Rated ripple current superimposed)
- Terminal shape : Chip type
- Samples : Currently available
- Mass production launch / Production capacity : From October 2023 [Planned production volume: 1 million / month]
- Production plant : NICHICON (IWATE) CORPORATION
8-17-1, Kubo, Iwate-cho Iwate-gun, Iwate Prefecture
(ISO 9001, IATF 16949, and ISO 14001 certified)

• Main Specifications (GYF Series)

- Rated voltage range : 16 to 63V
- Rated capacitance range : 68 to 1,000 μ F
- Category temperature range : -55 to 125 $^{\circ}$ C
- Product dimensions : ϕ 6.3 \times 5.8L to ϕ 10 \times 10L(mm)
- Life : 4000 hours guaranteed at 125 $^{\circ}$ C (Rated ripple current superimposed)
- Terminal shape : Chip type
- Samples : Currently available
- Mass production launch / Production capacity : From October 2023 [Planned production volume: 1 million / month]
- Production plant : NICHICON (IWATE) CORPORATION
8-17-1, Kubo, Iwate-cho Iwate-gun, Iwate Prefecture
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Product Appearance



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