
NICHICON Develops the PCY Series of Chip-Type Conductive Polymer Aluminum Solid Electrolytic Capacitors

NICHICON CORPORATION has developed the PCY series of chip-type conductive polymer aluminum solid electrolytic capacitors featuring high heat and moisture resistance, as well as long life—designed to meet the growing demand for heat resistance and longevity in next-generation communications systems. The series achieves industry-leading performance standards.

We will exhibit the PCY series at Electronica China 2025, held at the Shanghai International Expo Center from April 15 to 17.

Overview and Development Background

As 5G expands—with its ultra-high speeds, high capacity, low latency, and support for multiple simultaneous connections—power consumption in communications infrastructure continues to rise. Looking ahead to 6G, expectations are rising for further advancements in these characteristics, along with ultra-low power consumption, enhanced coverage scalability, autonomy, and ultra-high safety and reliability. As a result, capacitors are expected to meet even higher reliability standards moving forward. In particular, macrocells and outdoor small cells require products that can operate across wide temperature ranges, offer high moisture resistance, and remain maintenance-free.

The PCY series is an industry-leading chip-type conductive polymer aluminum solid electrolytic capacitor rated for 12,000 hours at 125°C. By meeting the above market demands, it will contribute to the advancement of information and communications infrastructure.

Features

Chip-type aluminum solid electrolytic capacitors using conductive polymers as electrolytes exhibit the polymer's characteristically superior ESR in the high-frequency ranges, while maintaining stable product characteristics over long periods.

The PCY series offers guaranteed operation for 12,000 hours at 125°C and moisture resistance for 1,000 hours at 85°C and 85% R.H., thanks to a high heat-resistant sealing rubber that enhances airtightness and protects the conductive polymer from degradation, combined with an optimized conductive polymer electrolyte.

【Capacitance and Rated Ripple Current Comparison】

Dimensions (mm)	Rated Voltage (V)	PCY Series				
		Capacitance (μF)	tanδ	Leakage Current (μA) (2-minute value/20°C)	Initial ESR (mΩ) (20°C/100kHz)	Rated Ripple Current (mArms)
ø6.3×6.7L	2.5	560	0.12	280	16	1,300
	6.3	330	0.12	415	18	1,300
	16	100	0.12	320	25	1,000

*Capacitance: 120Hz at 20°C

*Rated ripple current: 100kHz at 125°C

Main Specifications

- Series : PCY Series
- Rated voltage range : 2.5V to 16V
- Rated capacitance range : 100μF to 560μF
- Category temperature range : -55°C to 125°C
- Product dimensions : ø6.3mm × 6.7mmL
- Life : 12,000 hours guaranteed at 125°C
- Terminal shape : Chip type
- Samples : From April 2025
- Mass production launch : From July 2025
- Production plant : NICHICON (OHNO) CORPORATION FUKUI FACTORY
4-24-15 Technology Center, Tsuchifugo, Ohno-shi, Fukui
(ISO 9001, IATF 16949, and ISO 14001 certified)



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