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NICHICON Expands Ratings for Industries' Highest Temperature PCZ Series of 150°C Chip-Type Conductive Polymer Aluminum Solid Electrolytic Capacitors

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NICHICON CORPORATION has expanded the ratings for PCZ series of chip-type conductive polymer aluminum solid electrolytic capacitors (operating temperature of 150°C; guaranteed life of 2,000 hours) suitable for automotive and industry applications which need high reliability, 16V, 20V, 50V and 63V ratings have been added this time. We also increased the range of sizes, including introducing a low profile $\phi 8 \times 7L$ version.

The new series will be exhibited at CEATEC 2019, held at Makuhari Messe from Tuesday, October 15, to Friday, October 18.

Overview and Development Background

The automotive and related fields have been accelerating the usage of electronic components, as seen in self-driving vehicles and ADAS*, and integration and diversification of control boards is progressing. It has become common to have control boards such as powertrain ECUs** installed in the engine compartment, which has created demand for highly reliable capacitors that operate at high temperatures

To meet these market needs, we expanded our lineup by adding the new ratings of 16V, 20V, 50V, 63V and low profile size of $\phi 8 \times 7L$ to PCZ series (150°C; 2,000 hours).

Features

We optimized the new technologies employed in the development of the PCZ series to expand our 150°C lineup, adding 16V, 20V, 50V and 63V-rated

capacitors as well as low profile and special-size capacitors, enabling the use of the PCZ series in applications that were previously unattainable.

The lineup now has a voltage range of 16V to 63VDC, a capacitance range of 12 μ F to 1,000 μ F, and product dimensions ranging from ϕ 8 \times 7L to ϕ 10 \times 12.7L. The additions will allow our customers to choose the best product to meet their needs in high-temperature environments without losing the features of conductive polymer aluminum solid electrolytic capacitors such as low ESR and high allowable ripple current.

Main Specifications

Note: Figures in parentheses indicate expanded ratings.

Rated voltage range	16 to 63VDC (16V, 20V, 50V, 63V)
Rated capacitance range	12 to 1,000 μ F (12 to 68 μ F, 470 to 1000 μ F)
Category temperature range	-55°C to 150°C
Product dimensions	ϕ 8 \times 7L to ϕ 10 \times 12.7L (mm) 6 sizes (ϕ 8 \times 7L)
Life	2,000 hours guaranteed at 150°C
Terminal shape	Chip type
Samples	Expanded lineup from October 2019
Mass production	Expanded lineup from January 2020 [Planned production volume: 1 million/month]
Production plant	NICHICON (OHNO) CORPORATION, SITE II Factory 4-24-15 Tsuchifugo, Ono, Fukui Prefecture (ISO 9001, IATF 16949, and ISO 14001 certified)

Terminology Explanation

*ADAS: Advanced driver-assistance systems

**ECU: Electronic control unit



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