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## **NICHICON Develops the PCW Series of Chip-Type Conductive Polymer Aluminum Solid Electrolytic Capacitors with a Guaranteed Ripple Current Capacity at 125°C**

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NICHICON CORPORATION has developed the PCW Series of conductive polymer aluminum solid electrolytic capacitors with a guaranteed ripple current at high temperatures. This makes the PCW ideal for use in automotive and telecommunications sectors. The PCW Series is the industry's first lineup of conductive polymer aluminum solid electrolytic capacitors to offer a guaranteed ripple current.

### **Overview and Development Background**

In recent years, the demand for conductive polymer aluminum solid electrolytic capacitors that offer maximum operating temperatures of 125°C and the same reliability in terms of the ripple current as electrolytic and hybrid capacitors has grown along with the use of electrical components in automobiles. To satisfy this demand, NICHICON CORPORATION has developed the PCW Series that is rated for 2,000 hours at a maximum temperature 125° with rated ripple current applied. The PCW Series has optimized the sealing rubber with a high heat-resistant material to improve the reliability.

### **Features**

Aluminum solid electrolytic capacitors that utilize conductive polymers as electrolytes are characterized by both superior ESR in the high-frequency ranges and excellent ripple current durability. Our PCW Series uses highly heat-resistant sealing rubber to maintain stability even at high temperatures while achieving low ESR and reduced self-heating by using a superior lead wire and other optimized materials. The PCW Series is the first lineup of chip-type conductive polymer aluminum solid electrolytic capacitors in the industry to offer a guaranteed ripple current.

### Comparison with Current Products

	PCW Series (Developed product)	PCJ Series (Current product)
Life (guaranteed)	<b>2000 hours at 125°C with rated ripple current applied</b>	2000 hours at 105°C with rated DC voltage
Rating	6.3V – 220μF	6.3V – 220μF
Case Size (mm)	φ6.3×6L	φ6.3×6L
ESR (at 20°C/100 kHz)	16 mΩ	15 mΩ
Ripple Current (at 100kHz)	1800 mArms <b>(at 125°C)</b>	3200 mArms (at 105°C)

\*Capacitance: 120Hz at 20°C

### Main Specifications

- Rated voltage range : 2.5 to 6.3 V
- Rated capacitance range : 150 to 390 μF
- Category temperature range : -55 to 125°C
- Product dimensions : φ5×6L to φ6.3×6L (mm) (2 Sizes)
- Life : 2,000 hours guaranteed at 125°C
- Terminal shape : Chip type
- Sample : From October 2022
- Production plant : NICHICON (OHNO) CORPORATION,  
SITE II Factory  
4-24-15 Technology Center, Tsuchifugo, Ono,  
Fukui Prefecture  
(ISO 9001, IATF 16949, and ISO 14001 certified)



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Aluminum Solid Electrolytic Capacitors**

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