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NICHICON Develops UYA Series of Chip-Type Aluminum Electrolytic Capacitors Guaranteed for 5,000 Hours at 125°C

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NICHICON CORPORATION has developed the UYA series of chip-type aluminum electrolytic capacitors. The series boasts specifications such as high heat resistance and long life, making it ideal for 5G base station applications.

NICHICON will exhibit the series at TECHNO-FRONTIER 2021's 36th Power System Japan Expo.

Overview and Development Background

Providing widespread 5G coverage requires more base stations than 4G/LTE systems. 5G base stations installed in urban areas with limited space or in locations where maintenance is difficult will need to be made smaller through high-density mounting and more reliable (maintenance-free). For this reason, base stations call for miniaturized mounted components that have high heat resistance and long life. NICHICON has developed the UYA series of chip-type aluminum electrolytic capacitors guaranteed for 5,000 hours at 125°C in response to these market needs.

Features

In designing the UYA series, NICHICON used a low-evaporation electrolyte to achieve a longer product life than was previously available. Adopting the series enables the optimization of products' internal specifications, which saves space for other necessary components. With an optimally shaped seating plate, the series also provides excellent solderability. The UYA series

makes it possible to meet the demand for long-life in 5G base station components.

Main Specifications

Rated voltage range:	63 to 100V
Rated capacitance range:	90 to 880 μ F
Category temperature range:	-40 to 125°C
Product dimensions:	ϕ 12.5 \times 13.5L to ϕ 18 \times 21.5L (15 sizes)
Life:	5,000 hours guaranteed at 125°C (when voltage is applied)
Terminal shape:	Chip type
Samples:	From May 2021
Mass production:	From September 2021 [Planned production volume: 50,000/month]
Production plant:	NICHICON (OHNO) CORPORATION 1-11-2 Shimoyoro, Ono, Fukui Prefecture (ISO 9001, IATF 16949, and ISO 14001 certified)

• See following table for product sizes and ratings

μ F Cap	Code	V		80		100	
		63		1K		2A	
		1J		1K		2A	
90	900					12.5 \times 13.5	650
160	161			12.5 \times 13.5	650	16 \times 16.5	930
200	201					18 \times 16.5	1000
240	241	12.5 \times 13.5	650			16 \times 21.5	1500
270	271			16 \times 16.5	930		
330	331					18 \times 21.5	1600
360	361			18 \times 16.5	1000		
430	431	16 \times 16.5	930	16 \times 21.5	1500		
560	561	18 \times 16.5	1000	18 \times 21.5	1600		
660	661	16 \times 21.5	1500			Case size ϕ D \times L (mm)	Rated ripple
880	881	18 \times 21.5	1600				

Rated ripple current (mArms) at 125°C 100kHz



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