



**Development of RHA Series of
Screw Terminal Type Aluminum Electrolytic Capacitors
World's First Mass Production of 650V Rated Voltage Product
(Guaranteed 5000 hours Operation at 85°C)**

Nippon Chemi-Con has developed the RHA Series of ultra high voltage 650V screw terminal type aluminum electrolytic capacitors with a durability of 5000 hours operation at 85°C. This is the first time in the world that aluminum electrolytic capacitors with a rated voltage of 650V have been mass produced.

Screw terminal type aluminum electrolytic capacitors are used as smoothing capacitors in the inverter systems that are indispensable for obtaining high efficiencies in industrial equipment such as machine tools, industrial robots, and servo motors.

Conventionally, the highest rated voltage of screw terminal type aluminum electrolytic capacitors was 600 to 630V in the case of mass produced models. However, the RHA Series developed this time has succeeded in increasing the rated voltage to up to 650V.

By using ultra high voltage aluminum electrolytic capacitors, it becomes possible to reduce the number of series-connected capacitors, enabling equipment downsizing. In addition to reducing the number of balance resistors required for series connection, there is the advantage that the chassis can be shared.

Technical Advantages:

For development, in order to achieve high capacitance in the ultra high voltage region, Nippon Chemi-Con used an original, newly designed aluminum electrode foil. We also used our original technology for higher voltage for the electrolyte and increased the insulation breakdown voltage to more than 800V. In addition, a new special structure was adopted in order to achieve high voltage and high reliability at the same time.

Mass Production Schedule:

Mass production of the RHA Series has started from this July.



Specifications:

- Category temperature range: -25 ~ +85
- Endurance: 5000 hours at 85
- Rated voltage range: 500 ~ 650V
- Capacitance range: 1000 ~ 15000 μ F
- Case size: ϕ 50 \times 95 ~ ϕ 100 \times 250Lmm
- Rated ripple current: 5.4 ~ 39.8Arms

Features:

315V-2S VS 600V-1S Performance Comparison

	General Purpose Product: 315V -6800μF (ϕ76.2\times130L)	Newly Developed Product: 600V -3900μF (ϕ76.2\times170L)
Total Case Volume (cm ³)	501 cm ³ \times 2 = 1002 cm ³	775 cm ³ (-23%)
Total Capacitance (μ F)	3400 μ F	3900 μ F (+15%)
Total Ripple Current (120Hz/85)	17.7Arms	17.3Arms (-2%)