# nichicon

# Tech Topics

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## Oh Snap!

## Nichicon's High Performance Snap-In Capacitors



Due to advances in industrial machinery efficiency, systems continue to require more compact, longer lasting, and more powerful components for inverter control circuits. Nichicon has snap- in type capacitors with rated voltages up to 500V and with 10,000 hours life at 105C.

By making these upgrades, we have a selection of capacitors with optimal specifications ideal for control circuits, inverters, power supplies, solar and wind power, and other renewable energy equipment.

There are many key advantages to our high performance electrolytic capacitors. Here are five benefits to using them in your designs:

#### Advantage #1: Rapid Charging and Discharging

Our QS series is suited for high frequency regenerative voltage for AC servomotors and switching power supplies. This series has special design features proprietary to Nichicon that allow for rapid charging and discharging.

#### Advantage #2: High Voltage/High Reliability

Our GX series is made with high reliability foil and a high voltage electrolyte for general inverters and power supplies withstanding up to 5,000 hours at 500V.

#### Advantage #3: Small Case Sizes

Our GL series is made for tight spaces including equipment downsizing. Our capacitors are designed to accommodate the miniaturization trend in the industry.

#### Advantage #4: High Rated Ripple Current

Our GW series is designed for applications which require high ripple currents. Our rated voltage goes up to 450V and the rated ripple goes up to 5220 mA.

#### Advantage #5: Long Life Assurance

Our GR series is designed for long life assurance withstanding 10,000 hours.

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#### **Quick Facts**

- Long Life Assurance
- High Ripple Current
- **High Reliability**
- Suited for high frequency regenerative voltage for AC servomotors
- Suited for equipment downsizing.

# **High Performance Product Offerings**













Nichicon's High Performance family of capacitors offers:

Series	Life (hours)	Max Voltage
GL	2,000	450 volts
QS	3,000	450 volts
GR	10,000	450 volts
GW	3,000	450 volts
GX	5,000	500 volts

## **Focus Markets**

- **Power Electronics** 
  - o Inverters in power supplies and industrial apparatuses
- **Consumer Electronics** 
  - o Large audio equipment such as Servo-amps and speakers
- **Transportation** 
  - o Internal electronics systems in cars and busses.

## **Applications**

- **Filtering** 
  - Snap-in caps are perfectly suited for filtering and storing input current, as well as the smoothing of the output current.
- Rapid Charge & Discharge
  - Perfect for switching power supply designs that require rapid regenerative power
- Safety
  - Often used in board designs for protection applications that guard against over voltage



There are a wide variety of applications for electrolytic capacitors and in this Tech Topic we have merely scratched the surface. We encourage you to contact your Nichicon Account Representative to assist you if you have any additional questions.

\*Data sheets for the high performance snap-in can be found on Nichicon's web site at www.nichicon.com:



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