nichicon Tech Topics

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Contact Us:

Nichicon (America) Corporation

http://www.nichicon-us.com

P— (847) 843-7500

F— (847) 843-2798

E— sales@nichicon-us.com

Follow us:

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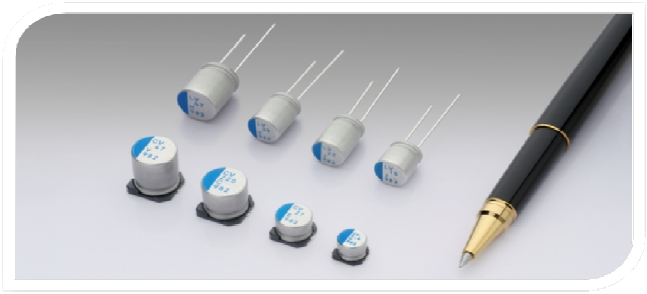
Twitter @NichiconUS

High Voltage Aluminum Polymer Capacitors: CX, LV, LE and CV series



High reliability products have become a necessity in the electronics industry. Nichicon is proud to offer several Polymer Aluminum capacitors which provide high reliability along with high voltage. The CV series has been enhanced and is now available up to 125 volts, while the LV series goes up to 100 volts. The recently upgraded CX series goes up to 50 volts for 3000 hours at 125°C., while the LE series is ideal for ultra-low ESR requirements.

Below are advantages to Nichicon's Aluminum Polymer capacitors:

Advantage #1: Low ESR

Polymer aluminum electrolytic capacitors offer very low ESR ratings versus standard aluminum electrolytic capacitors. Nichicon offers ESR ratings down to 5 milli-Ohms in other series in its family of polymer capacitors.

Advantage #2: Excellent Frequency Characteristic

By using the high conductivity of functional polymer as the electro-lyte, ESR is greatly improved, obtaining the frequency characteristic nearly equal to a film capacitor.

Advantage #3: High Ripple Currents

Polymers have higher ripple current capability.

Advantage #4: Steady ESR and Capacitance

ESR and capacitance have steady characteristics over temperature change and a wide frequency range. At low temperatures, polymers are very reliable.

Advantage # 5: Cost Savings

One polymer capacitor has the same ripple current and ESR capabilities as 7 to 9 standard aluminum capacitors in parallel. This creates a great advantage in reducing cost and pc board's real estate.

Quick Facts

- Cost Effective
- Excellent Frequency Characteristics
- High Ripple Current Usage
- Excellent Ripple Voltage Smoothing
- Excellent Noise Absorption
- Reduces Board Real Estate
- Low ESR and Steady Capacitance

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Product Offerings in the CX, LV, LE and CV series

Nichicon's polymer capacitors offer:

- Smaller overall case sizes and higher capacitance values than standard aluminum electrolytics.
- ESR ratings as low as 5 milli-Ohms.
- Radial-lead and surface-mount versions with many size options.
- 2.5V to 125V maximum voltage ratings.
- 3.3uF to 4700uF capacitances.
- Load life of 3000 hours at 125°C.
- SMD type: Lead free reflow soldering condition at 260°C peak.

Markets

* DC-DC Converter for Automotive * LED Backlight * Industrial Equipment * AC-DC Power Supply for Personal Computers * Cellular Phones * Outdoor and Indoor Wireless Equipment * General LED Applications *

Applications

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

Filtering

Primary and secondary filtering for DC-DC converter and secondary filtering for switching power supplies.

Noise Absorption

Noise absorption in the DC/DC Converter and Power Supply Line.

Smoothing

Smoothing of ripple voltage.

Scan this tag to receive Data sheets for the series above which can also can be found on Nichicon's web site at ***www.nichicon.com****.*