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High Voltage Aluminum Polymer Capacitors: LV and CV Series-80 and 100 Volts



Nichicon has enhanced its high voltage aluminum electrolytic polymer capacitors. The current LV and CV family of polymer capacitors are now available in 80 and 100 volts. For the radial leaded device, LV series, capacitance ranges from 6.8uF to 470uF. In the surface mount CV series, capacitance values of 5.6uF to 680uF are available.

There are key advantages to 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

Using the high conductivity of a functional polymer with an electrolyte, the ESR is greatly improved, obtaining the frequency characteristic nearly equal to a film capacitor.

Advantage #3: Usage with 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 boards real estate!

LV and CV Product Offering

Nichicon's LV and CV family of polymer capacitors offers:

- Smaller overall case sizes and higher capacitance values than standard aluminum

Polymer Quick Facts

- Cost Effective
- Excellent Frequency Characteristics
- High Ripple Current Usage
- Excellent Ripple Voltage Smoothing
- Excellent Noise Absorption
- Reduces Board Placements
- Saves PC Real Estate
- Excellent Transient Response Capability
- Steady ESR and Capacitance
- Low ESR

electrolytics

- ESR ratings down to 19 milli-Ohms
- Radial-lead and surface-mount versions with many size options
- 3.5 or 5.0mm lead spacings
- 16V to 100V maximum Vdc ratings
- 5.6uF to 680uF capacitances
- Load life of 3000 hours at 105C
- High ripple currents up to 4400 mArms
- SMD type: Lead free reflow soldering condition at 260C peak

Markets

* DC-DC Converter for Automotive * LED Backlight * Industrial Equipment * AC-DC Power Supply for Personal Computer * Cellular Phone * General Household Goods * 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 Account 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 supply.

Noise Absorption

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

Smoothing

Smoothing of ripple voltage.

Data sheets for the LV and CV series are attached and also can be found on Nichicon's web site at www.nichicon.com.