

Al Electrolytic Capacitors Are Vibration-Proof

[KYOCERA AVX](#)'s AEVA and AEVB series compact, vibration-proof aluminum electrolytic capacitors are engineered for harsh industrial environments. Designed to overcome the mechanical stress challenges that have limited the application of aluminum electrolytic capacitors in industrial applications, these capacitor series feature compact, surface-mount form factors equipped with innovative plastic supports that improve vibration performance and unique termination shapes that maximize the soldering area. These features also increase the capacitors' board-mounting strength.

The AEVA and AEVB series feature liquid electrolyte dielectrics, provide high-CV performance in smaller packages than competing can-type aluminum electrolytics, and ruggedly withstand up to 30-g acceleration and operating temperatures as low as -55°C and as high as +125°C. They exhibit very low ESR, low leakage (≤ 0.01 CV or 3 μ A, whichever is greater), and high endurance, with rated lifetimes up to 5,000 hours at rated voltage and 125°C. Additionally, they are halogen-free, lead-free compatible, and RoHS compliant.

Both series are suited for industrial applications exposed to high vibration and temperatures including robotics, embedded motor control units, photovoltaic inverters, power tools, dc-dc converters, and uninterruptable power supplies (UPSs)—and are shipped on 15-in. reels and compatible with reflow soldering to support automated placement.

The AEVA series capacitors are currently available in five case sizes (0810, 1010, 1213, 1616, and 1821) and rated for 6.3 to 100 Vdc, 10 μ F to 4,700 μ F $\pm 20\%$, operating temperatures extending from -55°C to +125°C, and up to 4,000-hours endurance at rated voltage and 125°C.

The AEVB series capacitors are currently available in four case sizes (0810, 1010, 1213, and 1616) and rated for 16 to 50 Vdc, 47 μ F to 2,200 μ F $\pm 20\%$, operating temperatures extending from -40°C to +125°C, and up to 5,000-hours endurance at rated voltage and 125°C.

"Mechanical stress has long been a critical concern for aluminum electrolytic capacitors," said Mack Cartagena, staff research development engineer, KYOCERA AVX. "To overcome this common challenge, we gave the new AEVA and AEVB series a unique plastic support and special terminations designed to increase the soldering area. These features significantly improve board-mounting strength and ensure reliable performance under up to 30 g of acceleration. These capacitors are also rated for operating temperatures up to +125°C to effectively address the demands of industrial applications, and every unit is tested in accordance with international standards to uphold the exceptional quality that KYOCERA AVX is known for."

For more information, about the [AEVA](#) and [AEVB](#) series product pages or contact the technical [support team](#). To order, contact your [local sales representative](#) or visit one of the company's trusted distributors. Or for more information, email inquiry@kyocera-avx.com or call 864-967-2150.



Figure. The AEVA and AEVB series aluminum electrolytic capacitors are engineered for harsh industrial environments, delivering high-CV, long-lifetime performance in compact, surface-mount packages that reliably withstand up to 30-g acceleration and operating temperatures extending from -55° to +125°C.