

AST High Temperature Capacitors

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Active Signal Technologies (AST) and Alfred University have successfully developed high temperature capacitors for power conditioning.

These capacitors mitigate current spikes and voltage ripple in large power conversion equipment such as DC-DC converters, AC power inverters and power control units for aircraft actuators.

These capacitors function as high frequency switching filters for military and civilian hybrid vehicle traction motors and portable power inverters, according to Walter Schulze, PhD, Active Signal Technologies (AST) project engineer.

"These capacitors are exceptionally low-loss and do not overheat as many conventional capacitors do at high frequency and high ambient temperature (tested to 150C at full current)," said Schulze. Alfred University (AU) has proven that related capacitors perform very well for other applications.

The dielectric used in capacitors targeted at hybrid vehicle traction inverters are related to material systems that have proven application in ceramic capacitors for very high temperature use in oil and gas exploration, geothermal instrumentation and inverters for compact transportable energy storage devices. Currently compositions are being life tested at 350C.