



Press Release

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PA&E Offers Aluminum Silicon Carbide Option for Titanium Composite Electronic Packages

AlSiC Heat Sinks Offer Reduced Weight and Improved Thermal Conductivity

Wenatchee, WA -- October 28, 2008 – Titanium composite technology can produce electronic packages that are stronger and more reliable than aluminum alternatives, however, titanium's thermal dissipation characteristics are inadequate for some applications. PA&E offers engineers the option of using integrated molybdenum/copper heat sinks and now, for applications where weight is a primary consideration, the company is offering an aluminum silicon carbide heat sink option.

AlSiC offers thermal properties similar to those of MoCu at 180 – 200 W/mK, but is one third to one-fifth as dense, offering significant weight savings. The implementation process begins during initial design phase, when the package's electronic circuitry is mapped against the housing floor and where locations that will be exposed to the highest temperatures are identified. The AlSiC composite heat sinks are then metallurgically bonded to the housing only in the locations where the housing comes into contact with the high-power devices. This limited use of the heat sink material minimizes the overall mass of the package. The package is then machined, finished and plated with no visible signs of the heat sinks on the finished product.

Since titanium composite material does not require mold tooling or diamond machining, it can be incorporated into new designs with very limited nonrecurring tooling, making the prototype phase more economical than would be possible with competitive technology. Those characteristics, combined with the low-coefficient of thermal expansion (CTE), and high-thermal-conductivity AlSiC heat sinks provide a rugged, reliable, high-performance electronic packaging alternative.

For more information about PA&E's AISiC heat sink capabilities or to learn about other integrated electronic packaging solutions, custom interconnect products, capabilities or EMI filter product line, contact the company at 509-664-8000 or visit at <http://www.pacaero.com>.

PA&E, Inc. is an integrated manufacturing company, specializing in technically demanding ceramic and metal components and assemblies, hermetic connectors and advanced micro-electronic hermetic packaging for global leaders in the defense, space, medical and commercial industries. PA&E is ISO 9001:2000/AS9100 Rev B certified and NADCAP compliant.

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