



### **CPS AlSiC Metal Matrix Composite Assemblies for Hermetic Packaging Applications**

*In response to the market CPS Technologies is pleased to announce the development of products combining AlSiC Metal Matrix Composites into Hermetic Packaging Assemblies – Economical, Light Weight Thermal Management Hermetic Packages*



CPS Technologies Corporation, the worldwide leader in the design and production of metal matrix composites, is developing AlSiC (Aluminum Silicon Carbide) a metal matrix composite packaging solutions for traditional hermetic packaging applications.

AlSiC hermetic packing solutions will offer many benefits over traditional thermal management hermetic packaging materials, such as CuMo and CuW. AlSiC is significantly lighter in weight than CuMo and CuW that makes AlSiC the appropriate choice for weight sensitive applications. AlSiC is also lower cost material than CuMo and CuW that have seen significant increase in material cost in the past three years.

AlSiC provides thermal management with thermal expansion coefficient (TCE) that is similar to CuMo and CuW. AlSiC high thermal conductivity is also similar to these materials.

The CPS AlSiC offers significant shape advantage over CuMo and CuW that require machining for all but simple shapes. The CPS casting fabrication process can produce AlSiC to net-shape that produces both the composite material and final product shape in one process step, - eliminating costly machining of the component, yet maintaining tight tolerances and design complexity. The net-shape casting capability enables directly creating functional design features such as pockets for circulators, as well as cavities or pedestals for the die.

AlSiC meets the requirements of the Restriction of Hazardous Substances Directive (RoHS compliant) of the European Parliament. CPS will certify and is compliant to DFARS CLAUSE 252.225-7014 Alt.1

Utilizing the CPS proprietary sealing process combined with CPS's extensive knowledge and experience from their standard hermetic packaging business unit will offer the market place AlSiC hermetic packaging solution. CPS is working with key technology driven customers to develop AlSiC hermetic packaging solutions.

For more information on CPS' AlSiC components, contact CPS at 1 (508) 222-0614 x 242; e-mail [marko@alsic.com](mailto:marko@alsic.com), or Cheryl Oliveira at x 247; e-mail [coliveira@alsic.com](mailto:coliveira@alsic.com).