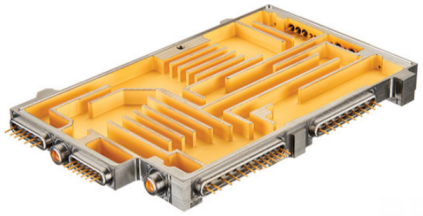
High Performance Microwave Packaging



Winchester Interconnect provides Hermetic Microwave Packaging solutions for the most extreme applications from Aircraft Radar and Electronic Warfare systems to Missile/Missile Defense systems.

Advanced Hermetic Sealing

Our exclusive ceramic dielectric material, Ceramax™, is a multi-phase devitrified compound used as a direct replacement for glass that provides the most reliable solution available. With industry-leading material science and superior hermetic sealing technology, our vertically integrated manufacturing capabilities provide your design team with limitless solutions. In-house high precision machining, laser welding, vacuum brazing, and plating means tightly controlled, precision-built hermetic solutions with sealing beyond 1 x 10-9 and operating temperatures of -269° C to +450° C.

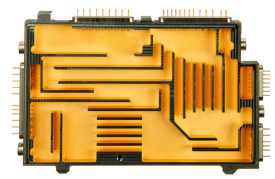
Joining of Dissimilar Metals

The ability to join dissimilar metals through the use of advanced processes, such as explosion welding, vacuum brazing, diffusion bonding, and laser welding is a core technology in manufacturing of high performance hermetic assemblies. Laser Beam Welding is ideally suited for assembly and integration of hermetic connectors due to its precise application and small heat-affected zone. Connectors can be joined together and mounted into higher level assemblies with little to no thermal stress impact.

Explosion Welding uses chemical explosives to accelerate one metal into another at high velocity, which creates a welded interface between two metals. This unique metal joining process allows for the capability of creating hermetic connectors that consist of two, or more, dissimilar metals.

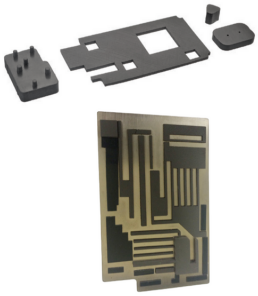
Vacuum Brazing is a joining process where filler metal is heated to melting temperatures above 450° C and distributed between two or more base materials by capillary action while protected by an oxygen-free (vacuum) atmosphere.

Hermetic Product Solutions



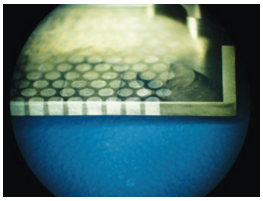
Hermetic Microwave Packaging

Utilizing explosion/laser welding, vacuum brazing, and diffusion bonding technologies, Hermetic Microwave Packaging Solutions are available in Stainless Steel, Aluminum, Titanium, or any combination thereof.



Cover Assemblies

Hermetically Sealed, Laser Welded Covers with installed PolyIron Microwave Absorber and Hydrogen Getter material provide a complete solution addressing potential EMI and hydrogen contaminant issues within the hermetically sealed electronic enclosure. PolyIron magram absorber addresses potential EMI issues by absorbing it, not reflecting it. Hydrogen getter material captures hydrogen, which is often present and can damage electronics within the microwave package. Ideal for use with densely packed microwave packages where space is at a premium.



Titanium Aluminum Packaging (TAP)

When requirements for hermetic packaging include high thermal conductivity, a low coefficient of thermal expansion ("CTE"), and lightweight, Titanium-Aluminum Packaging (TAP) provides a great solution. TAP utilizes titanium as its main housing structure material while integrating aluminum into thermally sensitive areas to optimize heat dissipation.

Hermetic RF Feedthroughs

Laser-welded SMP, SMPM, SMA, SSMA, and TNC feedthroughs available in Stainless Steel, Aluminum, and Titanium with patented Press-In design. Laser welded DC feedthroughs also available.

Hermetic Multi-Pin Connectors

Exclusive dielectric material, Ceramax, Ceramic-to-Metal laser-welded true hermetic Nano D, Micro D, Standard D and Military Circular connectors IAW Mil Specs including, but not limited to, M32139, M83513, M24308 and D38999.

Winchester Interconnect™

We Energize Innovation™