

Coil Cables for Imaging Applications

Custom Balun and Hose Design Solution

Customer Challenge

A leader in medical device manufacturing for imaging applications has trusted Winchester Interconnect to provide cable assembly solutions for over a decade. The customer originally approached Winchester with a need to improve the overall performance of their MRI coil cable.

A design review illustrated that the components were not only difficult to manufacture, but also cracked which resulted in unreliable performance. Additionally, the customer was experiencing long lead times, supply chain issues, and high cost implications. Winchester was tasked with focusing on two primary components for the coil cable, the balun and the protective hose.



Winchester's Solution

Winchester has a patented balun design that utilizes 3D printing technology which is solely processed in-house. By utilizing these capabilities, we eliminated the current multi-step balun machining process which had caused long lead times. In fact, our balun solution can be produced in one day.

The current hose design was composed of foam potted materials that cracked. Winchester changed these materials to a more robust, medical-grade, quality resin and utilized our in-house mold capabilities to extrude the hoses. We were able to eliminate the cracking and produce a better solution faster. Most importantly, the end result of this newly designed balun and hose improved the performance that the customer can count on.

Winchester understands the need for continuous design improvements that align with innovation and technological enhancements for medical devices. We are always developing solutions for customers that support better manufacturability and performance.