



SUCCESS STORY

EMI Filter Assemblies for Implantable Defibrillators

Spectrum Control's custom engineered ceramic assemblies help save lives in next generation ICDs

Spectrum Control was selected to supply EMI filtering and custom ceramic assemblies to a leading medical device maker for their next-generation Implantable Cardioverter Defibrillators (ICDs). These innovative new ICDs are saving countless lives.

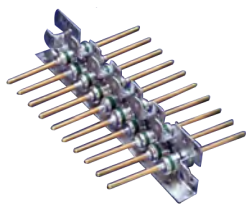
Why Spectrum Control Was Chosen

Spectrum Control has extensive experience in EMI filtering design and manufacturing for medical devices. We were engaged by the customer in on this project to support the ICD program with custom-engineered EMI filtering solutions. These assemblies protect the devices from electromagnetic interference from external sources such as smartphones to ensure flawless performance at all times, even in the presence of heavy electromagnetic interference.

Our EMI filtering assemblies prevent the implantable device from malfunctioning and impairing them from operating when they should not.

Ceramic capacitor assemblies protect implantable devices against EMI/RFI susceptibility.

These and similar solutions are achieved by using one of three custom options. Custom designs may include multi-pin filter assemblies, single line discoidal capacitors, or planar array ceramic capacitors.



EMI Filter Assembly



Planar Array Capacitor



Single Line Discoidal Capacitor

High-reliability EMI filtering components keep ICDs functioning properly.



ICDs using Spectrum Control's custom EMI filtering assemblies reduce the risk of life-threatening cardiac arrhythmias.

Stringent Testing and Manufacturing

Spectrum Control validates performance requirements with automated testing, 100% thermal shock, voltage conditioning, customized transient/pulse testing, dielectric withstanding voltage, insulation resistance, and other critical tests.

Spectrum Control's ceramic capacitors and all our EMI filters are designed and produced in our State College, PA manufacturing facility leveraging our state of the art ceramics factory. Key features include:

- MRI compatible (non-magnetic available)
- Mixed loading including filtered, grounded, and pass-through/antenna compatible line within the same device
- High voltage capable to survive external defibrillation exposure