Advancement in Microelectronic Packaging for Medical Implants

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Abstract

In the world of electronics, the call for more and more functionality comes with the expectation of maintaining the current footprint or even better, reducing it. Advancements in microelectronics design and packaging have been one of the major factors in meeting these demands. Device and system packaging for medical implant applications is no different. Many believe that miniaturization is key to developing implantable products that have minimal adverse impact on quality of life. In this talk, approaches in microelectronics packaging taken for several systems will be discussed. Applications including a cranial mounted neural interface, peripheral nerve interface for advanced prosthetics, and ultra-miniaturized neural stimulator, will be discussed. Packaging, assembly, and materials trade-offs will also be discussed.