Case Study

OEM – Medical Industry

Technical situation

Customer developed a state of the art hearing aid designed to transform the user's own eardrum into a speaker, which enables delivery of an ultra-wide frequency range (from 125 to 10,000 Hz) and a higher maximum gain margin. Providing hearing impaired patients a hearing solution that is designed to change the current standard of care for sound performance. This small medical device 4mm x 3mm x 1.4mm is placed into the ear and is required to meet all the FDA Biocompatibility requirements.

Solution

PRS presented Parylene-C as the coating solution for this medical device. PRS engineering team successfully completed "Design of Experiments" (DOE) that met or achieved better than performance relative to controlling customer's thickness specifications.

Benefits

First Articles were submitted. PRS engineering team developed a process to meet Parylene-C, thickness of 12 microns +/- 2 microns with 100% first pass yields. The Parylene- C coating meets all of the FDA Biocompatibility requirements and with a thickness of 12 microns +/- 2 microns the medical device passed "sweat-soak" corrosion testing. Subsequently the customer awarded the contract to PRS.