Abstract

The implantable medical devices (IMDs) are one of the most important advanced healthcare systems. Nowadays, the devices which are designed to monitor physiological data from inside the human body have great promises to provide major contributions to disease prevention, diagnosis and therapy thus reducing hospitalization terms and improving the patients' quality of life. It is recognized that modern wireless technology will play an important role in the biomedical application. Essential elements of implantable devices are antenna embedded in system contains Biosensors and interface circuits, which enable the exchange of data between implantable devices and external environment. In this paper, the implantable slot antenna which operates at MICS band (402-405 MHz) has been designed. This implantable antenna is a combination of meander slots and square spiral slots have been embedded for effective size reduction at a fixed frequency operation. Compared to traditional planar inverted-F antennas (PIFAs), the proposed antenna has advantages of good size reduction and also being easy to be optimized to the necessary resonance frequency. This design would fulfill the requirements of biocompatibility, miniaturization, patient safety, and high-quality communication with exterior equipment.
Miniaturized Antenna with Combination of Meander and Square Spiral Slots for Biomedical Applications

- A. Kiourti, K. S. Nikita, and M. Christopoulou, "Performance of a Novel miniature

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