Abstract

Wireless medical devices are used for monitoring a patient’s health. These devices transmit patient’s health data to external programming devices through communication links. Battery life is a significant issue with these wireless medical devices. This project proposes an energy harvesting system which scavenges energy from Radio Frequency (RF) electromagnetic spectrum and it is operated in GSM 900 band. In such systems, RF input energy is rectified using RF DC rectifier topologies. The RF- DC conversion is carried out using schottky diode. Impedance matching circuit is deployed between antenna and rectifier for maximum power transfer. The rectifying efficiency is found to be 72% for low input power. The proposed RF energy harvesting system is designed and simulated using Advanced Design System 2009 software.

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Index Terms

Computer Science

Information Sciences

Keywords

Energy harvesting, Health monitoring System, Half wave rectifier, voltage doubler rectifier, Bridge rectifier.