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| **Title:** | A Low SAR In-Body Antenna for Wireless Monitoring Purpose of Pacemaker System | | |
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| **Abstract:** |  |
| This research paper deals with a low SAR patch antenna that resonates at 2.415 GHz. This antenna can be employed to monitor the pacemaker system wirelessly, considering its performances. The main aim was to operate the antenna at ISM (Industrial, Scientific and Medical) band (2.4-2.48 GHz) in the pacemaker system, where body granted materials were used to construct both the pacemaker and the antenna to ensure the biocompatibility. To investigate the antenna parameters' changes between free space and in-side body condition, the designed antenna was examined and compared for both conditions. The key speciality of this design is that the SAR (Specific Absorption Rate), which is the most crucial parameter for any in-body antenna, was found in a considerable-safe region. Moreover, Computer Simulation Technology (CST)-based desired findings of this antenna for return loss, VSWR, and far-field radiation characteristics were found with compared to other recent body-implantable antenna related published works. | |