

عنوان مقاله:

A New Design of a Compact Metamaterial Antenna for RFID Handheld Applications

محل انتشار:

مجله مهندسی برق مجلسی، دوره 13، شماره 2 (سال: 1398)

تعداد صفحات اصل مقاله: 7

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خلاصه مقاله:

The development of miniature antennas is the key requirement for radio frequency identification applications in various fields. In this paper, a new design of a compact metamaterial microstrip antenna based CSRR resonators is proposed. The proposed metamaterial antenna has a simple structure. It is formed by a rectangular patch embedded a T-shaped slot in one side, and a two metamaterial unit cells formed by CSRR etched from the ground plane in the other side. The designed antenna is printed on an epoxy Frame Resistant ϵ substrate by using CST Microwave Studio. It operates at two RFID bands around 5.8GHz and 2.45GHz . The designed antenna is fabricated by using an LPKF machine. The simulation results have been justified by measuring the parameters, respectively

کلمات کلیدی:

antenna, Radio frequency identification, Metamaterial, ISM band, Dual band antenna, Split Ring Resonator, CST

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