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Frequency Tunable Slot-Coupled Dielectric Resonators Antenna

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ABSTRACT

A frequency tunable slot-coupled dielectric resonators antenna (DRA) is investigated. Three dielectric resonators (DRs) that placed onto a rectangular coupling slot are fed through the slot. CST Microwave Studio is used to simulate the electromagnetic properties of the proposed antenna. Base on the simulated results, the magnetic resonance mode can be influenced by the distance between the DRs. Further measurement, which verifies the simulation by reasonable agreement, is carried out on the antenna. As the distance between the DRs increases, the resonance frequency of the proposed antenna increases, which shows a tunable performance. This work points a new way for the miniaturization of wireless communication system.

KEYWORDS:

A. Dielectric resonator antenna;

B. Resonance frequency;

C. Reconfigurable antenna.

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