عنوان مقاله:

Analysis and Design of a Novel Dual Band Frequency Selective Surface Based on Inset Crossed-Dipoles Fractal Geometry Using 3DFDTD Method

محل انتشار:

سیزدهمین کنفرانس مهندسی برق ایران (سال: 1384)

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خلاصه مقاله:

The multiband properties of selfsimilar fractals can be exploited to design multiband frequency selective surfaces (FSS). One of the fractal shapes used for multiband FSS design is inset crossed-dipole fractal. The inset crossed-dipole fractal can be used to generate FSS with band more closely separated than the other fractal designs. In this paper the inset crossed-dipole FSS is simulated by the FDTD method in conjunction with unit cell approach and also a novel multiband FSS based on the inset crossed-dipoles through adding horizontal arms to dipoles generated at the first stage of fractal iteration is introduced. The proposed design has a multiband characteristic in which the frequency ratio of the bands is less than two which could not be achieved by inset crossed-dipoles FSS.

کلمات کلیدی:

Frequency Selective Surfaces (FSS), FDTD, Fractal geometry, Inset crossed- dipoles