

MICROSTRIP ANTENNA PARAMETERS IMPROVEMENT USING EBG STRUCTURE

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ABSTRACT

A novel mushroom like electromagnetic band gap (EBG) structure for antenna improvement is presented in this paper. The idea proposed in this paper is etching several properly shapes in the metal surface of the mushroom-like compact EBG cell to introduce stop band in electromagnetic band gap structur. This band gap is represented by LC equivalent circuits, from which the resonant frequencies can be estimated. The effectiveness of the EBG as a surface wave suppresser is demonstrated using numerical simulations CST microwave studio. Two port method is used to analysis the band gap properties of the proposed structure.[1] Micro strip antenna surrounded by double layer of EBG structure presented in this paper which enhance return loss and bandwidth of conventional micro strip antenna

KEYWORDS: Electromagnetic Band Gap Structure, Surface Wave, Band Gap Property, Micro Strip Antenna