Abstract

This paper presents a gain enhancement of microstrip triangular patch antenna array using defected ground structure (DGS). The proposed antenna is designed using 2×1 triangular array. An antenna without DGS is first designed acting as reference. In designing the antenna integrated with DGS, two rectangle shaped DGS were etched off from the ground plane. Using DGS the gain of the antenna is enhanced from the reference paper. Gain is improved from 9.5dB to 11.2 dB at 2.4GHz. The minimum peak of return loss (S11) is -21.29dB. For designing of the structure the thickness h=1.61mm with Dielectric constant=1.6 is used and the antenna occupies 170mm × 160mm die of area. This antenna is operating at the resonance
Gain Enhancement of Microstrip Triangular Patch Antenna Array using Defected Ground Structure

frequency of 2.4GHz which are suitable for ISM band and WLAN. CST microwave studio software is used for the simulation of the designed structure.

References


Index Terms

Computer Science Circuits And Systems

Keywords

Microstrip Antenna Array  Wlan  Dgs