Abstract

In this paper, a new Defected Ground Structure (DGS) consisting of I-shape slot in ground has been presented to enhance the bandwidth of the Microstrip Patch Antenna (MPA). The parameters such as Bandwidth, Return loss and VSWR are much improved in proposed antenna than simple MPA without defected ground structure. Finite Element Machine (FEM) based High Frequency Structure Simulator (HFSS) software Version-13.0 is used to obtain the performance parameters of the proposed antenna. A comparison is also shown for the proposed antenna with the antenna structure without defect. The proposed antenna resonates in C-band at frequency of 6.0718 GHz with bandwidth of 132.3 MHz. A very good return loss of -46.75 dB is obtained for I-Shaped Defected Ground Structure (DGS). Also I-shaped DGS in the ground plane found to give a size reduction of about 5%.

References

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**Index Terms**

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