International Journal of Electrical and Electronics Engineering (IJEEE)
ISSN(P):2278-9944; ISSN(E): 2278-9952
Vol. 5, Issue 4, Jun - Jul 2016; 9-18

International Academy of Science, Engineering and Technology
Connecting Researchers; Nurturing Innovations

NUMERICAL ANALYSIS AND MODELLING OF MICROSTRIP PATCH ANTENNAS WITH EMBEDDED DEFECTIVE GROUND STRUCTURE

S. SREENATH KASHYAP[1] & VED VYAS DWIVEDI[2]

[1]Research Scholar, C. U. Shah University, Wadhwan City, Gujarat, India

[2]Pro-Vice Chancellor, C. U. Shah University, Wadhwan City, Gujarat, India

ABSTRACT

The key design issues of antennas at terahertz frequency applications is wide bandwidth, there is a necessity to numerically analyze the electrical and physical parameters of the antenna structures. Simultaneously electro-geometrical modelling of the antennas with Defective Ground Structures is a technological challenge towards the high frequency communication applications. Fundamentally this paper aims to analyze and discuss critically about the microstrip antenna structures with embedded W shaped defective ground structure. The conceptual in depth analysis of the DGS based antenna structures can lead to improve performance, realize the design and develop high bandwidth and directivity antennas which are potentially useful for the short range communication application of terahertz frequency.

KEYWORDS: Antennas, Bandwidth, Directivity, Defective Ground Antennas, Gain, Microstrip Patch Antennas, Return Loss, Terahertz Wireless Communications, Terahertz Antennas, VSWR