

## **DGS BASED FREQUENCY RECONFIGURABLE MICROSTRIP PATCH ANTENNA FOR COGNITIVE RADIO AND WI-MAX APPLICATIONS**

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### **ABSTRACT**

In this paper, Defective ground based frequency reconfigurable micro strip patch antenna for cognitive radio and Wi-max applications is proposed. The different antenna parameters like Return loss ( $S_{11}$ ), VSWR, Radiation pattern, Gain and Directivity are improved when compared with the antenna with DGS to the antenna without DGS structure. Simulated frequency of an antenna range lies in the range of 3.2-3.67 GHz. The simulation results of an antenna carried by using computer simulated technology (CST) microwave studio software. Resonating frequency range of the antenna is well suitable for Wi-max and cognitive radio applications.

**KEYWORDS:** Frequency Reconfigurable, Micro Strip Patch Antenna, Wi-Max, DGS, Cognitive Radio