DESIGN OF ULTRA WIDE BAND ANTENNA

A PROJECT REPORT

Submitted by

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BONAFIDE CERTIFICATE

Certified that this project report **"DESIGN OF ULTRA WIDE BAND ANTENNA"** is the bonafide work of "**DIVYA SOUNDHARYA. N (211714106026), LEKHA PRIYADHARSHINI. S (211714106069)** and **NIVETHITHA. P (211714106085)"** who carried out the project work under my supervision.

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The report on the project work submitted by the above students in partial fulfilment for the award of the degree of Bachelor of Engineering in ELECTRONICS AND COMMUNICATION ENGINEERING of Anna University, reported the work done by the above students and then evaluated.

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INTERNAL EXAMINER **EXTERNAL EXAMINER**

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ABSTRACT

In this paper we propose an Ultra wide band antenna which operates on UWB range (3.1 to 10.6GHz). We use micro strip line feeding and rectangular shape as a base shape for patch. FR4 is used as a substrate material with thickness 1.57mm with copper cladding for a ground and patch as 0.035mm. Rectangular patch and defected ground structure is used to attain UWB range. The design is carried out using Computer Simulation Technology (CST) microwave studio 2014. The optimization is achieved by varying the length and width parameters. Simulation results show that the antenna works well in the UWB region and satisfies premier antenna parameters such as return loss, VSWR and radiation pattern. Finally, the proposed UWB antenna structure is fabricated and verified. The measurement shows a good agreement with the simulated results. Mainly used in the application like military, satellite, cognitive radio etc.

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UWB	Ultra Wide Band
CST	Computer Simulation Technology
VSWR	Voltage Standing Wave Ratio
FR-4	Flame Retardant
dBi	Decibel over Isotropic
dBd	Dipole over Dipole
IEEE	Institute of Electrical & Electronics Engineering
RF	Radio Frequency