

BANDWIDTH ENHANCEMENT OF MICROSTRIP PATCH ANTENNA

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ABSTRACT

This thesis presents the design of microstrip rectangular patch antenna with resonant frequency at 5.8GHz for wireless application. High bandwidth is one of the main requirements for wireless application. In this thesis, two different possible techniques were used to enhance the bandwidth. The first technique is using different thickness of substrate. The second technique is addition of parasitic element into antenna structure. With adding passive element, the bandwidth enhancement achieve up to 9.3%. The simulation of the microstrip rectangular antenna done by using Computer Simulation Tool (CST) Microwave Environment software and fabricate on FR4 substrate. All the simulation and measurement results are presented in this thesis to show its feasibility.

Keywords: patch antenna, CST microwave studio, fabrication, microstrip, simulation, substrate FR-4

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