

# CPW Pentagonal Patch Antenna with Multiple Slots Effect for WLAN and WiMAX Applications

## Abstract

This work presents a dual band CPW pentagonal antenna with multiple slots technique for WiMAX and WLAN applications. Antenna A was a basic pentagonal antenna with CPW-fed, while Antenna B was the pentagonal island shaped antenna with CPW. Then it moves on to Antenna C, which has pentagonal island slot with mini pentagonal island slots while Antenna D is the modified version of Antenna C. The objective is to create dual band frequencies with the improvement of the antenna by addition of the multiple slots. The Antenna D has an improvement of - 25.22 dB at 3.5 GHz and - 23.92 dB at 5.92 GHz, making it appropriate for WiMAX and WLAN band, according to the research results.

## Keywords

Fractal; Pentagonal Island; Resonant Frequency; WiMAX; WLAN