

## Design of a Novel CPW Fed Fractal Antenna for UWB

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**Abstract :** This paper presents a novel fractal antenna structure proposed for UWB (Ultra - Wideband) applications. The frequency band 3.1-10.6 GHz released by FCC (Federal Communication Commission) as the commercial operation of UWB has been chosen as frequency range for this antenna based on coplanar waveguide (CPW) feed and circular shapes fulfilled according to fractal geometry. The proposed antenna is validated and designed by using an FR4 substrate with overall area of 34 x 43 mm<sup>2</sup>. The simulated results performed by CST-Microwave Studio and compared by ADS (Advanced Design System) show good matching input impedance with return loss less than -10 dB between 2.9 GHz and 11 GHz.

**Keywords :** Fractal antenna, Fractal Geometry, CPW Feed, UWB, FCC

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