



DESIGN AND IMPLEMENTATION OF DUAL-BAND CIRCULARLY POLARIZED ANTENNAS USING STACKED PATCHES

S Sankaranarayanan¹, M Anto Bennet^{1*}, B. Deepa², A. Banu², S. Gayathri²

¹Faculty of Electronics and Communication Engineering, Vel Tech, Chennai, India.

²UG Student of Vel Tech, Chennai, India.

Email: bennetmab@gmail.com

Submitted: May 27, 2017

Accepted: June 15, 2017

Published: Sep 1, 2017

Abstract- Single and Dual feed Antennas with dual frequencies have been demonstrated. Varactor diodes are used for independent tuning. The PIFA (Planar Inverted F-Antenna) has two frequencies from 0.7 to 1.1 GHz and from 1.7 to 2.3GHz. Impedance match of about -10dB an isolation greater than 13dB is obtained. The single feed antenna can be tuned from 1.2 to 1.6GHz and 1.6 to 2.3 GHz. The antenna volumes are 63x100x3.15 mm³ with relative permittivity is 3.55 substrates. The efficiency varies from 25% to 50% over tuning range. The application areas are in 4G wireless systems.

Index terms: Planar inverted F-antenna (PIFA), Voltage Standing Wave Ratio(VSWR)