

Design and Evaluation of five element Yagi-Uda Antenna operating in ISM Band

Tashi phuntsho^{1*}, Purna B.Samal²

^{1*,2} *Department of Electronics and Communication Engineering, College of Science and Technology, Royal University of Bhutan*

^{1*} 0214424.cst@rub.edu.bt

² purna.cst@rub.edu.bt

Abstract--Design of five element Yagi-Uda antenna operating at 2500 MHz is proposed. The proposed antenna successfully operates at 2500 MHz with operating bandwidth of 250.25MHz from 2.39GHz to 2.64GHz The proposed antenna achieved a directional radiating property with maximum radiation intensity of 9.37dBi. It achieved high gain of 9.4 dB with stable performance ranging from 8 dB to 9.4 dB within its operating frequency. The antenna consists of reflector, driven element and three directors for high gain and directivity. Fundamental dipole antenna is employed as a driven element. The design and evaluation of the antenna is carried out in CST STUDIO SUITE 2016, antenna design software.

Keywords: Yagi-Uda Antenna, dipole antenna, directional antenna, WI-MAX