BOW TIE ANTENNA WITH L-CUT AND TRIANGULAR SLOTS FOR IMPROVING REFLECTION COEFFICIENT USED FOR BLUETOOTH APPLICATIONS

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Abstract

This paper presents a study on Bow tie antenna with L-cut and triangular slots for improving reflection coefficient used for Bluetooth applications. It is designed to work on a thick substrate (h = 1.6mm) with a high dielectric constant (\(\varepsilon_r = 4.4\)) operating at three frequencies (2.4, 3.6, 3.9, 4.9 GHz). L-shaped slots are introduced in the both sides of bow tie antenna in order to achieve a very low return loss at these frequencies. The antenna is simulated with HFSSv11 simulator. The proposed antenna can exhibit minimum return loss, Omni-directional radiation pattern, wide impedance bandwidth, VSWR<2, and the stronger current distribution throughout the antenna.

Keywords: – bow tie antennas, L-shaped slots, wireless.