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Abstract

In this paper, a printed Yagi-Uda antenna with an integrated balun is presented for WLAN applications. The planar directive antenna is designed to operate at 2.4 GHz and 5 GHz frequency bands. An integrated balun in the form of microstrip-to-coplanar strips (CPS) transition is used to feed the antenna. The substrate material used is FR4 of dielectric constant 4.4 and thickness 1.6 mm. The proposed antenna design presents measured bandwidths (RL_{-10 dB}) of 2.37 – 2.42 GHz and 4.78 – 6.17 GHz for VSWR

References

- E. Avila-Navarro, C. Cayuelas, and C. Reig, "Dual-band printed dipole antenna for Wi-Fi 802.11n applications," *Electronics Letters*, vol. 46, no. 21, pp. 1421–1422, 2010.
- N. Zhang, P. Li, B. Liu, X. W. Shi, and Y. J. Wang, "Dual-band and low cross-polarisation printed dipole antenna with L-slot and tapered structure for WLAN applications," *Electronics Letters*, vol. 47, no. 6, pp. 360–361, 2011.
- C. -Y. Huang and E. -Z. Yu, "A slot-monopole antenna for dualband WLAN applications," *IEEE Antennas and Wireless Propagation Letters*, vol. 10, pp. 500–502, 2011.
- J. Huang and A. C. Densmore, "Microstrip Yagi array antenna for mobile satellite vehicle application," *IEEE Trans. Antennas Propagat.*, vol. 39, pp. 1024–1030, July 1991.
- K. Uehara, K. Miyashita, K. I. Matsume, K. H. Hatakeyama, and K. Mizuno, "Lens-coupled imaging arrays for the millimeter and submillimeter-wave regions," *IEEE Trans. Microwave Theory Technol.*, vol. 40, pp. 806–811, May 1992.
- Y. Qian, W. R. Deal, N. Kaneda, and T. Itoh, "Microstrip-fed quasi-Yagi antenna with broadband characteristics," *Electronics Letters*, vol. 34, no. 23, pp. 2194–2196, 1998.
- L. H. Truong, Y. -H. Baek, M. -K. Lee, S. -W. Park, S. -J. Lee, and J. -K. Rhee, "A high-performance 94 GHz planar Quasi-Yagi antenna on GaAs substrate," *Microwave and Optical Technology Letters*, vol. 51, no. 10, pp. 2396–2400, 2009.
- K. Han, Y. Park, H. Choo, and I. Park, "Broadband CPS-fed Yagi-Uda antenna," *Electronics Letters*, vol. 45, no. 24, pp. 1207–1209, 2009.
- S. X. Ta, B. Kim, H. Choo, and I. Park, "Slot-line-fed Quasi Yagi Antenna," in the 9th International Symposium on Antennas, Propagation, and EM Theory, Guangzhou, China 2010.
- N. Kaneda, W. R. Deal, Y. Qian, R. Waterhouse, and T. Itoh, "A Broadband Planar Quasi Yagi Uda Antenna," *IEEE Trans. Antennas Propag.*, vol. 50, pp. 1158–1160, Aug. 2002.
- Son Xuat Ta, Ikmo Park, Chien Dao-Ngoc, "A Hybrid of T-Dipole and Quasi Yagi Antenna for Dual-band WLAN Access Point," *REV Journal on electronics and communications*, vol. 2, No. 1-2, January-June, 2012.
- Antonio-Daniele, Capobianco, Filippo Maria Pigozzo, Antonio Assalini, Michele Midrio, Stefano Boscolo, and Francesco Sacchetto, "A Compact MIMO Array of Planar End-Fire Antennas for WLAN Applications," *IEEE Trans. Antennas Propag.*, vol. 59, no. 9, September, 20

Index Terms

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Wireless Communication

Keywords

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