

Dual-band printed dipole antenna loaded with open complementary split-ring resonators for wireless applications

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Abstract-

In this article, a printed dipole antenna loaded with open complementary split ring resonators is proposed. The integration of these particles inside the dipole structure provides dual-band behavior. Furthermore, a dipolar-like radiation pattern is obtained at both working frequency bands. A prototype has been designed for operation in the L1-GPS frequency (1.575 GHz) and the WiFi band of 2.4-2.48 GHz. The prototype has been fabricated and measured, achieving good results. The obtained results show the suitability of the proposed design for dual-band wireless terminals.

Index Terms- printed dipole antenna; dual-band antenna; metamaterial loaded antenna; open complementary split-ring resonator

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