

Design of dual-frequency SRR-loaded dipole with equivalent circuit approach

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Abstract-

An equivalent circuit approach to design dual-frequency printed dipoles is presented. This approach is based on magnetic coupled circuit characterising an antipodal printed dipole loaded with split ring resonators (SRRs). This kind of antenna allows working with any arbitrary pair of frequencies, and the equivalent circuit predicts accurately the two resulting resonance frequencies, as well as their bandwidth. Two prototypes, one working at 1.32 and 2.83 GHz and the second working at 1.2 and 2.05 GHz. have been manufactured and measured, showing excellent agreement with simulations and reasonable values for efficiencies at both frequencies.

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