

Bendable UHF RFID tag antenna for retail garments using non-uniform meandered lines

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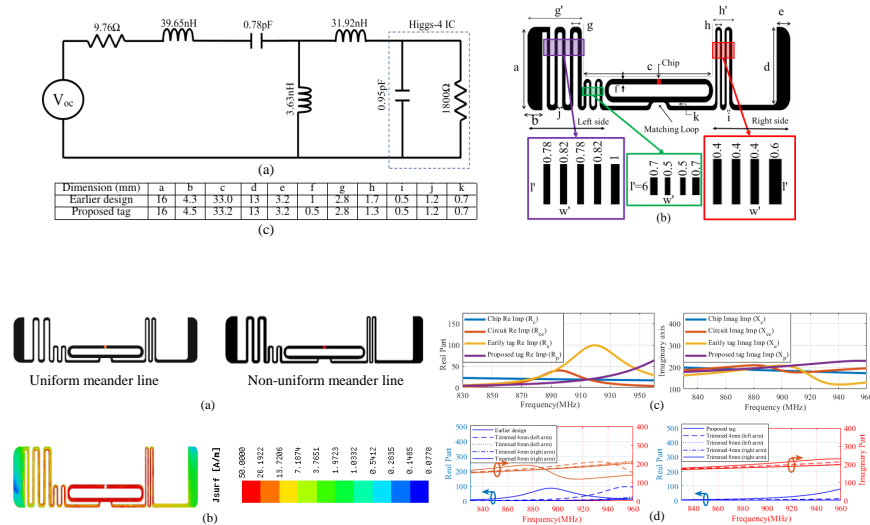
February 8, 2021

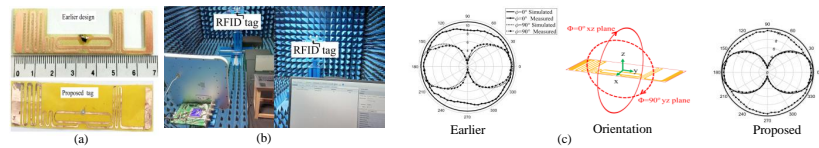
Abstract

A bendable UHF RFID tag antenna using non-uniform meandered lines for retail garments in the textile industry is presented. Based on an earlier UHF RFID tag antenna using nonuniform meandered lines, the proposed tag is fully bendable and aimed to be embedded in retail garments for long-life cycles. As a result, a relatively low cost, wide band, compactness and good conjugate matching with good dipole-like read range is presented. Results showed an antenna with a wide bandwidth of 900MHz and a long read range of 10.1m making the UHF RFID tag antenna using non-uniform meandered lines a potential candidate for retail garments in bendable applications of the textile industry. Simulations are corroborated by measurements and are in fairly agreement.

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