Abstracts

An active tagging system using circular-polarization modulation

M.A. Kossel, R. Kung, H. Benedickter and W. Biichtokd. "An active tagging system using circular-polarization modulation." 1999 Transactions on Microwave Theory and Techniques 47.12 (Dec. 1999 [T-MTT] (Special Issue on 1999 International Microwave Symposium)): 2242-2248.

An active read/write microwave tagging system using circular-polarization modulation as a novel modulation scheme for radio-frequency identification systems is presented. The proposed modulation scheme reduces demodulation complexity and power consumption on the battery-powered tag. Additional coding of the circular-polarization modulated data reduces transmission errors due to polarization inversion at multipath propagation. In multiple-reader environments, the main jamming threat occurs from power carriers of different interrogators. A combination of circular-polarization modulation and frequency hopping is presented that shows an increased immunity against multipath phenomena for multiple-tag and multiple-reader environments.

❑ Return to main document.