Abstracts

A retrodirective transponder with polarization duplexing for dedicated short-range communications

C. Luxey and J.-M. Laheurte. "A retrodirective transponder with polarization duplexing for dedicated short-range communications." 1999 Transactions on Microwave Theory and Techniques 47.9 (Sep. 1999, Part II [T-MTT] (Special Issue on Multilayer Microwave Circuits)): 1910-1915.

This paper presents a microwave active transponder using a two-port cross-shaped microstrip antenna. The linearly polarized field coming from an interrogating signal is received by the first port, amplified and used as the locking signal of a local oscillator. The output signal of this oscillator is radiated with an orthogonal polarization by the second port of the same antenna. Two transponders are then connected in a Van Atta array arrangement to provide a retrodirective function. This type of array can be built at low cost and finds application in short-range communications for vehicular systems.

❑ Return to main document.