Abstracts

A low-cost active antenna for short-range communication applications

F. Carrez, R. Stolle and J. Vindevoghel. "A low-cost active antenna for short-range communication applications." 1998 Microwave and Guided Wave Letters 8.6 (Jun. 1998 [MGWL]): 215-217.

A low-cost active antenna to be used in a miniature microwave transponder is presented. This active antenna operating at 9.9 GHz consists of a compact microstrip array antenna of electromagnetically gap-coupled rectangular resonators and a novel ASK demodulator/differential phase-shift keying (DPSK) modulator circuit. In order to minimize the power consumption and to reduce the cost of the active antenna, this novel microwave circuit employs a single "cold" MESFET which performs both the modulator and demodulator functions. The original methods used to realize the active antenna provide high performance, size reduction, and low power consumption.

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