

Abstracts

Integration of a self-oscillating mixer and an active antenna

Jiazong Zhang, Yunyi Wang and Zhizhang Chen. "Integration of a self-oscillating mixer and an active antenna." 1999 Microwave and Guided Wave Letters 9.3 (Mar. 1999 [MGWL]): 117-119.

Current trends in commercial communication system developments have called for small-size and low-cost radio frequency (RF)/microwave circuits. One of the solutions is to design a circuit element such that it possesses multiple functionality. In other words, different parts of a circuit are integrated into a single element, and consequently fewer elements are required. In this work, a C-band self-oscillating mixer (SOM) integrated with an active antenna is presented. A dual-gate field-effect transistor (FET) is employed to facilitate the integration. The resultant unit was tested and experimental results are shown to demonstrate the feasibility of the design.

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