Abstracts

A new millimeter-wave MMIC mixer for sensor applications

I. Angelov, J. Svedin, G. Huss, M. Garcia and H. Zirath. "A new millimeter-wave MMIC mixer for sensor applications." 2000 MTT-S International Microwave Symposium Digest 00.2 (2000 Vol. II [MWSYM]): 643-646.

A new configuration of a MMIC gate mixer associated with a dual-polarized patch antenna was experimentally investigated at 94 GHz for the first time. A 7 dB reduction in the LO power requirement was experimentally observed when compared to a previously used resistive mixer. The new configuration with its low pumping power can significantly simplify the design of the LO sensor chain compared to the ordinary mixer configuration which consumes 3-10 dBm per device to attain a sufficiently low conversion loss for a typical radar application.

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