Abstracts

A novel uniplanar balanced subharmonically pumped mixer for low-cost broadband millimeter-wave transceiver design

Huifang Gu and Ke Wu. "A novel uniplanar balanced subharmonically pumped mixer for low-cost broadband millimeter-wave transceiver design." 2000 MTT-S International Microwave Symposium Digest 00.2 (2000 Vol. II [MWSYM]): 635-638.

A new uniplanar architecture of subharmonically pumped balanced mixer is proposed and developed for low-cost broadband design of millimeter-wave transceiver. Our theoretical and experimental studies carried out over Ka-band show that the new mixer has a conversion loss comparable to the conventional balanced fundamental harmonic mixer. They demonstrates, on the other hand, unparalleled advantages such as very high isolation between ports, wide operating bandwidth, excellent suppression of unwanted LO/RF harmonics and mixing signal components, and also less demand on the LO source.

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