

Abstracts

A Compact Wideband Balanced Mixer (1994 [MCS])

*M.C. Tsai, M.J. Schindler, W. Struble, M. Ventresca, R. Binder, R. Waterman and D. Danzilio.
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A compact wideband balun using a common-gate/common-source approach has been developed. Using this active balun on the LO port, a passive interdigital microstrip balun on the RF port, and a passive lumped element L-C balun on the IF port, a wideband balanced mixer was designed, fabricated and tested. This paper describes the mixer circuit design based on a new passive FET model. Test results of the active balun and the mixer including conversion loss, noise figure, and third order intercept point are presented for RF frequencies from 4 to 18 GHz.

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