Abstracts

Monolithic Mixers with MESFETs Technology to Up and Down Convert Between C and V Band (1995 [MCS])

J.P. Torres, F. Fortes, M.J. Rosario, J.M. Dieudonne and J.C. Freire. "Monolithic Mixers with MESFETs Technology to Up and Down Convert Between C and V Band (1995 [MCS])." 1995 Microwave and Millimeter-Wave Monolithic Circuits Symposium Digest 95.1 (1995 [MCS]): 167-170.

In this paper the design of singly balanced mixers to convert C to V band signals are presented. A step by step design technique is described, based on harmonic balance simulations. The mixer devices are Schotky diodes compatible with a GaAs MESFET technology. The mixer was optimised for minimum conversion losses on the widest possible bandwidth when used as an up or downconverter in order to be used on a large number of applications. The experiments show a minimum conversion losses on the range of 6 to 8dB for both applications (up and downconverter) and a 3dB bandwidth larger then 6GHz.

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