Abstracts

Subharmonic Gate Mixer Based on a Multichannel HEMT

R. Allam, C. Kolanowski, D. Theron and Y. Crosnier. "Subharmonic Gate Mixer Based on a Multichannel HEMT." 1995 Microwave and Guided Wave Letters 5.4 (Apr. 1995 [MGWL]): 122-123.

This paper presents the realization and simulation of a new subharmonic gate mixer based on a multichannel HEMT. This device gives the possibility of tailoring the transconductance profile. Two peaks separated by a valley can be obtained. Biasing the device at the bottom of the valley, the IF signal comes from the mixing of the RF signal and the second LO harmonic. This mixer uses half the normal LO frequency and has a minimum conversion loss of 10 dB.

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