

Abstracts

A Monolithic 94 GHz Balanced Mixer

B. Adelseck, J.M. Dieudonne, K.E. Schmegner, A. Colquhoun, G. Ebert and J. Selders. "A Monolithic 94 GHz Balanced Mixer." 1990 Microwave and Millimeter-Wave Monolithic Circuits Symposium Digest 90.1 (1990 [MCS]): 111-114.

On the basis of a recently developed GaAs technology, which allows the realisation of millimeter wave Schottky mixer diodes and MESFETs on the same monolithic chip, different 94 GHz monolithic mixers have been fabricated. The Schottky diodes show cutoff frequencies of up to 2.3 THz, whereas MESFETs with typical F_{max} (MAG=1) of about 90 GHz have been measured. The mixer chips show conversion losses of less than 8 dB combined with noise figures below 6 dB (DSB).

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