

Abstracts

94 GHz Monolithic GaAs Balanced Mixers

C. Chao, A. Contolatis, S. Jamison and C. Butter. "94 GHz Monolithic GaAs Balanced Mixers." 1983 Microwave and Millimeter-Wave Monolithic Circuits Symposium Digest 83.1 (1983 [MCS]): 50-53.

A millimeter wave monolithic GaAs balanced mixer integrated circuit using a pair of planar Schottky barrier diodes with RF matching elements on a semi-insulating GaAs substrate has been developed for 94 GHz receiver applications. The GaAs chip is used as a suspended stripline in a WR-10 waveguide circuit. A double sideband noise figure of 6.3 dB has been achieved with a local oscillator power of 8 dBm. This includes a contribution of a 1.5dB noise figure due to the IF preamplifier (5-500MHz).

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