A Monolithic 60 GHz Diode Mixer in FET Compatible Technology (1989 [MCS])

B. Adelseck, A. Colquhoun, J.M. Dieudonne, G. Ebert, J. Selders, K.E. Schmegner and W. Schwab. "A Monolithic 60 GHz Diode Mixer in FET Compatible Technology (1989 [MCS])." 1989 Microwave and Millimeter-Wave Monolithic Circuits Symposium Digest 89.1 (1989 [MCS]): 91-94.

A technology has been developed with which MESFETs with an f/sub max/ of 70 GHz and Schottky diodes with f/sub T//spl ap/ 2300 GHz can be fabricated on the same chip. This allows the production of mm wave mixers with integrated LO and IF amplifier. A 60 GHz mixer chip has been designed and fabricated using this technology and shows a conversion loss of 6.0 dB and a noise figure (DSB) of 3.3 dB.

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