

Abstracts

Self-Oscillating Tunnel-Diode Mixer Having Conversion Gain (Short Papers)

C. Toker. "Self-Oscillating Tunnel-Diode Mixer Having Conversion Gain (Short Papers)." 1972 *Transactions on Microwave Theory and Techniques* 20.9 (Sep. 1972 [T-MTT]): 616-618.

A self-oscillating-type tunnel-diode mixer having conversion gain operating at a signal frequency of 600 MHz is demonstrated. By changing the bias, conversion gains up to infinity (oscillations) can be obtained, although gains in excess of 20 dB are typical. Variation of gain with bias is such that the maximum magnitude of the local oscillations corresponds to the minimum conversion gain (a loss of more than 30 dB). No explanation can yet be given for this unexpected phenomenon.

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