Abstracts

A Resonant Tunneling Diode Self-Oscillating Mixer with Conversion Gain

G. Millington, R.E. Miles, R.D. Pollard, D.P. Steenson and J.M. Chamberlain. "A Resonant Tunneling Diode Self-Oscillating Mixer with Conversion Gain." 1991 Microwave and Guided Wave Letters 1.11 (Nov. 1991 [MGWL]): 320-321.

An 11 GHz self-oscillating microwave mixer using resonant tunneling diode has been constructed. Operating in a non-optimised system a maximum conversion gain of 10 dB with an associated noise figure of 11.5 dB has been observed. As result of the conversion gain and self-oscillating configuration, simpler construction with fewer components than conventional circuits is obtained. The local oscillator can be injection locked and swept over a frequency range of 200 MHz.

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