

Abstracts

Harmonic Mixing with an Antiparallel Diode Pair (Aug. 1975 [T-MTT])

M. Cohn, J.E. Degenford and B.A. Newman. "Harmonic Mixing with an Antiparallel Diode Pair (Aug. 1975 [T-MTT])." 1975 Transactions on Microwave Theory and Techniques 23.8 (Aug. 1975 [T-MTT]): 667-673.

An analytical and experimental investigation of the properties of an antiparallel diode pair is presented. Such a configuration has the following unique and advantageous characteristics as a harmonic mixer: 1) reduced conversion loss by suppressing fundamental mixing products; 2) lower noise figure through suppression of local oscillator noise sidebands; 3) suppression of direct video detection; 4) inherent self protection against large peak inverse voltage burnout. These results are obtained without the use of either filters or balanced circuits employing hybrid junctions.

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