

Abstracts

Low-Noise Microwave Down-Converter with Optimum Matching at Idle Frequencies (Short papers)

G.B. Stracca, F. Aspesi and T. D'Arcangelo. "Low-Noise Microwave Down-Converter with Optimum Matching at Idle Frequencies (Short papers)." 1973 Transactions on Microwave Theory and Techniques 21.8 (Aug. 1973 [T-MTT]): 544-547.

A low-noise balanced down-converter for microwave radio-link applications is described. Down-converters of this type have been realized with typical noise figures of 3.5 dB at 4 GHz, 4 dB at 7 GHz, and 5 dB at 13 GHz. These results are obtained mainly by taking into account high order sideband frequencies of the pump harmonics up to the third, by properly terminating the image frequency, by matching the input port of the mixer and by optimizing the mixer-preamplifier interface. The experimental results are compared with the theoretical ones obtainable with ideal purely resistive diodes.

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