

Abstracts

Harmonically Pumped Stripline Down-Converter

M.V. Schneider and W.W. Snell, Jr. "Harmonically Pumped Stripline Down-Converter." 1975 Transactions on Microwave Theory and Techniques 23.3 (Mar. 1975 [T-MTT]): 271-275.

A novel thin-film down-converter which is pumped at a submultiple of the local-oscillator frequency has given a conversion loss which is comparable to the performance of conventional balanced mixers. The converter consists of two stripline filters and two Schottky-barrier diodes which are shunt mounted in a strip transmission line. The conversion loss measured at a signal frequency of 3.5 GHz is 3.2 dB for a pump frequency of 1.7 GHz and 4.9 dB for a pump frequency of 0.85 GHz. The circuit looks attractive for use at millimeter-wave frequencies where stable pump sources with low FM noise are not readily available.

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