Abstracts

Millimeter-Wave Thin-Film Downconverter

W.W. Snell, Jr. and M.V. Schneider. "Millimeter-Wave Thin-Film Downconverter." 1976 Transactions on Microwave Theory and Techniques 24.11 (Nov. 1976 [T-MTT] (Special Issue on Millimeter Waves: Circuits, Components, and Systems)): 804-806.

A 60-GHs hyhrid integrated downconverter intended for use in a mitlimeter-wave radio relay experiment has heen designed and tested. The converter consists of a strip transmission line circuit and two beam-leaded Schottky-barrier diodes which are pumped at a subharmonic of the convectional Iocal oscillator frequency. The conversion loss of the circuit is 6.3 dB and the total single-sideband noise figure, including the noise contribution from the IF amplifier, is 9.1 dB. The circuit looks attractive for millimeter-wave communication systems application up to 100 GHz.

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