Abstracts

An Integrated-Circuit Balanced Mixer, Image and Sum Enhanced

L.E. Dickens and D.W. Maki. "An Integrated-Circuit Balanced Mixer, Image and Sum Enhanced." 1975 Transactions on Microwave Theory and Techniques 23.3 (Mar. 1975 [T-MTT]): 276-281.

GaAs Schotty-barrier diodes with a zero-bias cutoff frequency of 800 GHz have been used in an integrated-circuit balanced diode mixer operating with a signal frequency centered at 9.3 GHz and a local-oscillator (LO) frequency at 7.8 GHz. For an instantaneous bandwidth of 1.0 GHz, the conversion loss (including all circuits and connector losses) was under 3.15 dB. Over the center 0.5 GHz of the band, the conversion loss was less than or equal to 2.8 dB. The conversion loss at the image-band edges was greater than 25 dB; the loss at the center of the image band was greater than 35 dB.

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