Abstracts

Practical Application of a Positive Resistance Up-Converter for Ultra-Low-Noise Amplification

E. Sard, B. Peyton and S. Okwit. "Practical Application of a Positive Resistance Up-Converter for Ultra-Low-Noise Amplification." 1966 G-MTT International Microwave Symposium Digest 66.1 (1966 [MWSYM]): 41-45.

An ultra-low-noise, tunable S-band amplifier which uses a travelling-wave maser (TWM) as the second stage has been developed. The amplifier is made up of a cooled, tunable low-noise S-band varactor up-converter, a fixed-tuned, high-gain, C-band TWM, and an uncooled, tunable varactor down-converter connected in cascade. This receiver configuration has the advantage of combining the large tuning range capability of a parametric up-converter with the ultra-low noise temperature and unconditional stability of a maser.

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