

Abstracts

Novel phase noise reduction technique using HTSC-limiters

F. Massin, H. Christange and R. Knochel. "Novel phase noise reduction technique using HTSC-limiters." 1997 MTT-S International Microwave Symposium Digest 1. (1997 Vol. 1 [MWSYM]): 307-310.

This work presents a novel technique for reducing oscillator phase noise. A high-temperature superconducting (HTSC) limiter is implemented in a feedback oscillator in order to operate the amplifier in its linear region. Less $1/f$ -noise is upconverted by the amplifier which leads to reduced phase noise in the oscillator. A decrease of phase noise up to 10 dB at 1 kHz offset from the carrier could be measured. The new device is well suited for integration in an HTSC microstrip resonator layout.

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