Abstracts

On the noise behavior of a SAW convolver used as a matched filter

G. Ostermayer. "On the noise behavior of a SAW convolver used as a matched filter." 2001 Transactions on Microwave Theory and Techniques 49.4 (Apr. 2001, Part II [T-MTT] (Special Issue on Microwave Acoustic Wave Devices for Wireless Communications and Sensing)): 779-786.

The noise behavior of a surface acoustic wave convolver used as an analog matched filter is investigated in this paper. In contrast to the existing literature, the influence of noise processes with squared amplitudes is not neglected. It is shown that these quadratic noise contributions have a significant influence on the output signal-to-noise ratio (SNR) of the convolver for values of input SNR lower than 10 dB. The calculation is done for on-off keying coded signals but the results are also valid for other modulation schemes, e.g., phase shift keying.

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