

# Abstracts

## Large Pulse Compression Ratio Obtained with Nonlinear Interaction of Bulk Acoustic Waves in LiNbO<sub>3</sub>

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*J.M. White, D.K. Winslow and H.J. Shaw. "Large Pulse Compression Ratio Obtained with Nonlinear Interaction of Bulk Acoustic Waves in LiNbO<sub>3</sub>." 1973 G-MTT International Microwave Symposium Digest of Technical Papers 73.1 (1973 [MWSYM]): 123-125.*

We report here on increased bandwidth in bulk wave parametric convolvers, and demonstrate a new approach to cancellation of the inherent signal distortion in time inverters. A 6 ns compressed pulse has been generated in the convolver by autoconvolution of a 7  $\mu$ s V-FM chirp signal (center frequency of 1.2 GHz), using the nonlinear interaction of longitudinal waves in LiNbO<sub>3</sub>. Time inversion of microwave signals has been demonstrated with uniform output for signal lengths up to 5  $\mu$ s, by compensating for the signal distortion resulting from delay line attenuation.

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