Abstracts

Tapped dispersive SAW delay line yields powerful signal processing capability in communication systems

M. Brandl, A. Pohl and F. Seifert. "Tapped dispersive SAW delay line yields powerful signal processing capability in communication systems." 1999 MTT-S International Microwave Symposium Digest 99.4 (1999 Vol. IV [MWSYM]): 1413-1416 vol.4.

In this paper we present a new method of signal processing in chirp spread spectrum systems utilizing tapped dispersive surface acoustic wave (SAW) delay lines. The fundamentals of chirp impulse compression and its application for a reliable low cost data transmission system are described. The vulnerability by jammers is discussed and the necessity of interference suppression is shown. Our new time and frequency interval suppression technique implements fast adaptive interference cancellation. Further, a new method of chirp partial band coding is presented. This method yields the capability of symbol coding and a higher effective data rate. For verification simulation results and some preliminary experimental results are presented.

❑ Return to main document.