Abstracts

Design and verification of a SAW based chirp spread spectrum system

M. Huemer, A. Pohl, W. Gugler, A. Springer, R. Weigel and F. Seifert. "Design and verification of a SAW based chirp spread spectrum system." 1998 MTT-S International Microwave Symposium Digest 98.1 (1998 Vol. I [MWSYM]): 189-192.

We report on the design and performance of a SAW based spread spectrum wireless LAN system which operates in the ISM band at 2.45 GHz. System IF frequency, transmission bandwidth and data rate are 348.8 MHz, 80 MHz, and 2 Mbit/s, respectively. Due to the high processing gain of 22 dB-made possible by the use of SAW devices-and the large transmission bandwidth, the system is insensitive against narrowband fading and noise. We give a brief system overview and present measurements of the data throughput. A comparison with simulation results, focused primarily on measured and modeled channel characteristics, is also presented.

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