

论文

具有同步跟踪功能的单用户TH-SS PPM超宽带系统性能分析

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摘要

目前超宽带系统均假设已知发射机与接收机之间准确的传播时延,收发双方完全同步,而任何系统收发双方必然存在同步误差.该文针对这一点,提出了一种具有同步跟踪功能的单用户TH-SS PPM超宽带系统,设计了同步跟踪方法,推导出了系统中存在同步误差时,解调器输出端信噪比计算公式和系统BER表达式.理论分析与仿真结果表明,系统BER与同步误差大小有很大关系,同步误差越小,系统BER越小.

关键词 [超宽带](#) [同步](#) [跟踪](#) [TH-SSPPM](#)

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Performance Analysis of a Single User TH-SS PPM UWB System with Synchronization Timing Tracking Ability

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Abstract

It is usually assumed that the perfect propagation delay has been achieved between the receiver and the transmitter, the receiver and the transmitter synchronize perfectly, actually it is impossible to do this. Because of this, this paper proposes a single user TH-SS PPM UWB system with synchronization timing tracking ability, designs the synchronization timing tracking scheme, derives the receiver demodulator output SNR while the synchronization timing error exists between the transmitter and the receiver. The synchronization timing error has great effects on the system BER performance. Theoretical analysis and simulation results indicate that the less the synchronization timing error, the less the system BER.

Key words [UWB](#) [Synchronization](#) [Tracking](#) [TH-SS PPM](#)

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