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论文

降低PTS方法复杂度的原理及应用

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摘要
传统的降低OFDM信号峰均比值的部分传输序列(PTS)方法需计算全部相位旋转因子序列所对应的峰均比值，因而计算复杂度很大。该文分析了OFDM信号峰值出现的规律，提出了搜索合乎需求的相位旋转因子序列的一般性原则，并在此基础上提出了一种全新的降低PTS方法复杂度的方案。理论分析和仿真结果表明，该方法在大幅降低系统复杂度的同时，性能损失较少。

关键词 正交频分复用 峰均比 部分传输序列 复杂度

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The Principle and Application to the Reduction of PTS' Complexity

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Abstract
The conventional PTS method of reducing OFDM signal's PAPR has large computation complexity because of the computation of all sets of the phase rotation vectors. In this paper, a general principle of finding appropriate phase rotation vectors by analyzing the rule of the appearance of peak value for OFDM signals is presented. Based on the principle, a novel method is proposed which can remarkably reduce the complexity of PTS with little degradation of system's performance, as illustrated by theoretical analysis and simulation results.

Key words OFDM PAPR (Peak-to-Average Power Ratio) PTS (Partial Transmit Sequences) Complexity

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