

本科生毕业论文（设计）

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题 目 基于ICFWD对LFM信号的输出

信噪比期望不等式模型

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基于ICFWD对LFM信号的输出信噪比期望不等式模型

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摘要：好

关键词：好

The Expected Inequality Model of Output Signal-to-Noise Ratio of LFM Signal Based on ICFWD

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**Abstract**：

**Key words:** xxx

符 号 说 明

|  |  |
| --- | --- |
| 符号 | 说明与解释 |
|  | 确定信号；随机噪声 |
|  | 参数矩阵 |
|  | 线性正则域核函数 |
|  | 的LCT；的LCT；的LCT |
|  | 复共轭 |
|  | 瞬时自相关函数 |
|  | 的WD |
|  | 的CICFWD |
|  | 的ICFWD |
|  | 的ICFWD交叉项 |
|  | WD，ICFWD，CICFWD的期望输出信噪比 |
|  | 最大值，最大值成立的自变量取值 |
|  | 算数平均 |
|  | 期望算子；方差算子 |
|  | 狄拉克算子 |
|  | 初始频率；频率 |
|  |  |
|  |  |
|  | 噪声的功率谱密度 |

# 1 引言

## 1.1 研究背景

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## 1.2 国内外研究现状

xx

## 1.3研究内容和结构安排

xx。

# 2. 预备知识

## 2.1 线性正则变换（LCT）

















## 2.2 WD的ICF（ICFWD）







# 3. 数学模型

## 3.1 ICFWD的期望输出信噪比





## 3.2 ICFWD的不等式模型







## 3.3 ICFWD的不等式解



# 4. 对含噪LFM信号的不等式模型

## 4.1 单分量LFM信号的ICFWD







## 4.2 双分量LFM信号的ICFWD





















## 4.3 平稳零期望噪声的ICFWD















## 4.4 不等式解

### 4.4.1 单分量情形































# 5. 仿真模拟结果和讨论





表格 1 含零期望平稳噪声的单/双分量LFM信号不等式模型解

|  |  |  |
| --- | --- | --- |
|  | 单分量 | 双分量 |
| 模型的解 |  |  |
| 参数约束 |  |  |





# 6 结论

本文旨在xx。



# 附录

## A. 交叉项和的推导























## B. 等式和的推导





















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