

<<现代VLSI电路设计>>

图书基本信息

书名：<<现代VLSI电路设计>>

13位ISBN编号：9787030111494

10位ISBN编号：7030111494

出版时间：2003-3

出版时间：科学

作者：沃尔夫

页数：618

字数：919000

版权说明：本站所提供下载的PDF图书仅提供预览和简介，请支持正版图书。

更多资源请访问：<http://www.tushu007.com>

<<现代VLSI电路设计>>

内容概要

本书为国外高校电子信息类优秀教材(英文影印版)之一。

本书介绍了完整的VLSI设计过程——从物理设计到系统结构，为VLSI系统设计者提供了这一过程的全面介绍，同时对硬件描述语言VHDL进行了深入的讨论。

本书可作为电子工程、计算机专业本科生教材，也可作为相关领域工程技术人员的参考书。

<<现代VLSI电路设计>>

书籍目录

Preface to the Third Edition Preface to the Second Edition Preface

1 Digital Systems and VLSI 1.1 Why Design Integrated Circuits? 1.2 Integrated Circuit Manufacturing 1.3 CMOS Technology 1.4 Integrated Circuit Design Techniques 1.5 A Look into the Future 1.6 Summary 1.7 References 1.8 Problems

2 Transistors and Layout 2.1 Introduction 2.2 Fabrication Processes 2.3 Transistors 2.4 Wires and Vias 2.5 Design Rules 2.6 Layout Design and Tools 2.7 References 2.8 Problems

3 Logic Gates 3.1 Introduction 3.2 Combinational Logic Functions 3.3 Static Complementary Gates 3.4 Switch Logic 3.5 Alternative Gate Circuits 3.6 Low-Power Gates 3.7 Delay Through Resistive Interconnect 3.8 Delay Through Inductive Interconnect 3.9 References 3.10 Problems

4 Combinational Logic Networks 4.1 Introduction 4.2 Standard Cell-Based Layout 4.3 Simulation 4.4 Combinational Network Delay 4.5 Logic and Interconnect Design 4.6 Power Optimization 4.7 Switch Logic Networks 4.8 Combinational Logic Testing 4.9 References 4.10 Problems

5 Sequential Machines 5.1 Introduction 5.2 Latches and Flip-Flops 5.3 Sequential Systems and Clocking Disciplines 5.4 Sequential System Design 5.5 Power Optimization 5.6 Design Validation 5.7 Sequential Testing 5.8 References 5.9 Problems

6 Subsystem Design 6.1 Introduction 6.2 Subsystem Design Principles 6.3 Combinational Shifters 6.4 Adders 6.5 ALUs 6.6 Multipliers 6.7 High-Density Memory 6.8 Field-Programmable Gate Arrays 6.9 Programmable Logic Arrays 6.10 References 6.11 Problems

7 Floorplanning 7.1 Introduction 7.2 Floorplanning Methods 7.3 Off-Chip Connections 7.4 References 7.5 Problems

8 Architecture Design 8.1 Introduction 8.2 Hardware Description Languages 8.3 Register-Transfer Design 8.4 High-Level Synthesis 8.5 Architectures for Low Power 8.6 Systems-on-Chips and Embedded CPUs 8.7 Architecture Testing 8.8 References 8.9 Problems

9 Chip Design 9.1 Introduction 9.2 Design Methodologies 9.3 Kitchen Timer Chip 9.4 Microprocessor Data Path 9.5 References 9.6 Problems

10 CAD Systems and Algorithms 10.1 Introduction 10.2 CAD Systems 10.3 Switch-Level Simulation 10.4 Layout Synthesis 10.5 Layout Analysis 10.6 Timing Analysis and Optimization 10.7 Logic Synthesis 10.8 Test Generation 10.9 Sequential Machine Optimizations 10.10 Scheduling and Binding 10.11 Hardware/Software Co-Design 10.12 References 10.13 Problems

A Chip Designer's Lexicon B Chip Design Projects B.1 Class Project Ideas B.2 Project Proposal and Specification B.3 Design Plan B.4 Design Checkpoints and Specification C Kitchen Timer Model C.1 Hardware Modeling in C Index

<<现代VLSI电路设计>>

版权说明

本站所提供下载的PDF图书仅提供预览和简介，请支持正版图书。

更多资源请访问:<http://www.tushu007.com>