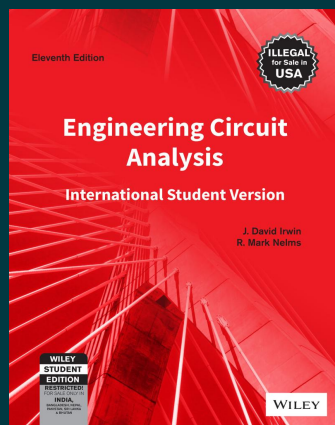




Engineering Circuit Analysis, 11ed, ISV

By J. David Irwin, R. Mark Nelms

Paperback

9788126576258

₹- Price

Pages: 736

Description

Circuit analysis is the fundamental gateway course for computer and electrical engineering majors. Engineering Circuit Analysis has long been regarded as the most dependable textbook. Irwin and Nelms has long been known for providing the best supported learning for students otherwise intimidated by the subject matter. In this new 11th edition, Irwin and Nelms continue to develop the most complete set of pedagogical tools available and thus provide the highest level of support for students entering into this complex subject.

Table of Contents

Preface

Chapter 1 Basic Concepts

1.1 System of Units

1.2 Basic Quantities

1.3 Circuit Elements

Chapter 2 Resistive Circuits

2.1 Ohm's Law

2.2 Kirchhoff's Laws

2.3 Single-Loop Circuits

2.4 Single-Node-Pair Circuits

2.5 Series and Parallel Resistor Combinations

2.6 Wye Delta Transformations

2.7 Circuits with Dependent Sources

2.8 Design Example

Chapter 3 Nodal and Loop Analysis Techniques

3.1 Nodal Analysis

3.2 Loop Analysis

Chapter 4 Operational Amplifiers

4.1 Introduction

4.2 Op-Amp Models

4.3 Fundamental Op-Amp Circuits

Chapter 5 Additional Analysis Techniques

5.1 Introduction

5.2 Superposition

5.3 Thévenin's and Norton's Theorems

5.4 Maximum Power Transfer

5.5 Design Example

Chapter 6 Capacitance and Inductance

6.1 Capacitors

6.2 Inductors

6.3 Capacitor and Inductor Combinations

6.4 Design Example

Chapter 7 First- and Second-Order Transient Circuits

7.1 Introduction

7.2 First-Order Circuits

7.3 Second-Order Circuits

7.4 Design Example

Chapter 8 AC Steady-State Analysis

8.1 Sinusoids

8.2 Sinusoidal and Complex Forcing Functions

8.3 Phasors

8.4 Phasor Relationships for Circuit Elements

8.5 Impedance and Admittance

8.6 Phasor Diagrams

8.7 Basic Analysis Using Kirchhoff's Laws

8.8 Analysis Techniques

Chapter 9 Steady-State Power Analysis

9.1 Instantaneous Power

9.2 Average Power

9.3 Maximum Average Power Transfer

9.4 Effective or rms Values

9.5 The Power Factor

9.6 Complex Power

9.7 Power Factor Correction

9.8 Single-Phase Three-Wire Circuits

9.9 Safety Considerations

9.10 Design Example

Chapter 10 Magnetically Coupled Networks

10.1 Mutual Inductance

10.2 Energy Analysis

10.3 The Ideal Transformer

10.4 Safety Considerations

Chapter 11 Polyphase Circuits

11.1 Three-Phase Circuits

11.2 Three-Phase Connections

11.3 Source/Load Connections

11.4 Power Relationships

11.5 Power Factor Correction

Chapter 12 Variable Frequency Network Performance

12.1 Variable Frequency-Response Analysis

12.2 Sinusoidal Frequency Analysis

12.3 Resonant Circuits

12.4 Scaling

12.5 Filter Networks

Chapter 13 The Laplace Transform

13.1 Definition

13.2 Two Important Singularity Functions

13.3 Transform Pairs

13.4 Properties of the Transform

13.5 Performing the Inverse Transform

13.6 Convolution Integral

13.7 Initial-Value and Final-Value Theorems

13.8 Solving Differential Equations with Laplace Transforms

Chapter 14 Application of the Laplace Transform to Circuit Analysis

14.1 Laplace Circuit Solutions

14.2 Circuit Element Models

14.3 Analysis Techniques

14.4 Transfer Function

14.5 Steady-State Response

Chapter 15 Fourier Analysis Techniques

15.1 Fourier Series

15.2 Fourier Transform

Chapter 16 Two-Port Networks

16.1 Admittance Parameters

16.2 Impedance Parameters

16.3 Hybrid Parameters

16.4 Transmission Parameters

16.5 Parameter Conversions

16.6 Interconnection of Two-Ports

Chapter 17 Diodes

17.1 Introduction

17.2 Modeling Techniques

17.3 Analysis Using the Diode Equation

17.4 Diode Rectifiers

17.5 Zener Diodes

Appendix

Complex Numbers

Index

To purchase this product, please visit:

<https://www.wileyindia.com/engineering-circuit-analysis-11ed-isv.html>



Scan to buy