

## **Book Review**

### **Fundamentals of Electronics**

#### **Book 1: Electronic Devices and Circuit Applications**

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#### **Synthesis Lectures on Digital Circuits and Systems**

**Morgan & Claypool Publishers**

**ISBN 9781627055628**

**97816270556235 ebook**

[www.morganclaypool.com](http://www.morganclaypool.com)

This book fundamentally and comprehensively focuses on the operation of the basic active and non-linear devices. The authors have designed this book with four major chapters.

The first chapter has no introduction, but starts with Operational Amplifiers and Applications. In Electronic circuits, the fundamental unit device is the Operational Amplifiers as it is used to build blocks in electronics. This first chapter begins with an elegant primary focus on the concepts and characteristics associated with the operational amplifiers. The various applications of the operational amplifiers OPAMP includes inverting amplifier, summing amplifier, non-inverting amplifier and differential amplifiers. This chapter is supplemented with numerous problems. At the end of the chapter, a list of references is given which seems to be small!

The electronic circuit elements are divided into two devices, namely linear and non-linear devices. The diode the most important component in the non-linear device is detailed in the chapter 2 on Diode Characteristics and Circuits. Besides the discussion of the characteristics, the diode-ampere relation is described with numerous illustrations. The major diodes and applications are thus well addressed in this chapter followed by many problems.

The third chapter deals extensively about the bipolar junction characteristic which according to the authors is the most basic of the three-terminal semiconductor device. It has many applications that include digital and analog circuits, amplifiers, radio electronics and electronic control devices. The bipolar junction character is explained with good amount of simulations. This chapter is supported with abundant problems and real life applications.

The last chapter on Field Effect Transistor Characteristic explained the Field Effect Transistors which are the semiconductor devices which employ the channel between the drain and source to transport carriers. The various types and characteristics are detailed with many problems and illustrations.

The book, thus contains many problems to understand the active linear devices. A good reading is the benefit one can earn after the use of this book. The book has a shortcoming that it has less number of references.

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