CMOS Active Inductors and Transformers: Principle, Implementation, and Applications

By Fei Yuan

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Many new topologies and circuit design techniques have emerged recently to improve the performance of active inductors, but a comprehensive treatment of the theory, topology, characteristics, and design constraint of CMOS active inductors and transformers, and a detailed examination of their emerging applications in high-speed analog signal processing and data communications over wire and wireless channels, is not available. This book is an attempt to provide an in-depth examination and a systematic presentation of the operation principles and implementation details of CMOS active inductors and transformers, and a detailed examination of their emerging applications in high-speed analog signal processing and data communications over wire and wireless channels.

The content of the book is drawn from recently published research papers and are not available in a single, cohesive book. Equal emphasis is given to the theory of CMOS active inductors and transformers, and their emerging applications. Major subjects to be covered in the book include: inductive characteristics in high-speed analog signal processing and data communications, spiral inductors and transformers – modeling and limitations, a historical perspective of device synthesis, the topology, characterization, and implementation of CMOS active inductors and transformers, and the application of CMOS active inductors and transformers in high-speed analog and digital signal processing and data communications.

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Editorial Review

From the Back Cover

Many new topologies and circuit design techniques have emerged recently to improve the performance of CMOS active inductors and transformers. However, a comprehensive treatment of the theory, topology, characteristics, and design constraints has not been available. ***CMOS Active Inductors and Transformers: Principle, Implementation, and Applications*** provides a systematic presentation and a detailed examination of the operation principles and implementations, and discusses their emerging applications in high-speed analog signal processing and data communications.

The author has organized the book into two parts and equally treats the theory of active inductors and transformers, and their emerging applications. Major subjects covered in the book include: inductive characteristics in high-speed analog signal processing and data communication; modeling and limitations of spiral inductors and transformers; topology, characterization, and implementation.

CMOS Active Inductors and Transformers: Principle, Implementation, and Applications is an invaluable resource for graduate students, IC design engineers and researchers working in circuit design.

Users Review

From reader reviews:

Rebecca Morales:

This book untitled CMOS Active Inductors and Transformers: Principle, Implementation, and Applications to be one of several books that best seller in this year, honestly, that is because when you read this book you can get a lot of benefit into it. You will easily to buy this particular book in the book retailer or you can order it by way of online. The publisher in this book sells the e-book too. It makes you easier to read this book, as you can read this book in your Smartphone. So there is no reason for you to past this e-book from your list.

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