The Design of CMOS Radio-Frequency Integrated Circuits, Second Edition, Thomas H. Lee. Cambridge University Press, 40 West 20th Street, New York, NY 10011-4211 USA. 2004. ISBN 0-521 83539 9 ;797 pages; Listed $75.00.

This book provides in detail how to design high frequency radio integrated circuits in CMOS technology. Starting with a history of radio, to establish a foundation and to high light the evolutionary path of the radio technology from the discrete components as the building block to the application of the integrated circuits design techniques, the book reviews passive RLC networks, the characteristics of passive IC components, and MOS device physics with the design tools and methods such as the discussion of the lumped and distributed systems, Smith chart and S-parameters, bandwidth estimation techniques.

The design of high-frequency amplifiers follows. Key RF building blocks, such as low-noise amplifiers (LNAs), mixers, power amplifiers, oscillators, and frequency synthesizers are studied in detail. The book ends with an examination of examples in GPS, WLAN chip design architectures.

The interested readers can delve into the extensive footnotes, references, and problems sets at the end of each chapter to enhance the understanding.

As a quality professional, it is important to understand the underlie technologies such as this book has provided, in order to effectively perform as the team member of a product design and development team. Even, in the RF device manufacturing environment, the basic understanding of the design issues can help to solve the quality problems which may or may not originated from the process of manufacturing.

This book can serve as either an excellent reference book or as a text book to provide understandings of how are the modern high frequency radio devices being implemented.

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