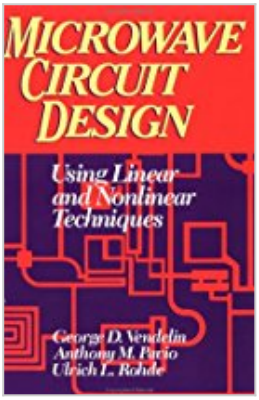

Microwave Circuit Design Using Linear and Nonlinear Techniques

By George D. Vendelin, Anthony M. Pavio, Ulrich L. Rohde

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The ultimate handbook on microwave circuit design with CAD. Full of tips and insights from seasoned industry veterans, Microwave Circuit Design offers practical, proven advice on improving the design quality of microwave passive and active circuits-while cutting costs and time. Covering all levels of microwave circuit design from the elementary to the very advanced, the book systematically presents computer-aided methods for linear and nonlinear designs used in the design and manufacture of microwave amplifiers, oscillators, and mixers. Using the newest CAD tools, the book shows how to design transistor and diode circuits, and also details CAD's usefulness in microwave integrated circuit (MIC) and monolithic microwave integrated circuit (MMIC) technology. Applications of nonlinear SPICE programs, now available for microwave CAD, are described. State-of-the-art coverage includes microwave transistors (HEMTs, MODFETs, MESFETs, HBTs, and more), high-power amplifier design, oscillator design including feedback topologies, phase noise and examples, and more. The techniques presented are illustrated with several MMIC designs, including a wideband amplifier, a low-noise amplifier, and an MMIC mixer. This unique, one-stop handbook also features a major case study of an actual anticollision radar transceiver, which is compared in detail against CAD predictions; examples of actual circuit designs with photographs of completed circuits; and tables of design formulae.

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Editorial Review

Review
"I would like to have this book for my graduate study…the book is definitely for graduate students or practicing engineers." (*IEEE Circuits & Devices Magazine*, September/October 2006)

From the Back Cover
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GEORGE D. VENDELIN is a technical consultant with 30 years of microwave engineering experience with, among other firms, Texas Instruments and Avantek. He is the author of Design of Amplifiers and Oscillators by the S-Parameter Method. ANTHONY M. PAVIO is Technical Director of the Microwave Technology Products Division of Texas Instruments. ULRICH L. ROHDE is President of Compact Software and a partner of Rohde & Schwarz, a firm specializing in test equipment and advanced communications systems.

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