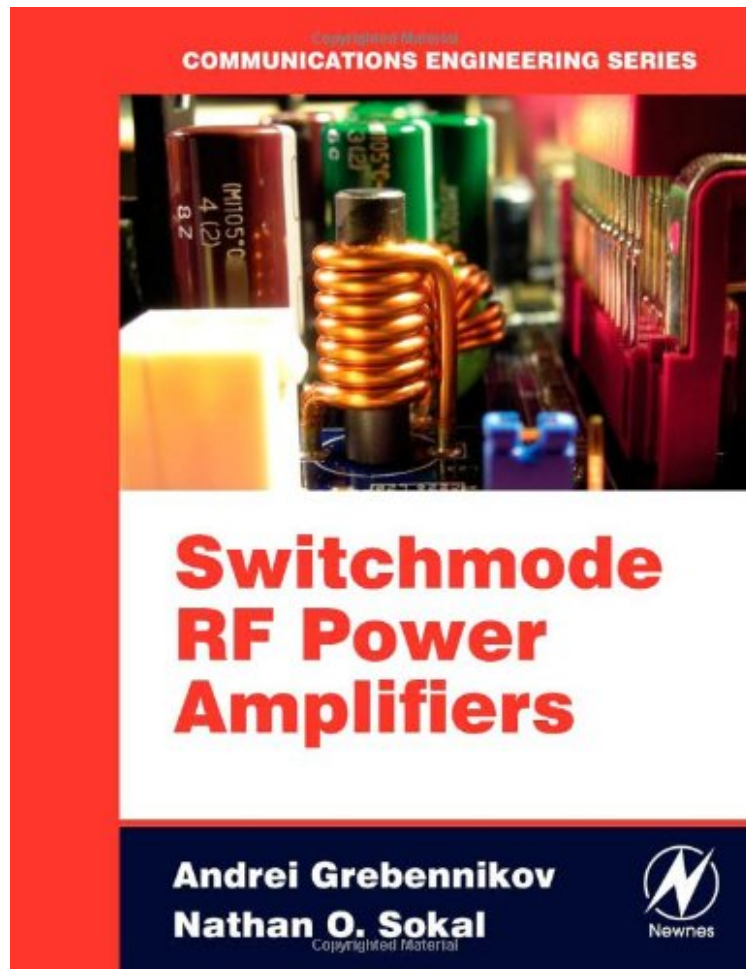


Switchmode RF Power Amplifiers (Communications Engineering)

Andrei Grebennikov, Nathan O. Sokal, Marc J Franco
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Andrei Grebennikov, Nathan O. Sokal, Marc J Franco : Switchmode RF Power Amplifiers (Communications Engineering) before purchasing it in order to gauge whether or not it would be worth my time, and all praised Switchmode RF Power Amplifiers (Communications Engineering):

0 of 0 people found the following review helpful. Three Stars By Scott Kemler very technical, sort of dry at times. for the advanced student with a burning interest in RF amps. 2 of 2 people found the following review helpful. exhaustive treatment by an expert By it This book is an exhaustive treatment of all topologies of RF switching power amplifiers. It contains many equations, graphs, and practical advice. Some of the topologies are presented for the first time in the English language. (Most of them were first presented in Russian publications.) For most of the topologies there are lumped element forms and transmission line forms. 2 of 2 people found the following review helpful. The Standard Reference for Switching PA Design. By David Cripe This book is a very comprehensive treatment of high-efficiency switching power amplifiers, written by two well-known experts in the field. There is an exhaustive listing of Class-D,

E, and F power amplifiers, their inverse circuits, variants, and mixed-class circuits. Ample equations are provided to define the operating conditions, and allow the designer to determine trade-offs for each type of circuit. Recommended.

A majority of people now have a digital mobile device whether it be a cell phone, laptop, or blackberry. Now that we have the mobility we want it to be more versatile and dependable; RF power amplifiers accomplish just that. These amplifiers take a small input and make it stronger and larger creating a wider area of use with a more robust signal. Switching mode RF amplifiers have been theoretically possible for decades, but were largely impractical because they distort analog signals until they are unrecognizable. However, distortion is not an issue with digital signals like those used by WLANs and digital cell phones and switching mode RF amplifiers have become a hot area of RF/wireless design. This book explores both the theory behind switching mode RF amplifiers and design techniques for them. *Provides essential design and implementation techniques for use in cma2000, WiMAX, and other digital mobile standards* Both authors have written several articles on the topic and are well known in the industry *Includes specific design equations to greatly simplify the design of switchmode amplifiers

"The main objective of this book is to present all relevant information required to design high-efficiency RF and microwave power amplifiers, including well-known and novel theoretical approaches and practical design techniques." - Microwave Journal, November 2007

About the Author Dr. Andrei Grebennikov is a Senior Member of the IEEE and a Member of Editorial Board of the International Journal of RF and Microwave Computer-Aided Engineering. He received his Dipl. Ing. degree in radio electronics from the Moscow Institute of Physics and Technology and Ph.D. degree in radio engineering from the Moscow Technical University of Communications and Informatics in 1980 and 1991, respectively. He has obtained a long-term academic and industrial experience working with the Moscow Technical University of Communications and Informatics, Russia, Institute of Microelectronics, Singapore, M/A-COM, Ireland, Infineon Technologies, Germany/Austria, and Bell Labs, Alcatel-Lucent, Ireland, as an engineer, researcher, lecturer, and educator. He lectured as a Guest Professor in the University of Linz, Austria, and presented short courses and tutorials as an Invited Speaker at the International Microwave Symposium, European and Asia-Pacific Microwave Conferences, Institute of Microelectronics, Singapore, and Motorola Design Centre, Malaysia. He is an author or co-author of more than 80 technical papers, 5 books, and 15 European and US patents. In 1989, Mr. Sokal was elected a Fellow of the IEEE, for his contributions to the technology of high-efficiency switching-mode power conversion and switching-mode RF power amplification. In 2007, he received the Microwave Pioneer award from the IEEE Microwave Theory and Techniques Society, in recognition of a major, lasting, contribution development of the Class-E RF power amplifier. In 2011, he was awarded an honorary doctorate from the Polytechnic University of Madrid, Spain, for developing the high-efficiency switching-mode Class-E RF power amplifier. In 1965, he founded Design Automation, Inc., a consulting company doing electronics design review, product design, and solving unsolvable problems for equipment-manufacturing clients. Much of that work has been on high-efficiency switching-mode RF power amplifiers at frequencies up to 2.5 GHz, and switching-mode dc-dc power converters. He holds eight patents in power electronics, and is the author or co-author of two books and approximately 130 technical papers, mostly on high-efficiency generation of RF power and dc power. During 1950-1965, he held engineering and supervisory positions for design, manufacture, and applications of analog and digital equipment. He received B.S. and M.S. degrees in Electrical Engineering from the Massachusetts Institute of Technology, Cambridge, Massachusetts, in 1950. He is a Technical Adviser to the American Radio Relay League, on RF power amplifiers and dc power supplies, and a member of the Electromagnetics Society, Eta Kappa Nu, and Sigma Xi honorary professional societies. Marc J. Franco holds a Ph.D. degree in electrical engineering from Drexel University, Philadelphia. He is currently with RFMD, Technology Platforms, Component Advanced Development, Greensboro, North Carolina, USA, where he is involved with the design of advanced RF integrated circuits and integrated front-end modules. He was previously with Linearizer Technology, Inc. Hamilton, New Jersey, where he led the development of advanced RF products for commercial, military and space applications. Dr. Franco is a regular reviewer for the Radio Wireless Symposium, the European Microwave Conference and the MTT International Microwave Symposium. He is a member of the MTT-17 HF-VHF-UHF Technology Technical Coordination Committee and has co-chaired the IEEE Topical Conference on Power Amplifiers for Radio and Wireless Applications. He is a Senior Member of the IEEE. His current research interests include high-efficiency RF power amplifiers, nonlinear distortion correction, and electromagnetic analysis of structures.