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Nota di contenuto

Cover; Title Page; Copyright; Contents; About the Authors; Preface; Acknowledgments; Chapter 1 Characterization of Wireless Transmitter Distortions; 1.1 Introduction; 1.1.1 RF Power Amplifier Nonlinearity; 1.1.2 Inter-Modulation Distortion and Spectrum Regrowth; 1.2 Impact of Distortions on Transmitter Performances; 1.3 Output Power versus Input Power Characteristic; 1.4 AM/AM and AM/PM Characteristics; 1.5 1 dB Compression Point; 1.6 Third and Fifth Order Intercept Points; 1.7 Carrier to Inter-Modulation Distortion Ratio; 1.8 Adjacent Channel Leakage Ratio; 1.9 Error Vector Magnitude
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5.4.2 Sparse-Delay Memory Polynomial Model

Sommario/riassunto

Covers theoretical and practical aspects related to the behavioral modelling and predistortion of wireless transmitters and power amplifiers. It includes simulation software that enables the users to apply the theory presented in the book. In the first section, the reader is given the general background of nonlinear dynamic systems along with their behavioral modelling from all its aspects. In the second part, a comprehensive compilation of behavioral models formulations and structures is provided including memory polynomial based models, box oriented models such as Hammerstein-based and Wiener-based models, and neural networks-based models. The book will be a valuable resource for design engineers, industrial engineers,

applications engineers, postgraduate students, and researchers working on power amplifiers modelling, linearization, and design.