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Autore	Grebennikov Andrei <1956->
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Determination of Equivalent Circuit Elements

2.4.3 Curtice Quadratic Nonlinear Model2.4.4 Parker-Skellern Nonlinear Model; 2.4.5 Chalmers (Angelov) Nonlinear Model; 2.4.6 IAF (Berroth) Nonlinear Model; 2.4.7 Noise Model; 2.5 BJTs and HBTs; 2.5.1 Small-Signal Equivalent Circuit; 2.5.2 Determination of Equivalent Circuit Elements; 2.5.3 Equivalence of Intrinsic - and T -Type Topologies; 2.5.4 Nonlinear Bipolar Device Modeling; 2.5.5 Noise Model; References; 3 Impedance Matching; 3.1 Main Principles; 3.2 Smith Chart; 3.3 Matching with Lumped Elements; 3.3.1 Analytic Design Technique; 3.3.2 Bipolar UHF Power Amplifier

3.3.3 MOSFET VHF High-Power Amplifier3.4 Matching with Transmission Lines; 3.4.1 Analytic Design Technique; 3.4.2 Equivalence Between Circuits with Lumped and Distributed Parameters; 3.4.3 Narrowband Microwave Power Amplifier; 3.4.4 Broadband UHF High-Power Amplifier; 3.5 Matching Networks with Mixed Lumped and Distributed Elements; References; 4 Power Transformers, Combiners, and Couplers; 4.1 Basic Properties; 4.1.1 Three-Port Networks; 4.1.2 Four-Port Networks; 4.2 Transmission-Line Transformers and Combiners; 4.3 Baluns; 4.4 Wilkinson Power Dividers/Combiners; 4.5 Microwave Hybrids

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5.6 Coupled-Line Filters

Sommario/riassunto

RF and Microwave Transmitter Design is unique in its coverage of both historical transmitter design and cutting edge technologies. This text explores the results of well-known and new theoretical analyses, while informing readers of modern radio transmitters' pracitcal designs and their components. Jam-packed with information, this book broadcasts and streamlines the author's considerable experience in RF and microwave design and development.