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7.3 Single-Ended PA-IC Design; 7.4 Push-Pull PA Design; 7.5 PA with Temperature Compensation; 7.6 PA with Output Power Control; 7.7 Linear PA; References; PART II DESIGN TECHNOLOGIES AND SCHEMES; 8 DIFFERENT METHODOLOGY BETWEEN RF AND DIGITAL CIRCUIT DESIGN; 8.1 Controversy; 8.2 Differences between RF and Digital Blocks in a Communication System; 8.3 Conclusion; 8.4 Notes for High-Speed Digital Circuit Design; References; 9 VOLTAGE AND POWER TRANSPORTATION; 9.1 Voltage Delivered from a Source to a Load; 9.2 Power Delivered from a Source to a Load; 9.3 Impedance Conjugate Matching; 9.4 Additional Effects of Impedance Matching; Appendices; References; 10 IMPEDANCE MATCHING IN NARROW-BAND CASE; 10.1 Introduction; 10.2 Impedance Matching by Means of Return Loss Adjustment; 10.3 Impedance Matching Network Built of One Part; 10.4 Impedance Matching Network Built of Two Parts; 10.5 Impedance Matching Network Built of Three Parts; 10.6 Impedance Matching When $Z(S)$ or $Z(L)$ Is Not 50 ; 10.7 Parts in an Impedance Matching Network; Appendices; References; 11 IMPEDANCE MATCHING IN A WIDE-BAND CASE; 11.1 Appearance of Narrow- and Wide-Band Return Loss on a Smith Chart; 11.2 Impedance Variation Due to Insertion of One Part per Arm or per Branch; 11.3 Impedance Variation Due to the Insertion of Two Parts per Arm or per Branch; 11.4 Impedance Matching in IQ Modulator Design for a UWB System; 11.5 Discussion of Wide-band Impedance Matching Networks; References; 12 IMPEDANCE AND GAIN OF A RAW DEVICE; 12.1 Introduction; 12.2 Miller Effect; 12.3 Small Signal Model of a Bipolar Transistor; 12.4 Bipolar Transistor with CE (Common Emitter) Configuration; 12.5 Bipolar Transistor with CB (Common Base) Configuration; 12.6 Bipolar Transistor with CC (Common Collector) Configuration

Sommario/riassunto

A Must-Read for all RF/RFIC Circuit Designers This book targets the four most difficult skills facing RF/RFIC designers today: impedance matching, RF/AC grounding, Six Sigma design, and RFIC technology. Unlike most books on the market, it presents readers with practical engineering design examples to explore how they're used to solve ever more complex problems. The content is divided into three key parts: Individual RF block circuit design Basic RF circuit design skills RF system engineering The author assumes a fundamental background in RF circuit design theory,
