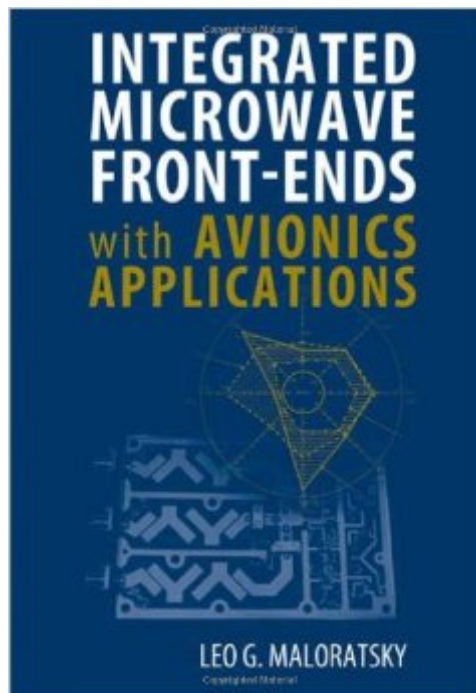# Integrated Microwave Front-Ends With Avionics Applications (Artech House Microwave Library (Hardcover))

Synopsis

A microwave front-end refers the components in the receiver that process the signal at the original incoming frequency. This highly practical resource offers an in-depth understanding of microwave front end integration and how it is applied in the avionics field. Engineers find detailed guidance on circuit integration, including coverage of component miniaturization, hybrid and monolithic integrated circuits, and 3D design. The book addresses system integration with discussions on the combination of different avionic systems, single antenna design, top/bottom front end combination, and integration of passive and active antenna modules. This first-of-its-kind volume features unique material on novel structures of avionics front-ends and new strategies for microwave front-end design. Supported with nearly 200 illustrations and more than 160 equations, this book is a valuable professional reference and also serves well as a postgraduate textbook.

Book Information

Series: Artech House Microwave Library (Hardcover)

Hardcover: 368 pages

Publisher: Artech House; 1 edition (January 30, 2012)

Language: English

ISBN-10: 1608072053

ISBN-13: 978-1608072057

Product Dimensions: 7.2 x 1 x 10.2 inches

Shipping Weight: 1.8 pounds (View shipping rates and policies)

Average Customer Review: 5.0 out of 5 starsÂ Â See all reviewsÂ (1 customer review)

Best Sellers Rank: #3,229,665 in Books (See Top 100 in Books)   #54 inÂ Books > Engineering & Transportation > Engineering > Aerospace > Avionics   #532 inÂ Books > Engineering & Transportation > Engineering > Telecommunications & Sensors > Microwaves   #565961 inÂ Books > Textbooks

Customer Reviews

In his book "Integrated Microwave Front-Ends with Avionics Applications," Leo G. Maloratsky summarizes the results of his many years of experience with a high level of expertise in development, invention, design and testing of a wide range of avionic microwave front-ends. The book covers a broad range of topics including, but not limited to the following: *Architectures and characteristics of microwave front-ends; *Novel passive and active devises as various planar transmission lines, phase shifters, diplexers, duplexers, mixers, receivers, low-noise amplifiers, etc;

*Technology processes and multilayer and 3D designs; *Various front-end avionic systems; *Integrated multifunctional front-ends.All topics presented in the book are clearly and completely described. Each topic includes theoretical and practical analysis of various options. For example, all practically usable planar transmission lines are described along with all of the necessary and sufficient details for selection of the optimum structure and implementation.Different technologies such as the monolithic process and those related to low-cost multilayer ceramic printed circuit boards, etc are analyzed and compared.By using detailed analysis of multiple topics, the author makes it possible to develop various options of full systems. Maloratsky describes full systems including various antennas and antenna arrays starting with the proper selection of architecture with their components and up to calibration and testing of implemented designs.The explanations of the concepts as well as for theory and technical details of implementation and testing are written in a clear language with a good overall structure.

Integrated Microwave Front-Ends with Avionics Applications (Artech House Microwave Library (Hardcover)) Avionics: Elements, Software and Functions (The Avionics Handbook, Second Edition) Software Verification and Validation: A Practitioner's Guide (Artech House Computer Library (Hardcover)) Convolutional Coding: Fundamentals and Applications (Artech House Communications Library) Microwave Cookbook: 40 Delicious, Healthy and Easy to Make Meal Recipes for Busy People (Quick and Easy Microwave Meal Recipes) Broadband Networking ATM, Adh and SONET (Artech House Telecommunications Library) Codes for Error Control and Synchronization (Artech House Communication & Electronic Defense Library) Practical Guide to Software Quality Management (Artech House Computer Science Library) Software Fault Tolerance Techniques and Implementation (Artech House Computing Library) Agile Systems with Reusable Patterns of Business Knowledge: A Component-Based Approach (Artech House Computing Library) Managing Front Office Operations with Answer Sheet (AHLEI) (9th Edition) (AHLEI - Front Office Operations) Principles of Avionics (Library of Flight) Integrated Theory & Knowledge Development in Nursing, 8e (Chinn, Integrated Theory and Knowledge Development in Nursing) Tiny Houses: Tiny House Plans, Woodworking on a Tiny House and Living Mortgage Free (Tiny Houses, Tiny House Living, Tiny House Plans, Small Homes, Woodworking Book 1) Introduction to Avionics Systems Principles of Avionics, Third Edition Avionics Installation Handbook Manual of Avionics Civil Avionics Systems (AIAA Education Series) Radar Techniques Using Array Antennas (FEE radar, sonar, navigation & avionics series)