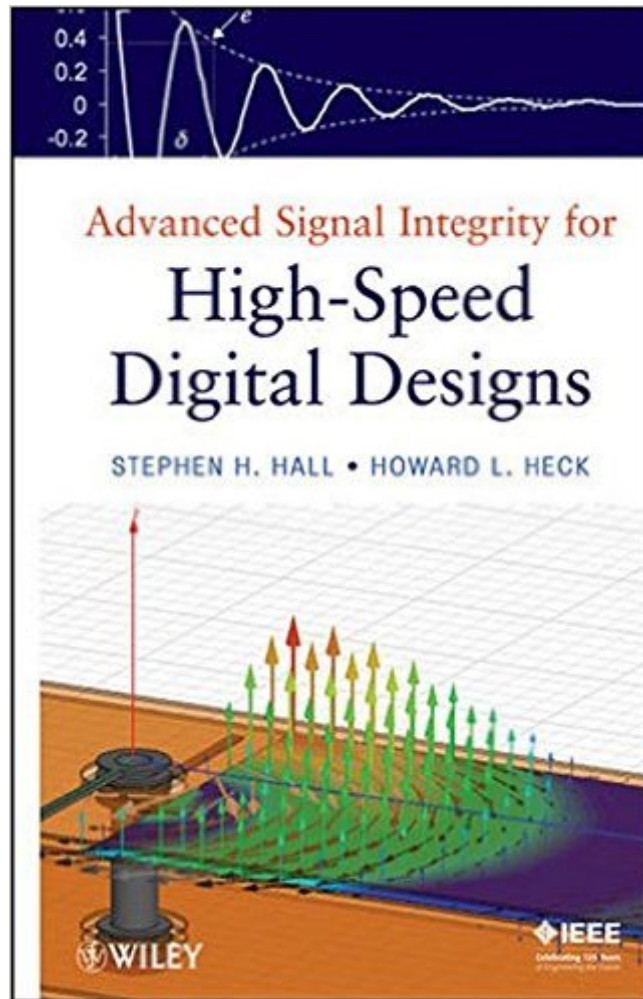


The book was found

Advanced Signal Integrity For High-Speed Digital Designs



Synopsis

A synergistic approach to signal integrity for high-speed digital design This book is designed to provide contemporary readers with an understanding of the emerging high-speed signal integrity issues that are creating roadblocks in digital design. Written by the foremost experts on the subject, it leverages concepts and techniques from non-related fields such as applied physics and microwave engineering and applies them to high-speed digital designâcreating the optimal combination between theory and practical applications. Following an introduction to the importance of signal integrity, chapter coverage includes: Electromagnetic fundamentals for signal integrity Transmission line fundamentals Crosstalk Non-ideal conductor models, including surface roughness and frequency-dependent inductance Frequency-dependent properties of dielectrics Differential signaling Mathematical requirements of physical channels S-parameters for digital engineers Non-ideal return paths and via resonance I/O circuits and models Equalization Modeling and budgeting of timing jitter and noise System analysis using response surface modeling Each chapter includes many figures and numerous examples to help readers relate the concepts to everyday design and concludes with problems for readers to test their understanding of the material. Advanced Signal Integrity for High-Speed Digital Designs is suitable as a textbook for graduate-level courses on signal integrity, for programs taught in industry for professional engineers, and as a reference for the high-speed digital designer.

Book Information

Hardcover: 680 pages

Publisher: Wiley-IEEE Press; 1 edition (March 16, 2009)

Language: English

ISBN-10: 0470192356

ISBN-13: 978-0470192351

Product Dimensions: 6.4 x 1.5 x 9.2 inches

Shipping Weight: 2.4 pounds (View shipping rates and policies)

Average Customer Review: 4.6 out of 5 starsÂÂ See all reviewsÂ (7 customer reviews)

Best Sellers Rank: #698,751 in Books (See Top 100 in Books) #120 inÂ Books > Science & Math > Physics > Waves & Wave Mechanics #202 inÂ Books > Engineering & Transportation > Engineering > Electrical & Electronics > Digital Design #2024 inÂ Books > Engineering & Transportation > Engineering > Telecommunications & Sensors

Customer Reviews

Heck and Hall have done a fantastic job in summarizing both the theory and practice of solving today's SI issues. The math behind topics such as linear network theory, frequency-dependent dielectric effects and filter design for equalization is rigorous, yet ample space is set aside for practical guidance as well. Of particular note is their thorough treatment of hot PCB SI topics as dielectric loss and surface roughness modeling, and preservation of causality in transmission line models. Transmitter and receiver equalization (DFE and CTLE) are well-described, as are analysis techniques such as peak distortion and bit-error rate. Finally, their summary of response surface modeling (RSM) approaches to design of experiments (DOE) is perhaps the first and certainly the most comprehensive overview of those methods as applied to PCB SI design available today. A book well worth purchasing if you are involved in SI modeling, SI simulation or PCB design.

The book has some great information, but the formatting could be much friendlier. Often there are 3 or more equations for the same calculation that are used as the material is introduced and additional complicating factors are included, but that is not made clear, leaving confusion about which form of the equation should be used. Reformatting to introduce the important final result, then working through the development of the result would be good. Or some other formatting method to make the important final result equations and summary stand out from the intermediate simplified steps

This is one of the very few books that really go deeply inside in theory giving the reader the possibility to understand what is going on. This amazing work is not a rule of thumb book, neither a handbook. Rather it offers a full comprehension of signal integrity related topics as any, enabling the reader to unveil by himself issues encountered in practice.

This book is an indepth detailed and mathematical explanation of signal integrity. I fully recommend this book to learn about the basics and the details of signal integrity. I started reading this book with a background of electronics but only a brief understanding of signal integrity. This book got me up to speed with everything I need to know for the modern electronics industry and provides an important reference in my library. I fully recommend it. The only failing of the book is that it can be a little too mathematical. With completely equations of various effects provided but nothing useful (if less accurate) that you can use on a day-to-day basis to make design decisions with.

I recommend it to other SI engineers that are looking for more advanced SI information. For me, there were a fair number of sections that helped fill in the gaps on my understanding. Which is

great.

A really good book! Written by signal integrity engineers at Intel who know the problems of SI firsthand and the modern solutions to those problems.

I work with Howard Heck in committee. These guys wrote an excellent treatise on the subject.

[Download to continue reading...](#)

Advanced Signal Integrity for High-Speed Digital Designs
Speed Reading: The Ultimate Speed Reading Course to Increase Your Reading Speed (speed reading techniques, speed reading for beginners, speed reading training) (Genius Guide: Step By Step Book 3)
Integrity Starts Here! A Catholic Approach to Restoring Sexual Integrity
A Digital Signal Processing Primer: With Applications to Digital Audio and Computer Music
Adsl/Vdsl Principles: A Practical and Precise Study of Asymmetric Digital Subscriber Lines and Very High Speed Digital Subscriber Lines (Macmillan Technology Series)
Cryptocurrency: Guide To Digital Currency: Digital Coin Wallets With Bitcoin, Dogecoin, Litecoin, Speedcoin, Feathercoin, Fedoracoin, Infinitecoin, and ... Digital Wallets, Digital Coins Book 1)
Survival of the Savvy: High-Integrity Political Tactics for Career and Company Success
Digital Coding of Waveforms: Principles and Applications to Speech and Video (Prentice-Hall Signal Processing Series)
Practical Approaches to Speech Coding (Prentice-Hall and Texas Instruments Digital Signal Processors Series)
Digital Compression of Still Images and Video (Signal Processing and its Applications)
Asap Implementation at the Speed of Business: Implementation at the Speed of Business
Speed Duel: The Inside Story of the Land Speed Record in the Sixties
Tropical Insects: 50 Incredible Insect and Beautiful Butterflies Designs to Raise up Your Creativity (butterflies and flowers, insect designs, butterfly designs)
Advanced Software Testing - Vol. 3, 2nd Edition: Guide to the ISTQB Advanced Certification as an Advanced Technical Test Analyst
Advanced Software Testing - Vol. 2, 2nd Edition: Guide to the ISTQB Advanced Certification as an Advanced Test Manager
Digital Painting Techniques: Practical Techniques of Digital Art Masters (Digital Art Masters Series)
Photography: DSLR Photography Secrets and Tips to Taking Beautiful Digital Pictures (Photography, DSLR, cameras, digital photography, digital pictures, portrait photography, landscape photography)
Photography: Complete Guide to Taking Stunning, Beautiful Digital Pictures (photography, stunning digital, great pictures, digital photography, portrait ... landscape photography, good pictures)
Mastering Digital Black and White: A Photographer's Guide to High Quality Black-and-White Imaging and Printing (Digital Process and Print)
Gardening For Entrepreneurs: Gardening Techniques For High Yield, High Profit Crops

(Farming For Profit, Gardening For Profit, High Yield Gardening)

[Dmca](#)