1. Record Nr. UNINA9910785354603321 Autore Thierauf Stephen C. Titolo Understanding signal integrity / / Stephen C. Thierauf Pubbl/distr/stampa Boston:,: Artech House,, ©2011 [Piscatagay, New Jersey]:,: IEEE Xplore,, [2010] **ISBN** 1-59693-982-6 Descrizione fisica 1 online resource (256 p.) Disciplina 621.3815 621.382/24 Soggetti Signal integrity (Electronics) Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Understanding Signal Integrity; Contents; Preface; Chapter 1: Introduction to Signal Integrity; Chapter 2: The Signal Integrity Process; Chapter 3: Signal Integrity CAD and Models; Chapter 4: Printed Test and Evaluation Boards: Chapter 5: Printed Circuit Board Construction: Chapter 6: Transmission Line Fundamentals; Chapter 7: Understanding Microstrip and Stripline Transmission Lines; Chapter 8: Signal Loss and the Effects of Circuit Board Physical Factors; Chapter 9: Understanding Trace-to-Trace Coupling; Chapter 10: Understanding Crosstalk; Chapter 11: Understanding Signal Reflections Chapter 12: Termination StrategiesChapter 13: Differential Signaling; Chapter 14: Trace and Via Artwork Considerations for Signal Integrity: Chapter 15: Identifying Common Signal Integrity Problems; Chapter 16: Solving Common Signal Integrity Problems; Chapter 17: Calculating Trace and Plane Electrical Values: About the Author: Index This unique book provides you with practical guidance on Sommario/riassunto understanding and interpreting signal integrity (SI) performance to help you with your challenging circuit board design projects. You find highlevel discussions of important SI concepts presented in a clear and easily accessible format, including question and answer sections and bulleted lists. This valuable resource features rules of thumb and

simple equations to help you make estimates of critical signal integrity parameters without using circuit simulators of CAD (computer-aided

design). The book is supported with over 120 illustrations, nearly 100 equations, and detailed reference lists at the end of each chapter.