Record Nr. UNISA996218165303316 Autore Montrose Mark I. Titolo EMC and the printed circuit board : design, theory, and layout made simple / / Mark I. Montrose Pubbl/distr/stampa New York:,: IEEE Press,, c1999 [Piscatagay, New Jersey]:,: IEEE Xplore,, [2005] **ISBN** 1-280-54203-9 9786610542031 0-471-66090-6 0-471-72310-X Descrizione fisica 1 online resource (344 p.) Collana IEEE Press series on electronics technology;; 9 Disciplina 621.3815 621.3815/31 621.381531 Soggetti Printed circuits - Design and construction Electromagnetic compatibility Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali "IEEE Electromagnetic Compatibility Society, sponsor." Nota di bibliografia Includes bibliographical references (p. 287-290) and index. Nota di contenuto Preface. Acknowledgements. EMC Fundamentals. EMC Inside the PCB. Components and EMC. Image Planes. Bypassing and Decoupling. Transmission Lines. Signal Integrity and Crosstalk. Trace Termination. Grounding, Glossary, Bibliography, Appendix A: The Decibel, Appendix B: Fourier Analysis. Appendix C: Conversion Tables. Appendix D: International EMC Requirements. Index. About the Author. Sommario/riassunto This accessible, new reference work shows how and why RF energy is created within a printed circuit board and the manner in which propagation occurs. With lucid explanations, this book enables engineers to grasp both the fundamentals of EMC theory and signal integrity and the mitigation process needed to prevent an EMC event. Author Montrose also shows the relationship between time and frequency domains to help you meet mandatory compliance requirements placed on printed circuit boards. Using real-world examples the book features:. Clear discussions, without complex

mathematical analysis, of flux minimization concepts. Extensive

analysis of capacitor usage for various applications. Detailed examination of components characteristics with various grounding methodologies, including implementation techniques. An in-depth study of transmission line theory. A careful look at signal integrity, crosstalk, and termination.