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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Ch. 1. Characteristics and Construction of Printed Wiring Boards -- Ch. 2. Resistance of Etched Conductors -- Ch. 3. Capacitance of Etched Conductors -- Ch. 4. Inductance of Etched Conductors -- Ch. 5. Transmission Lines -- Ch. 6. Return Paths and Power Supply Decoupling -- Ch. 7. Serial Communication, Loss, and Equalization -- Ch. 8. Single-Ended and Differential Signaling and Crosstalk -- Ch. 9. Characteristics of Printed Wiring Stripline and Microstrips -- Ch. 10. Surface Mount Capacitors.
Sommario/riassunto	As circuit boards are increasingly required to transmit signals at higher and higher speeds, signal and power integrity become increasingly crucial. Rules of thumb that you have used over and over again to prevent signal loss no longer apply to these new, high-speed, high-density circuit designs. This leading-edge circuit design resource offers you the knowledge needed to quickly pinpoint transmission problems that can compromise your entire circuit design. Discussing both design and debug issues at gigabit per second data rates, the book serves as a practical reference for your projects involving high-speed serial signaling on printed wiring boards. Step-by-step, this book goes from reviewing the essentials of linear circuit theory, to examining practical issues of pulse propagation along lossless and lossy transmission lines.

It provides detailed guidelines for crosstalk, attenuation, power supply decoupling, and layer stackup tradeoffs (including pad/antipad tradeoffs). Other key topics include the construction of etched conductors, analysis of return paths and split planes, microstrip and stripline characteristics, and SMT capacitors. Filled with on-the-job-proven examples, this hands-on reference is the book that you can turn to time and again to design out and troubleshoot circuit signal loss and impedance problems.
