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Nota di contenuto	Frontmatter -- Transmission Lines: Physical Dimensions vs. Electric Dimensions -- Time-Domain Analysis of Two-Conductor Lines -- Frequency-Domain Analysis of Two-Conductor Lines -- Crosstalk in Three-Conductor Lines -- The Approximate Inductive-Capacitive Crosstalk Model -- The Exact Crosstalk Prediction Model -- Appendix: A Brief Tutorial on Using PSPICE -- Index.
Sommario/riassunto	Learn the new skills needed to work with today's high-speed digital electronic systemsFollowing this text's clear explanations and examples, EMC practitioners will quickly master the new transmission line concepts and skills needed to analyze and design today's high-speed digital electronic systems. The author focuses on modern transmission lines in which the conductors that interconnect the electronic modules are "electrically long" (i.e., longer than one-tenth of a wavelength). Moreover, throughout the text, the author explores the increasingly important issues of crosstalk and system integrity, helping readers avoid many common pitfalls in the analysis and design of electronic systems.Transmission Lines in Digital Systems for EMC Practitioners begins with a discussion of the fundamental concepts of waves, wavelength, time delay, and electrical dimensions, and then

examines the effect of electrically long conductors on signal integrity. Next, the book explores:. Time domain analysis of two-conductor lines. Frequency domain analysis of two-conductor lines. Crosstalk in three-conductor lines. Approximate inductive-capacitive crosstalk model for electrically short lines. Exact crosstalk prediction modelThroughout the text, the PSpice program is used as a computational aid to simulate digital systems and determine crosstalk and system integrity. A quick PSpice tutorial is provided for readers who are unfamiliar with the program. The text also offers numerous illustrations to help readers visualize complex concepts and design methods. In addition, experimental results are set forth to verify mathematical results. Transmission Lines in Digital Systems for EMC Practitioners is an essential guide for students and engineers who need to keep pace with the growing demand for ever faster digital electronic systems.