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Nota di contenuto	Planar EBGs: Fundamentals and Design -- Impact of Planar EBGs on Signal Integrity in High-Speed Digital Boards -- Planar Onboard EBG Filters for Common Mode Current Reduction -- Special Topics for EBG Filters -- Removable EBG Common Mode Filters -- EBG Common Mode Filters: Modeling and Measurements.
Sommario/riassunto	An essential guide to the background, design, and application of common-mode filtering structures in modern high-speed differential communication links Written by a team of experts in the field, Electromagnetic Bandgap (EBG) Structures explores the practical electromagnetic bandgap based common mode filters for power integrity applications and covers the theoretical and practical design approaches for common mode filtering in high-speed printed circuit boards, especially for boards in high data-rate systems. The authors describe the classic applications of electromagnetic bandgap (EBG) structures and the phenomena of common mode generation in high-speed digital boards. The text also explores the fundamental electromagnetic mechanisms of the functioning of planar EBGs and

considers the impact of planar EBGs on the digital signal propagation of single ended and differential interconnects routed on top or between EBGs. The authors examine the concept, design, and modeling of EBG common mode filters in their two forms: on-board and removable. They also provide several comparisons between measurement and electromagnetic simulations that validate the proposed EBG filters' design approach. This important resource: . Presents information on planar EBG-based common mode filters for high-speed differential digital systems. Provides systematic analysis of the fundamental mechanisms of planar EBG structures. Offers detailed design methodology to create EBG filters without the need for repeated full-wave electromagnetic analysis. Demonstrates techniques for use in practical real-world designs Electromagnetic Bandgap (EBG) Structures: Common Mode Filters for High-Speed Digital Systems offers an introduction to the background, design, and application of common-mode filtering structures in modern high-speed differential communication links, a critical issue in high-speed and high-performance systems.