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Nota di contenuto	1. SIW-Based Devices 151 -- 2. Challenges and Perspectives for SIW Hybrid Structures Combining Nanowires and Porous Templates 54 -- 3. Novel Filtering Applications in Substrate-Integrated Waveguide Technology 68 -- 4. Ridge Gap Waveguide Beamforming Components and Antennas for Millimeter-Wave Applications 22 -- 5. Manufacturing Methods Based on Planar Circuits 25 -- 6. Metal 3D-Printing of Waveguide Components and Antennas: Guidelines and New Perspectives 100 -- 7. Additive Manufacturing of Optical Waveguides 102.
Sommario/riassunto	Traditionally, high-performance communication systems were based on rectangular waveguides (RWGs) to guide high-frequency signals. Newer, efficient RWG-like systems are now available with the added value of low cost, low volume and low weight, together with compactness and ease of manufacture. These systems are based on substrate-integrated waveguides (SIWs), empty SIW (ESIW) and their multiple variations. This book presents successful examples of the use of these systems and the advances in their manufacture, as well as newer techniques that combine 3D metal/plastic printers with the most common planar procedures. The result is a variety of waveguide topologies, applications and manufacturing procedures that may have a strong influence on the design of communication devices and systems.