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Sommario/riassunto	"An excellent introduction to the SiGe BiCMOS technology, from the underlying device physics to current applications." -Ron Wilson, EETimes "SiGe technology has demonstrated the ability to provide excellent high-performance characteristics with very low noise, at high power gain, and with excellent linearity. This book is a comprehensive review of the technology and of the design methods that go with it." -Alberto Sangiovanni-Vincentelli Professor, University of California, Berkeley Cofounder, Chief Technology Officer, Member of Board Cadence Design Systems Inc. Filled with in-depth insights and expert advice, Silicon Germanium covers all the key aspects of this technology and its applications. Beginning with a brief introduction to and

historical perspective of IBM's SiGe technology, this comprehensive guide quickly moves on to: * Detail many of IBM's SiGe technology development programs * Explore IBM's approach to device modeling and characterization-including predictive TCAD modeling * Discuss IBM's design automation and signal integrity knowledge and implementation methodologies * Illustrate design applications in a variety of IBM's SiGe technologies * Highlight details of highly integrated SiGe BiCMOS system-on-chip (SOC) design Written for RF/analog and mixed-signal designers, CAD designers, semiconductor students, and foundry process engineers worldwide, Silicon Germanium provides detailed insight into the modeling and design automation requirements for leading-edge RF/analog and mixed-signal products, and illustrates in-depth applications that can be implemented using IBM's advanced SiGe process technologies and design kits. "This volume provides an excellent introduction to the SiGe BiCMOS technology, from the underlying device physics to current applications. But just as important is the window the text provides into the infrastructure-the process development, device modeling, and tool development." -Ron Wilson Silicon Engineering Editor, EETimes "This book chronicles the development of SiGe in detail, provides an in-depth look at the modeling and design automation requirements for making advanced applications using SiGe possible, and illustrates such applications as implemented using IBM's process technologies and design methods." -John Kelly Senior Vice President and Group Executive, Technology Group, IBM.