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Sommario/riassunto

3D IC and RF SiPs: Advanced Stacking and Planar Solutions for 5G Mobility Lih-Tyng Hwang, National Sun Yat-Sen University, Taiwan, Jason Tzyy-Sheng Horng, National Sun Yat-Sen University, Taiwan A concise summary of the state of the art, this book is an interdisciplinary guide to enabling technologies for 3D ICs and 5G mobility, covering packaging, design to product life and reliability assessments. Readers are introduced to the markets, technology drivers, integrated circuits, packaging and substrate trends that go hand-in-hand with the development of 3D IC and RF SiP, as well as related digital and RF designs, and product life and reliability assessments. Smart phone tear-down is used to illustrate the key components for mobility (4G and future 5G), such as AP/mobile memory and RFIC/RF FE. Other essential topics include packaging technology, high density logic design, RF system integration and future trends in MTM technology. . Features an interdisciplinary approach to the enabling technologies and hardware for 3D ICs and 5G mobility. Presents statistical treatments and examples with tools that are easily accessible, such as Microsoft's Excel and Minitab. Fundamental design topics such as electromagnetic design for logic and RF/passives centric circuits are explained in detail. Provides chapter-wise review questions and powerpoint slides as teaching tools 3D IC and RF SiPs offers graduate students and researchers an essential guide to advanced stacking and planar solutions for 5G mobility. It can also be used as a reference text for engineers and advanced students of semiconductors, communications hardware, and IC packaging technologies.