



Design of 3D Integrated Circuits and Systems (Hardback)

By -

Taylor Francis Inc, United States, 2014. Hardback. Book Condition: New. 236 x 156 mm. Language: English . Brand New Book. Three-dimensional (3D) integration of microsystems and subsystems has become essential to the future of semiconductor technology development. 3D integration requires a greater understanding of several interconnected systems stacked over each other. While this vertical growth profoundly increases the system functionality, it also exponentially increases the design complexity. Design of 3D Integrated Circuits and Systems tackles all aspects of 3D integration, including 3D circuit and system design, new processes and simulation techniques, alternative communication schemes for 3D circuits and systems, application of novel materials for 3D systems, and the thermal challenges to restrict power dissipation and improve performance of 3D systems. Containing contributions from experts in industry as well as academia, this authoritative text: * Illustrates different 3D integration approaches, such as die-to-die, die-to-wafer, and wafer-to-wafer * Discusses the use of interposer technology and the role of Through-Silicon Vias (TSVs) * Presents the latest improvements in three major fields of thermal management for multiprocessor systems-on-chip (MPSoCs) * Explores ThruChip Interface (TCI), NAND flash memory stacking, and emerging applications * Describes large-scale integration testing and state-of-the-art low-power testing solutions Complete with experimental...



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