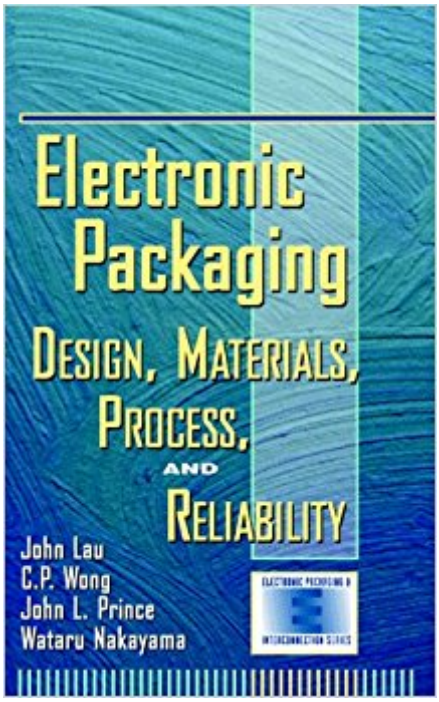
Electronic Packaging: Design, Materials, Process, And Reliability



Synopsis

The ultimate, up-to-the-minute electronic packaging resource The ever-increasing pin counts and clock speeds of modern electronics continue to "push the performance envelope" with regard to designing packaging and interconnection solutions that can meet increasingly challenging requirements. Here’s the help you need! For the first time, four well-known experts representing the four relevant fields--mechanical engineering, electrical engineering, thermal management, and materials--team up to provide a single-volume comprehensive reference that explains packaging and interconnection basics, details design tradeoff considerations, and presents specific system-level solutions. This unprecedented and unsurpassed multi-disciplinary coverage not only includes all the new technologies--BGA, Flip Chip, DCA, and CSP--it shows how they can be most effectively integrated. With its clear explication of both theoretical and practical issues, Electronic Packaging will be of considerable and continuing value if you hope to design and/or refine more reliable, robust, and cost-effective packaging solutions for virtually any interconnect system.

Book Information

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Customer Reviews

The ultimate, up-to-the-minute electronic packaging resource! Electronic Packaging The ever-increasing pin counts and clock speeds of modern electronics continue to "push the performance envelope" with regard to designing packaging and interconnection solutions that can meet increasingly challenging requirements. The fast SRAMS for cache memories need to perform

at near-microprocessor speeds to prevent data bottlenecks. ASICs are expected to run faster than 200 MHz on-chip clock frequency and have up to 900 package pin counts--and, for many telecommunication products, even more. Here's the help you need! For the first time, four well-known expert repesenting the four relevant fields--mechanical engineering, electrical engineering, thermal management, and materials--team up to provide a single-volume comprehensive reference that explains packaging and interconnection basics, details design tradeoff considerations, and presents specific system-level solutions. This unprecedented and unsurpassed multi-disciplinary coverage not only includes all the new technologies--BGA, Flip Chip, DCA, and CSP--it shows how they can be most effectively integrated. Among the topics explored: How to dsign, analyze, and measure electronic packaging and interconnections; Basic electrical and heat transfer effects and how to accommodate them; Thermal, electrical, and mechanical analysis and design techniques; What causes stresses and strains and how to reduce them; Currently used and advanced materials and processes. With its clear explication of both theoretical and practical issues, Electrical Packaging will be of considerable and continuing value for any professional seeking to design and/or refine more reliable, robust, and cost-effective packaging solutions for virtually any interconnect system.

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