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Sommario/riassunto

This book highlights recent research progress in lead (Pb)-free solder technology, focusing on materials development, processing, and performances. It discusses various Pb-free solder materials' development, encompassing composite solders, transient liquid phase sintering, and alloying. The book also details various Pb-free solder technology processing and performances, including flux modification for soldering, laser soldering, wave soldering, and reflow soldering, while also examining multiple technologies pertaining to the rigid and flexible printed circuit board (PCB). Some chapters explain the materials characterization and modeling techniques using computational fluid dynamics (CFD). This book serves as a valuable reference for researchers, industries, and stakeholders in advanced microelectronic packaging, emerging interconnection technology, and those working on Pb-free solder.