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Titolo	Fundamentals of Lead-Free Solder Interconnect Technology : From Microstructures to Reliability / / by Tae-Kyu Lee, Thomas R. Bieler, Choong-Un Kim, Hongtao Ma
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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Introduction -- Interconnection : The Joint -- Phase Equilibria and Microstructure of Sn-Ag-Cu Alloys -- Microstructure Development; Solidification and Isothermal Aging -- Thermal Cycling Performance -- Mechanical Stability and Performance -- Chemical and Environment Attack -- Challenges in Future Generation Interconnects: Microstructure Again.
Sommario/riassunto	This unique book provides an up-to-date overview of the fundamental concepts behind lead-free solder and interconnection technology. Readers will find a description of the rapidly increasing presence of

electronic systems in all aspects of modern life as well as the increasing need for predictable reliability in electronic systems. The physical and mechanical properties of lead-free solders are examined in detail, and building on fundamental science, the mechanisms responsible for damage and failure evolution, which affect reliability of lead-free solder joints are identified based on microstructure evolution. The continuing miniaturization of electronic systems will increase the demand on the performance of solder joints, which will require new alloy and processing strategies as well as interconnection design strategies. This book provides a foundation on which improved performance and new design approaches can be based. In summary, this book: Provides an up-to-date overview on lead-free soldering technologies Covers the fundamentals, implementation, reliability, challenges and risks of lead-free soldering technique Explores emerging technologies in lead-free soldering.

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