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Nota di contenuto	Front Matter -- Regulatory and Voluntary Drivers for Environmental Improvement: Hazardous Substances, Life-Cycle Design, and End of Life / John Hawley -- Lead-Free Surface Mount Technology / Jasbir Bath, Jennifer Nguyen, Sundar Sethuraman -- Lead-Free Wave Soldering / Denis Barbini, Jasbir Bath -- Lead-Free Rework / Alan Donaldson -- Lead-Free Alloys for BGA/CSP Components / Gregory Henshall -- Growth Mechanisms and Mitigation Strategies of Tin Whisker Growth / Peng Su -- Testability of Lead-Free Printed Circuit Assemblies / Rosa D Reinosa, Aileen M Allen -- Board-Level Solder Joint Reliability of High-Performance Computers Under Mechanical Loading / Keith Newman -- Lead-Free Reliability in Aerospace/Military Environments / Thomas A

Sommario/riassunto

A fully up-to-date approach to implementing lead-free soldering Environmental and health concerns have led to a growing movement to eliminate lead from electronics, specifically from electronics soldering. Lead-based solder has been used for many years with a good history of use, so the change to lead-free solder alternatives requires companies to re-examine, develop, and re-test manufacturing processes as they make the transition. Lead-Free Solder Process Development covers general lead-free soldering topics written by those specializing in these areas. Timely and up to date, this reference covers key topics including legislation, SMT, wave, rework, alloys, test, and reliability. It provides updates in areas where research is ongoing and addresses various topics that are relevant to lead-free soldering, including: Government and legislative activities. Lead-free SMT assembly. Lead-free wave soldering. Lead-free rework. Lead-free alloys for BGA/CSP components. Lead-free mechanical reliability. Tin whiskers. Lead-free reliability in aerospace and military environments. Lead-free reliability in automotive environments. Testability of lead-free printed circuit assemblies Emphasizing practical knowledge of lead-free soldering rather than theory, Lead-Free Solder Process Development is written by experts who are or who have been heavily involved in lead-free implementation at the product level. Being an up-to-date book on this changing field, it is an essential read for engineers in the industry who are or will be migrating to lead-free soldering.

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