

Pbフリーはんだ接続部のエレクトロマイグレーション現象解明の基礎研究

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Basic Study on Electromigration Phenomena in Pb-free Solder Joint

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Abstract

In flip chip technology, electromigration affects the reliability of the solder interconnections. When investigating electromigration in the solder joint, it is essential to examine the effective charge number (Z^*) of the atoms involved in the electromigration. In this study, first, a solder joint with almost equivalent current crowding on electromigration was produced by using 1mm thick Cu plates. After that, nine markers were formed on the cross-sectioned solder joint. Then, the migration length of each marker was systematically measured under two conditions. The Z^* of each marker was examined by the marker's migration length.

Key Words: *Electromigration, Soldering, Current Crowding, Effective Charge Number*