「エレクトロニクス実装学会誌」8〔4〕318~324（2005）

フィルドビア電気銅めっきにおけるフィリング性の電気化学的モニタリング法

大久保　利一*，水野　由香*，直井　克巧*

Electrochemical Monitoring Method for Filling Capability of Copper Electroplating Solution for Via Filling

Toshikazu OKUBO*, Yuka MIZUNO* and Katsuyoshi NAOI*

*凸版印刷株式会社総合研究所次世代基盤研究所（〒345-8508 埼玉県北葛飾郡杉戸町高野台南4-2-3）
*Semiconductor Packaging Laboratory, Toppan Printing Co., Ltd. (4-2-3 Takanodai-Minami, Sugito-cho, Kita-Katsushika-gun, Saitama 345-8508)

Abstract

We have developed a method to monitor the time-dependent change in the filling capability of a via-hole filling copper electroplating solution. In this method, a rotating disk electrode is used to produce a controlled solution flow, and a constant current is applied to the rotating electrode in order to measure the potential value which is necessary to judge the filling capability. The obtained time-potential curves could be approximately fitted to a Boltzmann function to acquire the quantitative parameters required for judging the filling capability.

Key Words: *Build up, Printed Circuit Board, Via-Filling, Additives, Monitoring Method, Filling Capability*