「エレクトロニクス実装学会誌」11〔1〕72~77 (2008)

スパッタ膜形成条件がフォトレジストのプロファイルおよび金めっき後のバンプ形状に与える影響

三隅　浩一[*,**]，山之内　篤史[***]，先崎　尊博[***]，鷲尾　泰史[***]，本間　英夫[****]

Influence of Sputtering Conditions to Photoresist Profiles and Bump Shapes after Plating

Kouichi MISUMI[*,**], Atsushi YAMANOUCHI[***], Takahiro SENZAKI[***], Yasushi WASHIO[***] and Hideo HONMA[****]

* 関東学院大学大学院工学研究科　（〒236-8501　神奈川県横浜市金沢区六浦東1-50-1）
** 東京応化工業株式会社開発本部開発企画室（〒253-0114　神奈川県高座郡寒川町田端1590）
*** 東京応化工業株式会社開発本部先端材料開発三部（〒253-0114　神奈川県高座郡寒川町田端1590）
**** 関東学院大学工学部物質生命科学科（〒236-8501　神奈川県横浜市金沢区六浦東1-50-1）
* Graduate School of Engineering, Kanto Gakuin University (1-50-1 Mutsuurahigashi, Kanazawa-ku, Yokohama-shi, Kanagawa 236-8501)
** New Technology Development Section, Research & Development Department, Tokyo Ohka Kogyo Co., Ltd. (1590 Tabata, Samukawa-machi, Kouza-gun, Kanagawa 253-0114)
*** Advanced Material Development Division 3, Research & Development Department, Tokyo Ohka Kogyo Co., Ltd. (1590 Tabata, Samukawa-machi, Kouza-gun, Kanagawa 253-0114)
**** Department of Applied Material and Life Science, Faculty of Engineering, Kanto Gakuin University (1-50-1 Mutsuurahigashi, Kanazawa-ku, Yokohama-shi, Kanagawa 236-8501)

Abstract

Gold bumps are conventionally used for interconnection of TAB (Tape Automated Bonding), COF (Chip on Film), or COG (Chip on Glass) in the driver LSIs of liquid crystal displays for mobile devices. These bumps are generally formed using cyanide-free gold electro-plating, since electrolytes containing cyanide tend to damage organic photoresist. However, a cyanide gold-plating bath for printed writing boards is also sometimes used to make gold bumps. This study investigated the gold sputtering influence on photoresist profiles and bump shapes after gold deposition.

Key Words: *Gold Bump, Photoresist, Gold-Plating, Gold Sputtering, Photoresist Profile, Gold Bump Shape*