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Sn–Zn BGAの接続信頼性

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Joint Reliability of Sn–Zn BGA

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Abstract

In the protection of the earth environment, the substitution of the solder material that does not contain lead (Pb) is advanced. Sn–3Ag–0.5Cu is frequently adopted as a de facto standard composition the solder paste material for the mounting. Sn–3Ag–0.5Cu solder which are the same to mounting solder composition are mass-produced about the solder ball used to package BGA. However, Sn–Ag solder have a big problem in thermal damage for heatproof parts because of being about 40°C higher than past eutectic solder. To solve this problem, we should consider the low reflow process. As for Sn–Zn solder, the expectation is also great as present equipment can be used, and practical use is begun. And we should consider with the low temperature process for low-cost and reliability in the semiconductor package assembly. We paid attention to the Sn–Zn solder material for solder ball material used to package BGA, and report on the influence in the solder joint reliability and the process of the packaging.

Key Words: *Pb-Free, Sn–Zn, Solder Ball, BGA, Solder Joint Reliability*