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Relationship between controllable process parameters on bump height in ENIG

Abstract

This paper reports the factors that affect the bump height in electroless nickel immersion gold (ENIG) and their interrelation between each other. Bump height is a critical issue that needs to be investigated because a certain quality and requirements of bump height needs to be achieved prior to reflow oven soldering process. A total of four controllable process variables, with 16 sets of experiments were studied using a systematically designed design of experiment (DOE). The result suggests that the electroless nickel bath time has the most significant effect on the formation on bump height and consequently provide larger area for conductivity.

Keywords

Bump height; DOE; ENIG