

The surface morphology characterization of electroless nickel immersion gold under bump metallurgy (UBM) using SEM

This paper presents the surface morphology characterization at each process step in electroless nickel immersion gold (ENIG) deposition using Scanning Electron Microscope (SEM). The characterization start at initial bond pad, followed by cleaning, activation, first zincation, zinc removal, second zincation, electroless nickel and lastly immersion gold process. The result shows that the surface morphology of initial bond pad starts to change with deposition of zinc layer and further changes with deposition of nickel and gold layer.