

Borophosphosilicate glass (BPSG) reflow characterization for submicron CMOS technology

This paper involves the planarization of borophosphosilicate glass (BPSG) film using a new recipe for annealing process to improve the borophosphosilicate glass (BPSG) film flatness after reflow. This improvement is for 0.35 μ m technology using steam annealing method at different temperatures. This process allows the planarization of wafers with thin layer at its surface. In this paper we present the comparison between the effect of hydrofluoric acid (HF) staining on the cross sectional topography with the samples without hydrofluoric acid (HF) staining analyzed by field emission scanning electron microscopy (FESEM). We found that staining with HF produced clearer images.