

연마입자 크기가 CMP 공정의 연마균일도에 미치는 영향

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The effect of abrasive size on uniformity in CMP process

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ABSTRACT

The planarity and defect requirements have been increased as increasing process complexity and decreasing device dimensions. The understanding the effect of process variables on planarization and uniformity is needed for increasing these requirements. The effect of abrasive size CMP performance has not been fully understood. In this paper, the variation of removal rate and uniformity depending on abrasive size in the slurry has been investigated with non-pattern wafer. The polishing capability and surface morphology were evaluated through the metrology tools such as ellipsometer and Atomic Force Microscope (AFM) analysis. The results indicate that particle size influence the removal rate, uniformity and surface morphology.

Keywords : CMP (chemical mechanical polishing), planarization, uniformity, abrasive size